The Effects of a School Supervisor's Leadership Style on Organizational Effectiveness: Application of Distal Mediators

Yu-Je Lee

Takming University of Science and Technology, Taiwan

Abstract

The main purpose of this study is to verify the effects of a school supervisor's leadership style on organizational effectiveness, with organizational culture and organizational change being the mediators. A questionnaire-based survey was conducted on full-time teachers holding lecturer or higher-level positions at a particular Taiwanese technological university. After using simple random sampling to yield knowledge from the population and sending out copies of questionnaire via mail, convenience sampling was adopted to avoid excessively low response rates. The overall model's goodness-of-fit effect concerning the structural and measurement models were verified using linear Structural Equation Modeling (SEM). Regarding the path coefficients for implicit/unobservable variables in the structural model, the MacKinnon PRODCLIN 2 program was employed to test how significant the model's total effect, specific mediating effects and direct effects are. Research results showed that: (1) the overall model has a statistically significant total effect, which suggests a distal mediating effect in the model constructed by the author; (2) the supervisor's leadership style exerts a significantly direct effect on organizational effectiveness; (3) both organizational culture and organizational change exert *significant* and *practically the same* specific mediating effects.

Keywords: Distal Mediator, Leadership Style, Organizational Effectiveness, Organizational Culture, Organizational Change.

Introduction

As the dwindling birth rate in Taiwan is complicated by rigorous competitions among colleges that triggered a craze for upgrades to the "technological university" status, the shrinking enrolments and drastically increasing schools caused non-equilibrium in the market for educational resources, leaving private technological universities constantly threatened by under-enrolment or merger/acquisition talks.

To tackle the intensifying competition for new students in a rapidly changing environment, decision-makers at many schools are introducing every possible student-recruiting strategy and organizational change, which are aimed to directly adjust the structure of school organizations but, nevertheless, fail to address the problem's root causes. According to experts' research findings, when a school's decision-maker strategizes any organizational change, the supervisor(s) should first adjust their leadership approaches/styles on a timely,

flexible basis to cope with changes in the greater context. In other words, supervisors are supposed to revitalize and underscore the distinctive appeal of a school organization's culture by changing the culture as well as the method/pattern with which they lead that organization. They are also expected to communicate and negotiate in advance with the school organization's members or teachers who perform duties directly related to teaching, in order to revitalize, and improve the distinctive appeal of, the school organization's culture while enhancing the organizational effectiveness (Hsu, 2010).

The competencies of teachers, who are a school's most important human resource, are not only essential to the success of education but also a major driving force behind the policies of education/curricular reforms. A school's organizational effectiveness will improve when the teachers comprehend its concepts/visions well enough to bolster teamwork among organization members, to sharpen their own competencies, to increase identification with the organization, and to form a distinctive organizational culture (Hsieh, Lang and Chen, 2010).

Consequently, this author conducted a case study of a particular Taiwanese technological university and built a research model for analyses/verification in an attempt to understand the model's goodness-of-fit. The specific purposes of this study are:

1. To verify and understand whether the supervisor's leadership style has a distal mediating effect on organizational effectiveness in a particular Taiwanese technological university;
2. To verify and understand whether the supervisor's leadership style exerts a significant, positive and direct effect on organizational effectiveness in a particular Taiwanese technological university;
3. To verify and understand whether the supervisor's leadership style, mediated by organizational culture, exerts a significant, specific and indirect mediating effect on organizational effectiveness in a particular Taiwanese technological university;
4. To verify and understand whether the supervisor's leadership style, mediated by organizational change, exerts a significant, specific and indirect mediating effect on organizational effectiveness in a particular Taiwanese technological university;
5. To determine which of the two mediators (i.e., organizational culture and organizational change) has a larger specific indirect effect.

Literature Review

The purpose of this study is to verify the effects of supervisor's leadership style on organizational effectiveness in a particular Taiwanese technological university, with organizational culture and organizational change being the mediators. The relevant theories and studies are stated as follows:

Definitions of Leadership and Different Leadership Styles

Leadership is an individual's behavior that leads group activities toward a shared goal (Hemphill and Coons, 1957) as well as an ability, influence or motivation that directs individuals/organizations toward a certain goal (Bass, 1981). It is also defined as how a leader affects the process of organizational activities in order that an organized group reaches goals or makes achievements as expected (Rauch and Behling, 1984; Cheng, 2011).

According to Hsu (1997), leadership is a process of interpersonal interactions that exerts influence on an individual or a group of persons under a given situation, in order to attain a specific group-oriented goal.

Chen (2009) considered leadership a process of using various behavioral approaches to guide organization members toward a shared goal. In that process, the leader exerts influence on organization members through interpersonal interactions; his/her personal qualities help attain organizational goals as they accomplish tasks while rewarding the employees.

Cheng (2011) believes that leadership is a process existing in organizations that vary in nature and form for attaining the organizational goals. In that process, he said, the leader uses his/her influence to create a team spirit among organization members while providing a driving force that motivates employees to be willing to strive toward organizational goals. Cheng went on to divide leadership styles into charismatic leadership and transformational leadership.

House (1971) put forth the path-goal theory to define four leadership styles: (1) directive leadership: a leadership style that familiarizes subordinates with their leaders' expectations while giving them guidance as to how each task should be accomplished; it is similar to the *initiating structure* stated in Ohio State University's two-dimension theory of leadership styles; (2) supportive leadership: a leadership style that shows friendliness to subordinates and cares about their needs/feelings; it is similar to the *consideration* stated in the two-dimension theory of leadership styles; (3) participative leadership: leaders adopting this style seek opinions from the subordinates and respect their suggestions; they allow the subordinates to participate in the decision-making process; (4) achievement-oriented leadership: leaders adopting this style shows confidence in their subordinates and set organizational goals for them.

In summary, leadership in the present study is conceptually defined as "a process existing in organizations that vary in nature and form in order to attain organizational goals, where the leader uses his/her influence to create a team spirit among organization members and at the same time provides a driving force that motivates members to strive toward organizational goals." This study's author categorizes leadership styles as recommended by House (1971).

Definitions and Categories of Organizational Culture

Daft (2001) considers organizational culture a pool of all organization members' values, presumptions, beliefs, awareness and thoughts that provides the members a code of behavior to reflect how they really feel, and what they value the most.

Organizational culture, an important factor for the evaluation of corporate competitiveness, reflects particular corporate characteristics and is closely related to a business' core competitiveness (Huang, 2008). A term frequently mentioned in discussions of organizational behavior, organizational culture is shaped and evolves over a long period of time. Definitions and perspectives of organizational culture, however, vary among scholars worldwide.

Lee (2002) said organizational culture is the result of long-term interactions between an organization's internal systems and external circumstances, as well as the sum of values, beliefs, consciousness, thoughts and actions within an organization. The intangible culture, which regulates behaviors and performance of an organization and its members in a tangible way, is something present in the organization's day-to-day operations.

Mitchell & Yates (2002) said organizational culture is the sum of values, beliefs and understandings shared among organization members.

Robbins (2003) said organizational culture is a perception consistent throughout the organization with shared characteristics. Such a descriptive culture is a factor that

differentiates among organizations while integrating systematic variables at the individual, group and organization levels.

In his study, Tseng (2006) defines organizational culture as a demonstrated pattern of beliefs and expectations shared across the organization, compared to the definition put forth by Daft (2006) that organizational culture is the significant values, beliefs, ways of thinking, and code of conduct shared among all organization members. Liu (2004) mentioned in his paper that a good organizational culture makes an organization more effective and productive.

Cameron (1985) mentioned the following four types of organizational culture, classified in accordance with the introversion-extroversion of policy focus, and how flexible the organizational structure is controlled:

1. Consensual culture: Organizational culture of this type is rather flexible and introvert with a work environment inclined to openness and harmony, so all employees feel included in a large family. Organizations with a consensual culture are usually conservative, risk- and change-averse, flexible, and focus on maintaining the internal ties. Such a culture regards an organization's internal cohesion highly and attaches great importance to interpersonal relationship when assessing a member's performance. Highly flexible and internal-oriented, a consensual culture emphasizes openness, commitment and morale.

2. Developmental culture: The developmental culture tends to be flexible and open, with a focus on organizational innovation and challenges. It shows aggressiveness and trust in employees, hence the capacity to take greater risks and implement drastic changes. To enhance flexibility and employees' wellbeing, organizations with this type of culture put great emphasis on external activities and assess employees' performance largely according to how hard-working they are, which prompts the organization members to seek growth as their behavioral motive. The developmental culture is highly flexible and external-oriented, with a focus on innovation, adaptability, growth and obtaining resources.

