RESILIENT LEADERSHIP MODEL FOR ADMINISTRATORS OF HIGHER ART SCHOOLS IN LIAONING PROVINCE

Li Yuezhu

Peerapong Tipanark

Pornthep Mengman

Educational Administration, Faculty of Education, Bangkokthonburi University

Email: 1144092919@qq.com

ABSTRACT

The objectives of this research were: (1) to determine the components and indicators of resilient leadership required by administrators; and (2) to develop the model of resilient leadership for administrators of Higher Art Schools in Liaoning Province.

The research was a mixed methodology, including qualitative and quantitative research. The population of the research consisted of 4,494 who were administrators, staff and full-time teachers of Higher Art Schools in Liaoning Province. A proportional stratified random sampling method was used to sample, totaling 324 persons. The instruments used for data collection were semi-structured interview and a five-level rating scale questionnaire. The statistical used for data analysis were descriptive statistics and Confirmative Factor Analysis.

The research findings revealed that: (1) there were 7 components and 22 indicators of resilient leadership required by administrators, it consisted of: adaptability and control, mindfulness, interpersonal relationships and support, cooperation and communication, organizational innovation, learning and professional growth, and strategy and decision. (2) The resilient leadership model for administrators of Higher Art Schools in Liaoning Province that developed was consistent with the empirical data. The value of Relative Chi-square (χ^2/df) = 2.00, Degree of Freedom (df) = 121, Goodness of Fit Index (GFI) = 0.95, Tucker-Lewis Index (TLI) = 0.98, and Root Mean Square Error of Approximation (RMSEA) = 0.05, all in line with specified criteria. And the key components had the weight between 0.82-0.98 higher than 0.70.

Keywords*: Resilient Leadership Model, Administrators, Higher Art Schools, Liaoning Province

1. Introduction

At present, the People's Republic of China is in a period of social transformation and economic transition, social contradictions, risks and hidden dangers are constantly emerging, and various risks are accumulated and superimposed, showing a trend of diversification and compounding. General Secretary Xi Jinping pointed out: "Party members and cadres at all levels must adhere to bottom-line thinking, focus on preventing and defusing major risks, and must be highly vigilant not only against 'black swan' incidents, but also against 'grey rhinoceros' incidents. There are good ways to deal with and defuse risks and challenges. It is necessary to fight the preparedness war to prevent and resist risks, and also to fight the strategic initiative war to avert danger and turn crisis into opportunity." Uriel Rosenthal, a Dutch crisis management expert, believes that industrialized society is extremely Vulnerability to a large number and variety of catastrophic events, including technological disasters, social and political crises, etc. The COVID-19 outbreak in early 2020 has the basic characteristics of a crisis such as "uncertainty, suddenness, and variability" (James, 2011; Kahn, 2013; Bundy & Pfarrer, 2015), and it is not only a challenge to the country's public governance capabilities. The severe test is also a test of the enterprise's crisis management ability, prompting entrepreneurs to think seriously about organizational survival and crisis management. At the same time, organizational resilience, as a topic highly related to corporate crisis management, has also received extensive attention from the industry and scholars (Lu Jiangyong & Xiang Peirong, 2021). In this VUCA (Volatility, Uncertainty, Complexity, Ambiguity) era, organizational changes may occur at any time, ranging from mergers and acquisitions, reorganization, or even bankruptcy, to changes in operating methods. Therefore, the ability to respond to and manage change has become a necessary quality for the career and personal development of organizational members.

Resilience is an interactive concept that refers to the relative resistance to the experience of environmental risk, or the ability to overcome stress or adversity. Resilience is a quality of will that leading cadres must possess. Throughout the ages, anyone who has achieved something has been extremely resilient. Adversity can make or destroy a person, it can temper a person's will, and it can also wear down a person's confidence. Today we are in a new era of socialism with Chinese characteristics, facing a new historical development stage, striving towards new development goals, and at the same time facing new major social contradictions, which makes the tasks shouldered by leading cadres and the environment they face more difficult, more onerous, more need to improve resilient leadership (Li Ping, 2019). For an organization to succeed, resilient leadership is the key. It is the core strategic resource

for an organization to get out of crisis and continue to grow. Resilient leadership refers to the ability of leaders to reconstruct organizational resources, processes and relationships in a crisis, quickly recover from the crisis, and use the crisis to achieve growth against the trend when the organization encounters a crisis. This ability is not an inherent characteristic of people, but an ability developed and gradually strengthened by leaders in related activities and experiences. It requires leaders to actively adapt to crises and change their thinking in time to find solutions to crises.

If leaders cannot challenge the inherent sense of self-defense, they will not be able to improve their sensitivity and adaptability to the external environment, let alone build organizational resilience. Resilient leadership is also the wisdom of balancing organizational goals with organizational capabilities. Fragile leaders often lose the ability to see the future because of the lack of this kind of wisdom, resulting in the lack of vision or mediocre vision of the organization (Zhang Hongguo, 2021). The digital information explosion, coupled with technological advancements and societal expectations, has put pressure on organizations, especially higher education institutions, to adapt to the new changing environment. As the modern world changes, higher education is undergoing a dramatic transformation from a stable institution of more than 500 years to a dynamic entity that requires new leadership to meet expectations for innovation and change. This kind of innovation and change is not easy and requires the best leaders to create organizational innovation driven by people who are willing and able to lead. Resilient leaders are a different category of organizational leaders motivated by institutions of higher education that embrace innovation. While the concept of resilience is gaining popularity, empirical research on resilient tissues is actually quite rare (Lane, Kehr, & Richardson, 2009; Shaw, 2012; Walker & Cooper, 2010).

This article will start with the factors of resilient leadership required by administrators, explore the model of resilient leadership for administrators of Higher Art School in Liaoning, and start with research on the identification and confirmation of the model by consulting key informants. After a crisis, risk or accident occurs, whether the organization can quickly recover from it and restore the state of normal operation or achieve the purpose of optimizing operation. This article will develop a resilient leadership model to help organizations, providing problem-solving paths and skills. Developed a model of resilient leadership for the education industry in Liaoning Province and even the whole country, education administrators of higher art schools and related personnel. And enable administrators to fully realize the importance of resilience. Understanding models of resilience in higher education settings will