3. Rational culture: Organizational culture of this type stresses cost control, work efficiency, as well as competitions among groups or employees performance-wise. Businesses with a rational culture are willing to take greater risks for changes. The rational culture is a stabilized, well-controlled one that focuses on external activities and evaluates employees largely on the basis of job performance, hence the employees' task-oriented behavioral motives. Such a culture is highly controlled and external-oriented, with a focus on explicit goals, productivity and achievements.

4. Hierarchical culture: Inclined to control and introvert, the hierarchical culture is known for a clearly defined hierarchy of *responsibilities and a bureaucratic system, with all work procedures stipulated and relatively standardized. Such a culture gives employees a sense that corporate management is built on a foundation of control and power, hence the rather conservative employee behaviors.* Hierarchical culture is *intended for stability, control, and well-adjusted internal practices/ties. Organizational learning under h*ierarchical *culture is implemented strictly in accordance with a set of rules, with explicit and specific criteria unexceptionally applied to employee-performance assessments. Such a* culture *is* highly controlled and internal-oriented (Li, 2011).

Hsu, Kuo and Chen (2010) noted in "A study of the correlations among internal-service quality, job satisfaction and employee loyalty at the catering department of international tourist hotels: Using organizational culture as the extraneous variable" that organizational culture includes innovative, human-oriented and team-oriented cultures.

To sum up, this study's author conceptually defined *organizational culture* as "the sum of values, beliefs and understandings shared among organization members," which can be regarded as a package of important values, beliefs, ways of thinking and code of behavior shared among all organization members, or a perception consistent throughout the organization with shared characteristics. Such a descriptive culture is a factor that differentiates among organizations while integrating systematic variables at the individual, group and organization levels. In this study, the *organizational culture* perspective is verified using sub-perspectives proposed by Hsu et al. (2010).

Definitions and Categories of Organizational Changes

Jan (2006) said employees' resistant responses to an organizational change include disobedience, indifference, procrastination and resignation, with such responses resulted from the need for security, habits or misunderstandings. Since employees' resistance is a huge obstacle to implementing a change, he noted that an organization should make efforts to consider reducing such resistance, or obstacle, by: (1) encouraging employees to express opinions; (2) enhancing supervisor-subordinate communications; (3) improving the employees' approval of, and support for, the organization; (4) redoubling efforts in employee education/training; (5) offering material/psychological rewards to employees.

Hu (2007) defined *organizational change* by noting that an organization is an open organism that must transform, adjust and change in accordance with both the internal and external environments. While the internal adjustments are meant to improve organizational members' attitudes and behavior while refining the organizational culture, external adjustments further highlight the organization's competitive advantages so as to achieve steady growth and enhanced performance. Such adjustments and strategies are referred to as organizational changes. After defining organizational changes, Hu classified those changes into proactive and reactive ones, depending on how proactively a business initiates them.

Meanwhile, Hsu (2010) believed an organization's pursuit of change and innovation is a process that involves strategies, structures, managerial systems, skills, organizational culture, production methods, technical innovation, as well as the approaches to increasing organizational performance. In other words, development, transformation, innovation, turnarounds and renewal are the prerequisites of any organizational change.

Leavitt (1964) contended that an organization comprises four major perspectives that interact with one another, namely tasks, people, technologies and structure. The four perspectives are briefly described as follows:

(1) Task-oriented changes: Literally, the task means major jobs in the organization such as production, manufacturing and services. Task-oriented changes are focused on external control, the organization's responsibilities and products/services.

(2) Structural changes: The structure represents an organization's systems of communications, responsibility control and work procedures. Changes of this type are focused on internal control, the system of authorities, organizational hierarchy, and segregation of duties among departments.

(3) People-oriented changes: Changes of this type may involve differences in the size, attitudes or skills of an organization's personnel, with a focus on internal flexibility, interpersonal relationship besides values/attitudes of workers inside the organization.

(4) Technological changes: Changes in this category involve process-aiding tools like work evaluation mechanisms or computerized devices; they are focused on external

flexibility, organizational skills of production systems, managerial procedures and information technologies (Lee[a], 2011).

Any change in the four highly inter-dependent perspectives will certainly affect the other three. For example, an organization that introduces a new technology is probably force to transform its existing structures (e.g., communication mechanism and decision-making model), tasks (e.g., production, manufacturing and services) and personnel (e.g., the number, skills and job descriptions of employees). Therefore, Leavitt (1964) held the opinion that organizational changes can be accomplished through at least one of these perspectives.

To sum up, *organizational change* is conceptually defined in this study as "the transformations, adjustments and changes required of a school organization seeking survival and sustainable development in accordance with internal as well as external environments. While the internal adjustments are meant to improve the teaching staff's attitudes and behavior while refining the organizational culture, external adjustments further highlight the organization's competitive advantages so as to achieve steady growth and enhanced performance."

In the present study, organizational changes are categorized as recommended by Leavitt (1964) and operationally defined in accordance with that categorization.

Definitions of Organizational Effectiveness

Cheng (1998) said organizational effectiveness has always been the core element of organization theory and also the ultimate objective of organizational studies.

Wu (2002) defined school effectiveness as "a school's ability to attain predetermined goals with satisfying performance in every dimension, from the students' academic achievements, principal's leadership, the school's general ambiance, learning skills and strategies, school culture and values, to faculty development."

Complicated and full of diversity, school organizations not only have relatively ill-defined goals than a typical corporate organization, but also are characterized by vagueness and abstraction. For instance, schools seldom have quantitatively displayed goals or tangibly finished products, which explains the difficulties in, and divided opinions over, defining or gauging school effectiveness (Cheng, 1998; Chang, 2001).

Hsieh (2006) defined school effectiveness as "the extent to which a school attains its educational goals" and categorized it into four perspectives: (1) administrative management; (2) teachers' instructions; (3) students' performance and achievements; (4) the support from parents and communities.

In summary, *a school's organizational effectiveness* is conceptually defined in this study as "the extent to which a school attains the predetermined goals." Organizational effectiveness, therefore, is measured in the four dimensions recommended by Hsieh (2006), namely the "effectiveness of administrative management," "effectiveness of teachers' instructions," "students' performance and achievements" and "the support from parents and communities." These dimensions serve as the four sub-perspectives of the "a school's organizational effectiveness" variable in this study, each operationally defined in accordance with how those categorized perspectives are defined.

The Relationship between Leadership Styles and Organizational Effectiveness

According to House (1971), in order to enhance the subordinates' work performance while satisfying them, a leader must consider the nature of backgrounds where those subordinates perform tasks, along with their personal qualities, before adopting a leadership

style that makes the two contingent factors complimentary to each other. If the leadership style fails to match the nature of task background and/or subordinates, the leadership behavior will end up ineffective.

House, Woycke and Fodor (1994) mentioned that charismatic leadership, organizational performance and subordinate satisfaction are highly correlated.

According to Lee, Zhang and Lin (1998), there is a significantly positive correlation between the supervisor's leadership style and employees' satisfaction with communications; employees' satisfaction with communications and leadership effectiveness; the supervisor's leadership style and leadership effectiveness.

Wang (2006) said a company executive's leadership style has a significant, direct and positive effect on organizational culture, organizational commitment and organizational learning in "Applying Structural Equation Modeling to Study the Influence of Leadership, Organizational Culture, Organizational Commitment, Organizational Learning, Knowledge Management, and the Organizational Performance -- An Empirical Study of Life Insurance Finance."

In "The Influence of Leadership, Organizational Culture, and Total Quality Management on the Organizational Performances-- An Empirical Study of Taiwan Sugar Corporation's Business Divisions," Huang (2007) said leadership styles affect organizational performance by way of organizational culture and/or total quality management; organizational culture affects organizational performance through total quality management; total quality management directly affects the organizational performance.

In "The Relationship between the Organizational Change, Leadership Style, Organizational Culture and Job Performance-Evidence from Three Universities in Southern Taiwan," Huang (2008) said leadership style affects work performance significantly in terms of charisma, motivation, intellectual inspirations and personal consideration, with charisma exerting the most significant influence.

Tamg (2008) noted the significantly positive effects of organizational justice, leadership styles and locus of control on self-efficacy and organizational performance (and their perspectives) in "Research on The Relationships Between Organizational Justice, Leadership Style and Locus of Control with Seff-efficacy and Organizational Performance-A case Study on Volunteer Non-Commissioned Officers and Soldiers."

Wang (2009) contended that leadership styles significantly affect organizational performance in "A Study of the Relationships among the Leadership Styles, Organizational Culture, Job Performance and Organizational Performance－Banking in Southern Taiwan as an Example."

To sum up, this study's author proposed the following hypothesis:
H_1: The supervisor's leadership style significantly, positively and directly affects organizational effectiveness at the school being examined in this study.

The Relationship between Leadership Style and Organizational Culture

In "A research on the relations among leadership style, organizational culture and the attitude of practicing evidence-based medicine," Chang (2009) mentioned the partially mediating effect of organizational culture on the relationship among leadership style, organizational culture and the attitude toward practicing evidence-based medicine. Apparently, the leadership style has a significantly positive effect on organizational culture, Chang concluded.

In "An Examination of Job Performance in Banking Relating Leadership Styles, Organization Culture, Organization Citizenship Behavior," Weng (2009) mentioned the partially significant correlation the leadership style and organizational culture, organization citizenship behavior and job performance; organizational culture and organization citizenship behavior; organizational culture, organization citizenship behavior and job performance.

Huang (2011) contended that the leadership style positively affects organizational culture in "The Relationships between Leadership, Organization Commitment, Organization Culture, Organization Learning and Knowledge Sharing- A Case Study of the Technology Industry."

To sum up, this study's author proposed the following hypothesis:

H_2: The supervisor's leadership style significantly, positively and directly affects the teaching staff's organizational culture at the school being examined in this study.

The Relationship between Organizational Culture and Organizational Effectiveness

In "A study of relationship between the organizational culture and the organizational effectiveness and of quality improvement programs in public commercial vocational high schools," Wang (2010) said that faculty members tend to hold positive perceptions of the organizational culture/effectiveness of schools they work for, and that a school's organizational culture provides a basis for predicting its organizational effectiveness.

Hsu (2011) said organizational culture not only affects organizational effectiveness significantly, but also has a mediating effect on the relationship between transformational leadership and organizational effectiveness in "The Relationship between Transformational Leadership and Organizational Effectiveness, with Organizational Culture as an Intervening Variable – A Case Study of a Life Insurance Company."

In "Research on the Relations among Media Organizational Culture," Tien (2010) mentioned that a media worker's organizational culture, organizational trust, innovation strategy and organizational effectiveness are positively correlated and affect one another.

As Xing, He and Ru (2012) contended a school should develop all entities in it as an approach to, and guidelines for, creating the organizational culture. That is, the school should base its approaches to, and guidelines for, creating an organizational culture on "the level of advanced philosophies of education being shared across the school," "the formation of a flat learning organization" and "the affection and effective aspects of organization."

To sum up, this study's author proposed the following hypothesis:

H_3: The teaching staff's organizational culture significantly, positively and directly affects organizational effectiveness at the school being examined in this study.

The Relationship between Leadership Styles and Organizational Change

In "Exploring Leadership Styles, Organizational Change and Resistance: Taking the Example of Taiwan's Three Government-Backed Commercial Banks," Wen (1999) said the leadership styles and types of banks not only affect how the organizational change is perceived, but also significantly interact with each other.

Liao (2007) said in "A Study of Relationship among the Commands' Leadership Style and Organizational Change on Constructing Learning Organization, Promoting Organizational Commitment and Improving Work Behavior in 1st Air Force Area Logistic Command" that both learning organization and organizational commitment have partial predictive power with regard to work behavior.

In his study of elementary schools in central Taiwan, Li (2008) noted that the principals' leadership styles and school organizational change are highly correlated.

To sum up, this study's author proposed the following hypothesis:

H_4: The supervisor's leadership style significantly, positively and directly affects organizational change at the school being examined in this study.

The Relationship between Organizational Change and Organizational Effectiveness

Chang (2006) said organizational change is significantly correlated with both organizational culture and organizational performance in "Relationships among Leadership Behaviors, Organizational Change, Organization Culture and Organization Performance in Mechanical Manufacturing Industry."

In "An Empirical Study of the Relationships among Organizational Culture, Organizational Change & Organizational Effectiveness - The case of Chunghwa Telecom Southern Branch," Tseng (2006) mentioned the significantly positive effect of organizational change on organizational performance.

Yeh (2007) said organizational change exerts a significantly positive effect on trust, job satisfaction and organizational performance in "An Empirical Study of the Relationship among Industrial Environment, Organization Change, Trust, Job Satisfaction and Organization Performance in Banking Industry."

In "A Study on the Effect of Information Technology Application and Organizational Change on Organizational Performance in Financial Institutions," Lin (2011) argued that changes in the organizational structure significantly and positively affect organizational performance.

In their study entitled "An Empirical Study of the Characteristics, Organizational Change Patterns and Effectiveness of Private-Sector Entrepreneurs," Zhao and Yang (2012) observed that the demographic background/characteristics of a private-sector entrepreneur exerts a significantly direct effect on the model or effectiveness of organizational change. Such demographic background/characteristics, mediated by the "model of change" variable, indirectly affect the effectiveness of change. They concluded that the incremental model of change is more effective than the revolutionary one.

Chien (2012) said organizational change significantly and positively affects the organizational performance in "An Empirical Study of The Relationships among Organizational Culture, Organizational Change and Organizational Effectiveness - The Case of Taiwanese Optical Communication Industry."

To sum up, this study's author proposed the following hypothesis:

H_5: Organizational changes significantly, positively and directly affect organizational effectiveness the school being examined in this study.

The Relationship between Organizational Culture and Organizational Change

Kong (2010) said the organizational culture of companies in the TFT-LCD supply chain is significantly related to organizational change in "Organizational culture, organizational change and organizational commitment: A case study of TFT-LCD company A's supply chain."

In "The Effects of Organizational Culture and Organizational Change on Organizational Effectiveness: Taking the Example of Nursing Homes in Kaohsiung Area," Li (2011) mentioned the significantly positive effect of organizational culture and organizational change on organizational effectiveness.

Chien (2012) said the organizational culture significantly and positively affects organizational change in "An Empirical Study of The Relationships among Organizational Culture, Organizational Change and Organizational Effectiveness - The Case of Taiwanese Optical Communication Industry."

To sum up, this present study proposed the following hypothesis:

H_6: Organizational culture exerts a significant, positive and direct effect on organizational change at the school being examined in this study.

Research Method

Figure 3.1 illustrates how motivations, research objectives and literature review cited in the previous passages led to this study's hypotheses and conceptual research framework:
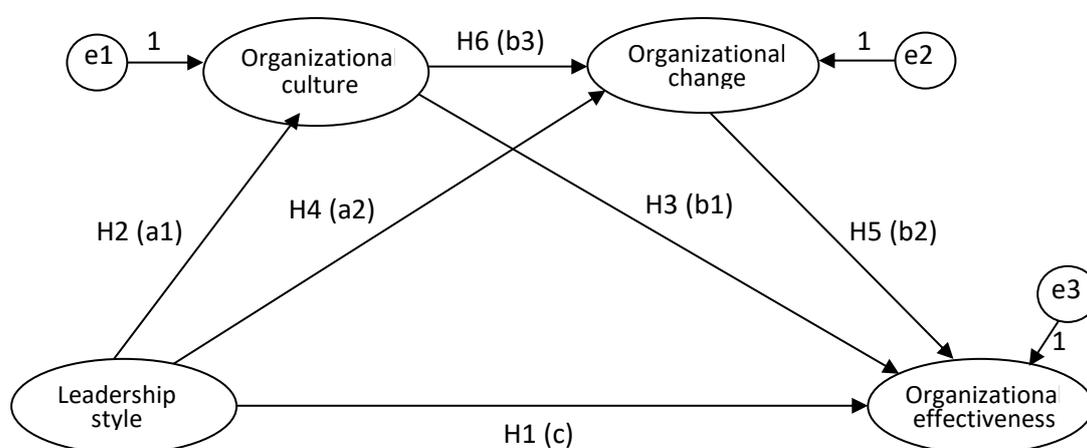
Research Framework

Figure 3.1 Conceptual Research Framework

The Design of Questionnaire and CMV Test
Designing the Questionnaire

The questionnaire in this study was compiled on the basis of multi-dimensional measurement, combined with the afore-mentioned observable perspectives. On a 7-point Likert Scale, the answers were measured with 7 denoting Strongly Agree and 1 denoting Strongly Disagree: the score grows in proportion to the degree of agreement.

The 16-item questionnaire for the *leadership style* perspective was patterned after that proposed by House (1971) on the basis of four variables (i.e., directive leadership, supportive leadership, participative leadership and achievement-oriented leadership), each comprising 4 questions.

The 12-item questionnaire for the *organizational culture* perspective was inspired by the categorization proposed by Hsu, Kuo and Chen (2010) on the basis of three variables (i.e., innovative culture, human-oriented culture and team-oriented culture), each comprising 4 questions.

The 16-item questionnaire for the *organizational change* perspective was patterned after that proposed by Leavitt (1964) on the basis of four variables: task-oriented changes, people-oriented changes, technological changes and structural changes. Designed on the basis of *multi-dimensional measurement*, the questionnaire contains 4 questions under each variable.

Finally, the 16-item questionnaire for the perspective of *school's organizational effectiveness* was inspired by the categorization put forth by Hsieh (2010). On the basis of four variables (i.e., effectiveness of administrative management, effectiveness of teachers' instructions, students' performance and achievements, and support from parents and communities), this questionnaire contains 4 questions under each variable.

CMV Test

This study's author had been considering ways to lower the CMV ever since the questionnaire copies were given out for a survey. After the completion of CFA, a Haman's single-factor test and a single-factor CFA (i.e., single-factor CMV test) were conducted to examine whether or not there is CMV regarding the perspectives. In other words, the chi-square difference testing allowed this study's author to at least declare an insignificant CMV in case of a statistically significant difference (Chang, 2011).

Sampling Method

This study's author conducted a questionnaire-based survey on full-time teachers holding lecturers or higher-level positions at a Taiwanese technological university. Simple random sampling was used to yield information from the population and copies of questionnaire sent out via mail, followed by convenience sampling to avoid excessively low response rates. 15 copies of questionnaire were given out to experts in a pilot-test. A post-test was conducted after modifying the questionnaire in accordance with the experts' suggestions. 350 copies of the official questionnaire were given out, with 213 valid copies returned at a 60.9% response rate (Fritz and Mackinnon, 2007).

The Data Obtained from Questionnaire and Measurement Model

This study's author adopted Linear SEM in a Confirmatory Factor Analysis (CFA) of the research framework and based the questionnaire design on four latent variables (i.e., leadership style, organizational culture, organizational change and organizational effectiveness), each of which was divided into observable/explicit sub-variables that contain several questions, as shown in the table below. After processing the collected data, the author created a primary file that preceded the design of questionnaire, using *multi-dimensional measurement* for construction of this study's measurement model. However, the data was measured by dual parcels to ensure the computer software efficiently handled and/or measured all data (Shun-yu Chen, 2010). Table 3.1 shows the number of questions under each implicit or explicit variable, as well as the referential sources (Chang and Lee, 2012).

Table 3.1

Number of Questionnaire Items under each 'Implicit Variable' and 'Observable Variable'

Implicit Variables	Explicit Variables	Total Number of Questionnaire Items	Referential Sources
Leadership style (X)	Directive leadership	4	House (1971)
	Supportive leadership	4	
	Participative leadership	4	
	Achievement-oriented leadership	4	
Organizational culture (ME1)	Innovative culture	4	Hsu, Kuo and Chen (2010)
	Human-oriented culture	4	
	Team-oriented culture	4	
Organizational change (ME2)	Task-oriented changes	4	Leavitt (1964)
	People-oriented changes	4	
	Technological changes	4	
	Structural changes	4	
Organizational effectiveness (Y)	Effectiveness of administrative management	4	Hsieh (September 2010)
	Effectiveness of teachers' instructions	4	
	Students' performance and achievements	4	
	Support from parents and communities	4	

**Results and Analysis**

Linear structural model analysis

This study includes a CFA, an analytical method contrary to the Exploratory Factor Analysis (EFA), on the four implicit/latent variables of leadership style, organizational culture, organizational change and organizational effectiveness. SEM is made up of structural and measurement models to efficiently tackle the causal relationships among implicit/latent variables. The three parts of model-testing in this study are: (1) goodness-of-fit of the measurement model; (2) goodness-of-fit of the structural model; (3) the overall model's conformity with goodness-of-fit indices. In other words, goodness-of-fit indices were applied to a test of the overall goodness-of-fit effect of SEM (Diamantopoulos & Siguaw, 2000; Lee, 2011).

Results and Analysis of CMV Test

A multi-factor CFA displays the nested structure of a single-factor CFA, which means the nested multi-factor CFA is a subordinate structure under the single-factor one. In this study, a chi-square difference test was conducted with the hypothesis of "there is little difference between the single-factor CFA model and multi-factor one (as shown in Figure 4.1 and Figure 4.2)." *The test results proved a difference between the two models, given the highly significant gap in their chi-square values, without any evidence that the CMV is present.*

The test was conducted in the following steps:

(1) A figure of single-factor CFA was compiled to derive statistics such as the chi-square values, degree of freedom and goodness-of-fit.

one factor CMV

chi-square=468.541

degree of freedom=209

norm chi=10.376

gfi=0.9 ;agfi=901

Figure 4.1 Single-factor CFA
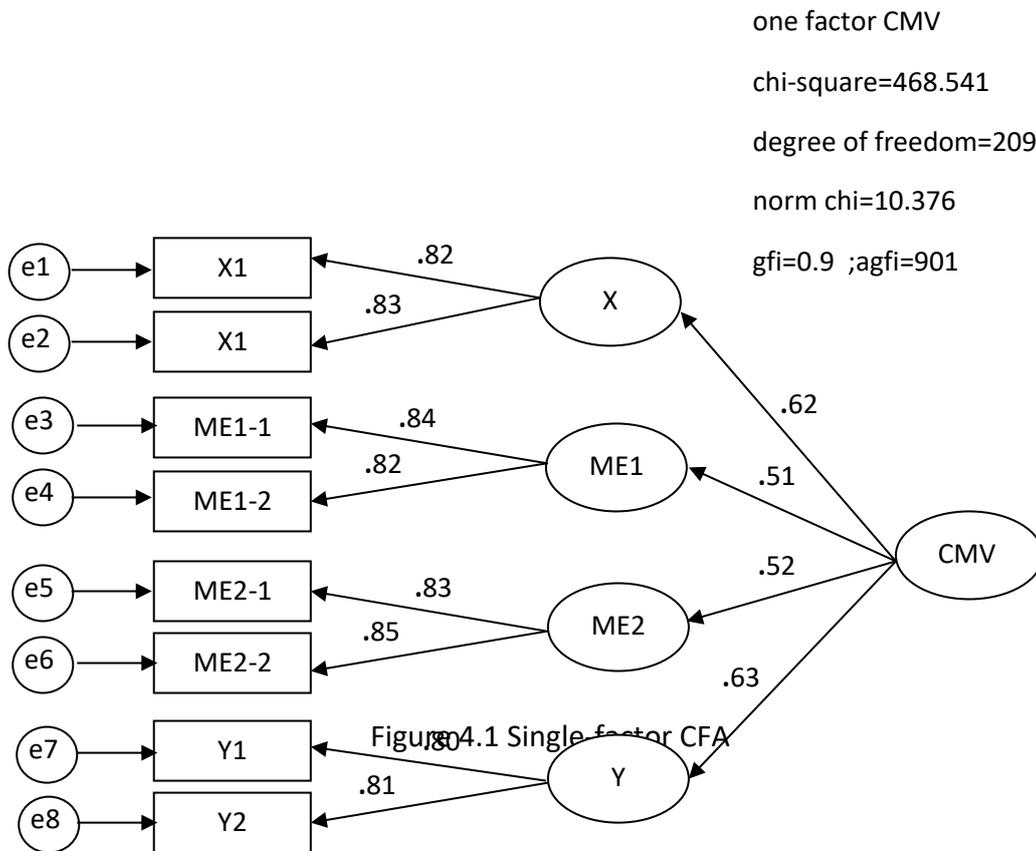
(2) The figure was revised according to the initial factor model (see Figure 4.2) before an analysis was carried out to derive statistics of another model, namely the chi-square value, degree of freedom and goodness-of-fit (Open CMV mulitifactor.amw file).

multi-factor CMV
chi-square=138.552
degree of freedom=63
norm chi=1.745
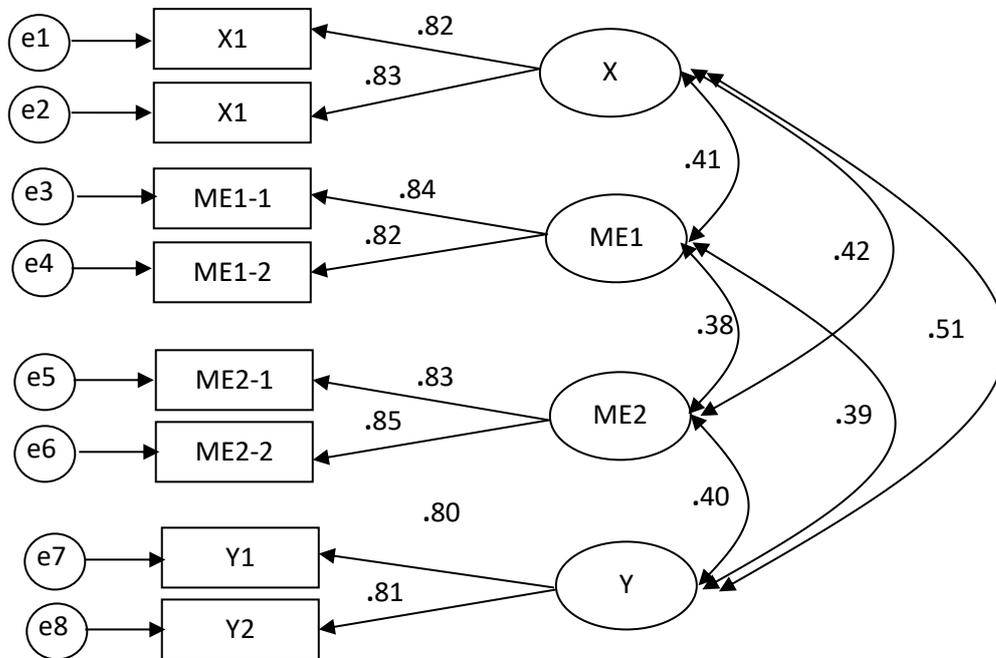gfi=0.908 ;agfi=0.902
msea=0.036

Figure 4.2 Multi-factor CFA

(3) Comparing the two models

Δdf=209-63=146；Δχ^2=468.54-138.55=329.99

(4) Calculating the statistical significance

Activate the STATABLW program, select *Distribution → Continuous → Chi-Square*, specify the Δdf and Δχ^2 and click on Enter, and we will obtain the p-value. The p-value in this study is 0, which indicates a highly level of significance that rejects the null hypothesis while proving the difference between the two models examined (see Figure 4.1 and 4.2). Apparently, it is impossible that CMV is present in any of this study's dimensions. The calculation of coefficients will not be biased because CMV is not a concern in the present study, which makes confusing explanations of research results unlikely.

Analyzing Fit of the Measurement Model

To a large extent, factor loading is intended to measure the intensity of linear correlation between each latent/implicit variable and a manifest/explicit one. The closer the factor loading is to 1, the better an observable variable is in measuring latent variables. Since this study's reliability is supported by the fact that factor loadings for all observable variables range between 0.7 and 0.9, all observable/explicit variables in the measurement model appropriately gauged the latent/implicit ones. The Average Variance Extracted (AVE), on the other hand, gauges an implicit/implicit variable's explanatory power of variance with regard to an observable one, with the AVE value growing in proportion to the reliability and convergent validity of that particular implicit/latent variable. As a rule, AVE must be larger than 0.5 for an observable variable's explainable variance to exceed the measurement error (Fornell and Larcker, 1981). Since the values of factor loadings, Composite Reliability (C.R.) and Cronbach's α in this study all exceed 0.7, with AVE values invariably larger than 0.5, the latent/implicit variables have excellent reliability and convergent validity (see Table 4.1, Table 4.2 and Figure 4.3).

Table 4.1
Judgment Indicators for the Measurement Model
Standardized Regression Weights: (Group number 1 - Default model)

Implicit/latent variables	rvable/explicit variables	Factor loading	Composite Reliability (C.R.)	Cronbach's α	Average Variance Extracted (AVE)
Leadership style	x1	.821	.824	.821	.621
	x2	.831			
Organizational culture	ε1	.842	.833	.824	.624
	ε2	.821			
Organizational change	ε3	.833	.834	.831	.631
	ε4	.852			
Organizational effectiveness	y1	.803	.813	.803	.672
	y2	.814			

In this study, the discriminant validity among the model's dimensions is determined using the AVE method. Fornell and Larcker (1981) said there will be discriminant validity between dimensions when the AVE exceeds the square of correlation coefficients in each dimension. Table 4.2 proves the discriminant validity among this study's perspectives (i.e., leadership style, organizational culture, organizational change and organizational effectiveness).

Table 4.2
Estimated Values for Discriminant Validity within the Confidence Interval

Parameter	Estimate	Ψ±2σ		Bias-corrected		Percentile method	
		Lower	Upper	Lower	Upper	Lower	Upper
X ⟷ ME1	.531	.381	.663	.372	.641	.383	.664
ME1 ⟷ ME2	.552	.421	.681	.414	.664	.423	.671
ME2 ⟷ Y	.502	.394	.602	.381	.591	.393	.611
ME1 ⟷ Y	.483	.373	.603	.362	.582	.373	.633
X ⟷ ME2	.493	.384	.611	.364	.604	.372	.613
X ⟷ Y	.503	.391	.621	.371	.593	.383	.632

Analyzing Fit of Structural Model
Path Analysis Results of Structural Model
This study's author made sure that the model passed the goodness-of-fit test before calculating the parameter estimates, Standard Errors (S.E.) and Critical Ratio (C.R.) among latent variables, as shown in Table 4.3.1 and Table 4.3.2 (Lee[b], 2008).

Table 4.3.1
Path Analysis Results of the Structural Model (Un-standardized)

Path coefficients for each pair of latent variables			Estimate	S.E.	C.R.	P	Label
Leadership style (X)	→	Organizational culture (ME1)	0.994	0.121	8.215	***	c
Organizational culture (ME1)	→	Organizational change (ME2)	0.992	0.132	7.515	***	b3
Organizational change (ME2)	→	Organizational effectiveness (Y)	0.853	0.123	6.935	***	b2
Organizational culture (ME1)	→	Organizational effectiveness (Y)	1.032	0.134	7.701	***	a1
Leadership style (X)	→	Organizational change (ME2)	0.983	0.132	7.447	***	a2
Leadership style (X)	→	Organizational effectiveness (Y)	0.761	0.191	3.984	***	b1

Note: * indicates P<0.05; ** indicates P<0.01; *** indicates P<0.001

Table 4.3.2
Standardized Regression Weights: (Group number 1–Default model)

Path coefficients for each pair of latent variables	Estimate
Leadership style (X) ⟶ Organizational culture (ME1)	**.651**
Organizational culture (ME1) ⟶ Organizational change (ME2)	**.832**
Organizational change (ME2) ⟶ Organizational effectiveness (Y)	**.631**
Organizational culture (ME1) ⟶ Organizational effectiveness (Y)	**.483**
Leadership style (X) ⟶ Organizational change (ME2)	**.493**
Leadership style (X) ⟶ Organizational effectiveness (Y)	**.481**

Note: * indicates P<0.05; ** indicates P<0.01; *** indicates P<0.001

Coefficient of Determination

The R^2 value (Squared Multiple Correlation or SMC) indicates how well an implicit *independent* variable explains an implicit *dependent* one. Therefore, the R^2 values shown in table 4.4 indicate that the implicit independent variables have adequate explanatory power on the implicit dependent variables, respectively. In Table 4.4, the coefficients of determination in path analysis, small as they may be, suggest that the implicit independent variables have a certain level of explanatory power regarding the implicit dependent ones, respectively.

Table 4.4
Path Coefficient of Determination

Coefficients of Determination	R^2
Leadership style (X) → Organizational culture (ME1)	**.282**
Organizational culture (ME1)→Organizational change (ME2)	**.305**
Organizational change (ME2) → Organizational effectiveness (Y)	**.252**
Organizational culture (ME1)→ Organizational effectiveness (Y)	**.232**
Leadership style (X) →Organizational change (ME2)	**.243**
Leadership style (X) → Organizational effectiveness (Y)	**.253**

Indices of Fit of the Overall Model

This study's author adopted SEM for modeling in order to explore how implicit variables connect to one another in the Structural Model, whether the measurement model has measurement reliability, and how the overall model's goodness-of-fit effect is. While χ^2, d.f., GFI, AGFI, NFI, CFI, RMR and RMSEA are the goodness-of-fit indicators for the overall model, it is preferable that χ^2/d.f. <5, 1>GFI>0.9, 1>NFI>0.9, 1>CFI>0.9, RMR<0.05 and RMSEA<0.05 (Bagozzi & Yi, 1988). In this study, the overall model has a satisfactory goodness-of-fit effect because χ^2/d.f. <5 and the values of GFI, AGFI and NFI all exceed 0.90, with a below-0.05 RMR, as shown as in Table 4.5 (Lee[a], 2011).

Table 4.5
Assessment of Fit of the Overall Model

Determination index	χ^2	DF	GFI	AGFI	NFI	CFI	RMR	RMSEA
Fit value	882.66	453	0.914	0.901	0.813	0.811	0.041	0.038

Standardized Results of SEM Analysis

The model's overall framework was resulted from computer-aided standardization, as shown in Fig. 4.3.
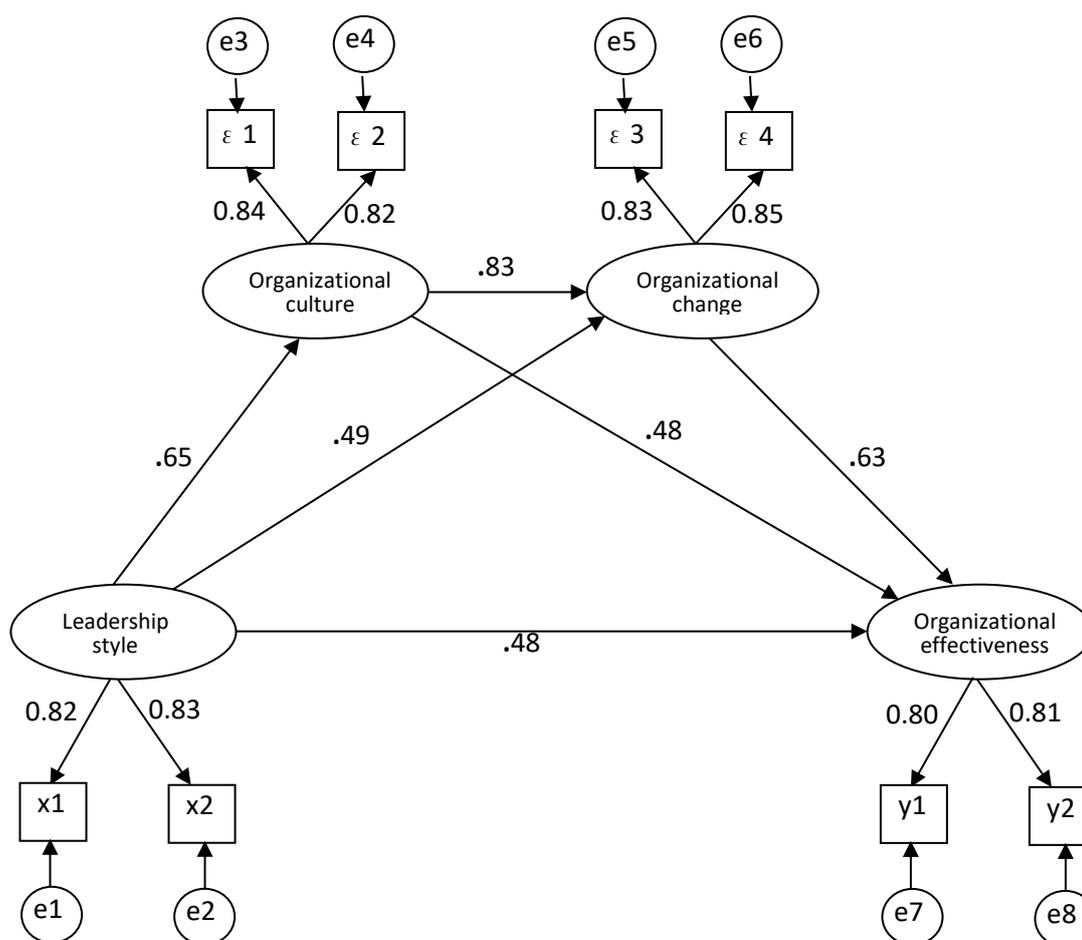

Figure 4.3 Standardized results of SEM analysis

Analytical Testing of Path Effects for the Structural Model

Focused on the path coefficients between implicit/unobservable variables in the structural model, this study's author adopted Mackinnon PRODCLIN 2 in an analytical test (MacKinnon, Fritz, Williams and Lockwood, 2007) to determine the statistical significance of that model's path effects, distal mediation effect, specific mediation effect, direct effect and total effect (see Table 4.6). According to Table 4.6, the distal mediation effects, specific indirect mediation effects, direct effects and total effect are all significantly positive in this study's structural model. The structural model in Figure 4.3 contains path coefficients that suggests: (1) the distal mediation effect in the structural model is denoted by a1*b3*b2; (2)

the specific indirect effect of organizational culture is denoted by (a1*b1) / (c+a1*b1); (3) the specific indirect effect of organizational change is denoted by (a2*b2) / (c+a2*b2); (4) the direct effect is denoted by (c); (5) the total effect is the sum of indirect and direct effects. Values of the five effects were calculated as follows:

(1)   The distal mediation effect regarding path coefficients in the structural model (a1*b3*b2) = 0.651*0.832*0.631 = 0.342

(2)   The direct effect = (c) = 0.481.

(3)   (I) The total effect concerning the *organizational culture* variable = indirect effect+ direct effect = 0.651*0.483+0.481 = 0.314+0.481 = 0.795;

(II) The total effect concerning the *organizational change* variable = indirect effect+ direct effect = (0.493*0.631) +0.481 = 0.792.

(4)   The specific indirect effect of *organizational culture* = (a1*b1) / (c+a1*b1)
 = (0.651*0.483) / (0.481+0.651*0.483) = 0.395.

(5)   The specific indirect effect of *organizational culture* = (a2*b2)/ (c+a2*b2)
      = (0.493*0.631) / (0.481+0.493*0.631) = 0.393.

The calculations above suggest that, in the model built for this present study, *organizational culture* and *organizational change* have practically the same specific indirect effect.

Table 4.6
Summary of Results Regarding the Mediation Effects

Variable	MacKinnon PRODCLIN2 95%CI	
	Lower	Upper
X→ME1	.212	.784
ME1→ME2	.182	.791
ME2→Y	.243	.784
ME1→Y	.231	.784
X→ME2	.214	.823
X→Y	.114	.852

According to Table 4.6, the distal mediation effects, specific indirect mediation effects, direct effects and total effect are all significantly positive in the structural models in this study.

The following results were derived from analyses mentioned above:

1.   The supervisor's leadership style exerts a distal mediation effect on organizational effectiveness at the school being examined in this study, hence the substantiated H_2, H_6 and H_5 (Hypothesis substantiated);

2. The supervisor's leadership style significantly, positively and directly affects organizational effectiveness at the school being examined in this study, with a 0.48 standardized path coefficient that supports H_1 (Hypothesis substantiated);

3. The supervisor's leadership style, mediated by organizational culture, exerts a significant, specific and indirect mediating effect on organizational effectiveness at the school being examined in this study, hence the substantiated H_2 and H_3 (Hypothesis substantiated);

4. The supervisor's leadership style, mediated by organizational change, exerts a significant, specific and indirect mediating effect on organizational effectiveness at the school being examined in this study, hence the substantiated H_4 and H_5 (Hypothesis substantiated);

5. The two specific mediators of *organizational culture* and *organizational change* have practically the same specific indirect effect.

Conclusions and Suggestions
Conclusions
Conclusions were derived from the afore-mentioned data analyses and results, as detailed in the following passages:

H_2, H_6 and H_5 are substantiated: In the university being examined in this study, the supervisor's leadership style has a distal mediating effect on organizational effectiveness, which echoes arguments proposed by Huang (2011), Li (2011) and Chien (2012). Despite the different industries explored, these scholars agree in their conclusions that, in a school: (1) the leadership style positively affects organizational culture; (2) the organizational culture positively affects organizational change; (3) organizational change positively affects the organizational effectiveness.

H_1 is substantiated: In the university being examined in this study, the supervisor's leadership style significantly, positively and directly affects organizational effectiveness, which echoes the arguments proposed by (Tamg, 2008; Wang, 2009). Despite the different industries explored, these scholars agree in their conclusions that, the leadership style affects a school's organizational effectiveness in a positive and significant way.

H_2 and H_3 are substantiated: In the university being examined in this study, organizational culture exerts a significant, specific and indirect mediating effect on the relationship between the supervisor's leadership style and organizational effectiveness, which echoes arguments proposed by Huang (2011) and Hsu (2011). Despite the different industries explored, these scholars agree in their conclusions that the leadership style positively affects a school's organizational culture, which in turn exerts a positive effect on organizational effectiveness.

H_4 and H_5 are substantiated: Supervisor's leadership style at the school being examined, mediated by organizational change, exerts a significant, specific and indirect mediating effect on organizational effectiveness. That conclusion echoes arguments of Li (2008) and Lin (2011). Despite the different industries explored, these scholars agree in their conclusions that the leadership style positively affects organizational change, which in turn affects organizational effectiveness positively.

Comparing the specific mediating effects of organizational culture and organizational change: The two specific mediators in this study (i.e., o*rganizational culture and organizational change) have practically the same* specific indirect effect.

Contributions of the Present Study
Innovative Applications of Research Method
Exploratory research enabled by multi-regression analyses accounts for a majority of the literature, leaving the CFA-based research framework with *distal mediators* rarely considered. Since the present study's main perspectives are implicit variables, CFA and linear SEM, but not multi-regression analysis, appear to be suitable measurement tool and model framework, respectively. Moreover, this study includes a series of analyses and tests of reliability, validity and CMV in the design of *questionnaire scales* and *model dimensions*, using relatively new statistical methods. That explains why this study is relatively innovative in terms of research method.

Contributions to the Practices of Taiwanese Technological Universities
Unlike the previous studies that were largely based on EFA, this study's author performed modeling in accordance with the summarized literature review and then verified the model's goodness-of-fit effects. The present study, consequently, is a CFA-based one addressing topics that are both important and innovative in terms of business practices, with the research results providing a reference for further studies in relevant fields, and also for the management of the school being examined in this study seeking to improve organizational effectiveness with strategic managerial decisions.

Managerial Significance of the Present Study
As mentioned earlier in this study, in order to tackle the intensifying competition, decision-makers at Taiwanese schools employ every possible student-recruiting strategy and organizational change aimed to directly adjust the structure of school organizations. Such strategies/changes may involve an increasing number of academic majors (i.e., departments) under each college or decreased classes for each academic major, in hopes of raising the minimum qualifying score for admissions to all academic units in the joint entrance exam, and subsequently attract, or recruit, more competent students. After all, students choose their college priorities in accordance with the minimum qualifying scores for the previous year.

These measures taken by a school to grapple with changes, however, fail to address the problem's root causes. In fact, results of experts' empirical studies and findings of this present study indicate that, in the university being examined in this study, the supervisor's leadership style has a distal mediating effect on organizational effectiveness. When the decision-maker of a school organization strategizes about organizational changes, he/she should ensure the supervisor(s) first adjust their leadership approaches/styles on a timely, flexible basis to cope with changes in the greater context. In other words, supervisors are supposed to revitalize and underscore the distinctive appeal of a school organization's culture by changing the method or pattern with which they lead that organization. They are also expected to communicate and negotiate in advance with the school organization's members or teachers who perform duties directly related to teaching, in order to revitalize, and improve the distinctive appeal of, the school organization's culture while enhancing the organizational effectiveness.

Limitations and Suggestions

1. Considering the limited amount of research resources, simple random sampling was used to yield information from the population and copies of questionnaire sent out via mail, followed by convenience sampling to avoid excessively low response rates. That method, however, led to sampling bias and unsatisfying reliability. Future studies are advised to use the other sampling methods (e.g., stratified random sampling) instead.

2. Regarding modeling for a CFA-based study like the present one, it is advisable that a simple verification model be built to avoid excessive complexity, and the subsequently poor goodness-of-fit (Chen, 2010). This study's author, therefore, decided to focus solely on the two mediators of organizational culture and organizational change to determine whether the model constructed in this study suggests a distal mediating effect, and which of the mediators has a greater specific indirect effect. Future researchers, nevertheless, may increase the number of mediators and compare their specific indirect effects.

3. This study is focused solely on the CFA of a Taiwan-listed company, and future researchers are advised to conduct similar studies on a wider range of companies or different industries for comparative analyses of multiple groups.

References

Bagozzi, R. P., & Yi, Y. (1988), "On the evaluation of structural equation models," *Academic of Marketing Science*, 16, 76-94.

Bass, B. M. (1981), "Stogdill's Handbook of Leadership," New York: *MacMillan.*

Cameron K. S. (1985), "Culture Congruence Strength and Type: Relationships to Effective," Working paper, Business School, *University of Michigan.*

Chang, C.-H.(2009), "A research on the relations among leadership style, organizational culture and the attitude of practicing evidence-based medicine," MA, Taiwan: *Department of Healthcare Administration, Asia University.*

Chang, C.-M., & Lee, Y. -J. (2012).Verification of the Influence of Intellectual Capital upon Organizational Performance of Taiwan-Listed Info-Electronics Companies with Capital Structure as the Mediator. *The Journal of International Management Studies*, Vol. 7, No. 1, pp.80-91.

Chang, C.-S. (2001), "The Effects of Transformational and Transactional Leadership of Elementary Schoo1 Principals on the Culture Characteristics and Effectiveness of School Organization," Kaohsiung City, Taiwan: *Fu-Wen Elementary School.*

Chang, W.-H. (2011). "Structural Equation Modeling," Taiwan: *Tingmao Publishing Co., Ltd.*

Chang, W.-T. (2006), "Relationships among Leadership Behaviours, Organizational Change, Organization Culture and Organization Performance in Mechanical Manufacturing Industry," MA, Taiwan: *Department of Industrial Education and Technology, National Changhua University of Education.*

Chen, C.-N. (2009), "A Study of Civil Servants' Cognition of Core Value and Incorruption Government: A Case of Tainan County Government," Taiwan: *New Public Management Trend and Challenges under the Development of Globalization, the 2009 Annual Conference of TASPAA.*

Chen, S.-Y. (2010). "SEM," Taiwan: *Psychological Publishing Co., Ltd.*

Cheng, K.-L. (2011), "Exploration of the Construct Model Linking Leadership Style, Organizational Culture, Employee Performances and Leadership Effectiveness," PhD, Taiwan: *Graduate School of Business and Management, Lunghwa University of Science*

and Technology.

Cheng, T.-F. (1998), "The Application of Competing Values Approach on the Relationship among the Principals' Roles, School organizational Culture and Organizational Effectiveness in the Senior High School," PhD, Taiwan: *Department of Education, National Kaohsiung Normal University.*

Chien, W.-C. (2012), "An Empirical Study of The Relationships among Organizational Culture, Organizational Change and Organizational Effectiveness - The Case of Taiwanese Optical Communication Industry," MA, Taiwan: Department of Business Administration, China: *University of Technology.*

Daft, L. R. (2001), "Organization theory & design," Australia: *South-Western College.*

Daft, R. L. (2006), "Organization Theory and Design," South-Western College Pub, 9 edition.

Diamantopoulos, A., & Siguaw, J. A. (2000), "Introducing LISREL: A guide for the uninitiated," Thousand Oaks, CA: *Sage.*

Fornell, C., & Larcker, D. F. (1981), "Evaluating structural equation models with un-observables and measurement error," *Journal of Marketing Research*, 18: 39-50.

Fritz, M. S., and Mackinnon, D. P. (2007), "Required sample size to detect the mediate effect," *Psychological Science*, 18, 233-239.

Hemphill, J. K., and Coons, A. E. (1957), "Development of the leader behavior description questionnaire," In R. Stogdill and A. Coons. (Eds.), Leader Behavior: Its Description and Measurement, Ohio: *Bureau of Business Research.*

House, R. J. (1971), "A path-Goal Theory of Leader Effectiveness," *Administrative Science Quarterly*, 16, 321-339.

House, R. J., Woycke, J., and Fodor, E. M. (1994), "Charismatic and Non-charismatic Leaders: Differences in Behavior and Effectiveness." In Conger, J. A. and Kanungo, R. N. (Eds.), Charismatic Leadership, Sari Francisco: *Jossey-Bass,* 103-04.

Hsieh, S.-Y. (2006), "A study on the relationships among the organizational culture of junior high school, the organizational citizenship behaviour of the teachers and the effectiveness of the schools of Kaohsiung County," MA, Taiwan: Graduate Institute of Education, *National Sun Yat-Sen University.*

Hsieh, S.-Y., Lang, F.-L., and Chen, M.-H. (2010), "A Study on the Relationships among the Organizational Culture of Junior High School, the Organizational Citizenship Behavior of the Teachers and the Effectiveness of the Schools of Kaohsiung County," Taiwan: *NPUST Humanities and Social Science Research*, Issue 3, Vol. 4, pp.86-105.

Hsu, N.-H. (2010), Terminology of Public Administration, Taipei: *Sunny Digital Education Co.*

Hsu, S.-C. (1997), "Management," Taiwan: *Tung Hua Books Co.*

Hsu, S.-W., Kuo, Y.-J., and Chen, H.-H. (2010), "A Study on the Relationship among the Internal Service Quality, Job Satisfaction and Employee Loyalty of the Employees Working in the Food and Beverage Department of an International Tourist Hotel-Taking the Organizational Culture as an Extraneous Variable," Taiwan: *Journal of Hospitality and Home Economics*, 7 (1), pp. 025-053.

Hsu, T.-C. (2011), "The Relationship between Transformational Leadership and Organizational Effectiveness, with Organizational Culture as an Intervening Variable – A Case Study of a Life Insurance Company," EMBA, Taiwan: Yuan Ze University.

Hu, C.-C. (2007), "The Pedagogical Research on the Implementation of the Interdisciplinary Course from the Perspective of Technology Convergence: A Case Study of Undergraduate 'Media Economics' Course in SHU," Taiwan: *Communication and Management Research*, Vol. 6, 2, 111.

Huang, H.-L. (2007), "The Influence of Leadership, Organizational Culture, and Total Quality Management on the Organizational Performances-- An Empirical Study of Taiwan Sugar Corporation's Business Divisions," MA, Taiwan: Department of Business Administration, *National Sun Yat-sen University.*

Huang, L.-H. (2008), "The Relationship between the Organizational Change, Leadership Style, Organizational Culture and Job Performance- Evidence from Three Universities in Southern Taiwan," Taiwan: MA, Department of Business Administration, *National Cheng Kung University.*

Huang, P.-H. (2011), "The Relationships between Leadership, Organization Commitment, Organization Culture, Organization Learning and Knowledge Sharing- A Case Study of the Technology Industry," MA, Taiwan: Department of Business Administration, K*un Shan University.*

Jan, C.-Y. (2006), "Organizational Change and How an Organization Copes with it," Taiwan: *NPF Research Report*, *Constitutional Studies (Research No. 095-044).*

Kong, X.-W. (2010), "Organizational culture, organizational change and organizational commitment: A case study of TFT-LCD company A's supply chain," MA, Taiwan: Graduate Institute of Commerce, *National Kaohsiung University of Applied Sciences.*

Leavitt, H. J. (1964). "Managerial psychology (rev. ed.)" Chicago: *The University of Chicago Press, Ltd.*

Lee, Y. J. (2011), "A Case Study on the Effect of Teaching Innovation on Learning Effectiveness: Using a Moderator of 'Integrating Information Technology into Teaching'," *The Journal of Human Resource and Adult Learning*, Vol. 7, No.1, pp.33-46.

Lee[a], Y. J. (2011), A study on school organizational change and its impact on organizational effectiveness: using organizational citizenship behavior and organizational culture as mediators, *African Journal of Business Management (AJBM)*, Vol.5 (30), pp.12086-12098, Internet-issue

Lee[b], Y. J. (2008), "A Study of the Correlation and Performance Evaluation among Innovative Activities, Intellectual Capital and Operational Development: As exemplified with Listed IT Corporations in Taiwan," Ph. D. Dissertation, China*: Ji-Nan University.*

Lee, I.-C. (2002), "A study of organizational culture and knowledge sharing: Taking the example of elementary schools in Taipei County," MA, Taiwan: Graduate Institute of Compulsory Education, *National Taipei Teachers College.*

Lee, Y.-D., Zhang, L., and Lin, K.-T. (1998), "Leadership Style, Satisfaction with Communication and Leadership Effectiveness in Non-private Enterprise," China: *CHINESE JOURNAL OF APPLIED PSYCHOLOGY*, Issue 2, pp. 33-41.

Li, J.-J. (2011), "The Effects of Organizational Culture and Organizational Change on Organizational Effectiveness: Taking the Example of Nursing Homes in Kaohsiung Area," MA, Taiwan: Graduate School of Operation and Management, *Kao Yuan University.*

Li, Y.-H. (2008), "A Study on the Relationship between Principals' Leadership Styles and School Organizational Change in Elementary Schools in Central Taiwan," MA, Taiwan: Department of Educational Policy and Administration, *National Chi Nan University*.

Liao, C.-Y. (2007), "A Study of Relationship among the Commands' Leadership Style and Organizational Change on Constructing Learning Organization, Promoting Organizational Commitment and Improving Work Behaviour in 1st Air Force Area Logistic Command," MA, Taiwan: Graduate School of Business and Operations Management, *Chang Jung Christian University.*

Lin, S. (2011), "A Study on the Effect of Information Technology Application and

Organizational Change on Organizational Performance in Financial Institutions," MA, Taiwan: *Department of Business Administration, National Taipei University.*

Liu, Y.-F. (2004), "The study of Organization Culture and Performance for Kaohsiung Country (City) Land Administration Office," MA, Taiwan: Graduate School of Management Science, *I-Shou University.*

MacKinnon, D. P., Fritz, M. S., Williams, J., and Lockwood, C. M. (2007), "Distribution of the product confidence limits for the indirect effect: Program PRODCLIN," *Behavior Research Methods*, 39, 384-389.

Mitchell, M. A., & Yate, D. (2002), "How to use your organizational culture as a competitive tool," *Nonprofit World*, 20 (2), 33-34.

Rauch, C. F., and Behling, O. F. (1984), "Functionalism: Basis for alternate approach to the study of leadership," In Hunt, J. G., Hosking, D. M., Schrieshieim, C. A. and Stewart, R. (Eds.) Leaders and mangers: International perspectives on managerial behavior and leadership, New York: *Pergamon Press,* 45-62.

Robbins, S. P. (2003), *"Organizational behavior"* (10th ed.) New Jersey: *Pearson Education International, Inc.*

Tseng, H.-C. (2006), "An Empirical Study of the Relationships among Organizational Culture, Organizational Change & Organizational Effectiveness - The case of Chunghwa Telecom Southern Branch," Taiwan: Part-time Engineering Management Graduate Program, *National Cheng Kung University.*

Tamg, M.-D. (2008), "Research on The Relationships Between Organizational Justice, Leadership Style and Locus of Control with Seff-efficacy and Organizational Performance-A case Study on Volunteer Non-Commissioned Officers and Soldiers," EMBA, Taiwan: *Southern Taiwan University of Science and Technology.*

Tien, C.-K. (2010), "Research on the Relations among Media Organizational Culture," MA, Taiwan: Graduate Institute of Adult Education, *National Kaohsiung Normal University*.

Wang, H.-L. (2009), "A Study of the Relationships Among the Leadership Styles, Organizational Culture, Job Performance and Organizational Performance一Banking in Southern Taiwan as an Example," EMBA, Taiwan: *Southern Taiwan University of Science and Technology.*

Wang, H.-T. (2010), "A study of relationship between the organizational culture and the organizational effectiveness and of quality improvement programs in public commercial vocational high schools," MA, Taiwan: Department of Industrial Education, *National Taiwan Normal University.*

Wang, N.-M. (2006), "Applying Structural Equation Modeling to Study the Influence of Leadership, Organizational Culture, Organizational Commitment, Organizational Learning, Knowledge Management, and the Organizational Performance -- An Empirical Study of Life Insurance Finance," MA, Taiwan: Department of Business Administration, *National Dong Hwa University.*

Wen, C.-Y. (1999), "Exploring Leadership Styles, Organizational Change and Resistance: Taking the Example of Taiwan's Three Government-Backed Commercial Banks," MA, Taiwan: Department of Business Administration, *National Central University.*

Weng, S.-Y. (2009), "An Examination of Job Performance in Banking Relating Leadership Styles, Organization Culture, Organization Citizenship Behavior," MA, Taiwan: Department of International Business, *Chang Jung Christian University*.

Wu, C.-S. (2002), "A Study on School Effectiveness," 2nd ed., Taipei City: WU-NAN CULTURE *Enterprise.*

Xing, X., He, J., and Ru, R.-F. (2012), "A Perspective on and a Constructive Approach to School Culture," China: *Educational Science Research*, Issue 7, pp. 46-50.

Ching-Hsiang, Y. (2007), "An Empirical Study of the Relationship among Industrial Environment, Organization Change, Trust, Job Satisfaction and Organization Performance in Banking Industry," EMBA, Taiwan: National Cheng Kung University.

Zhao, M., and Yang, Z. (2012), "An Empirical Study of the Characteristics, Organizational Change Patterns and Effectiveness of Private-Sector Entrepreneurs," China: *Modern Economic Research*, Issue 7, pp. 59-62.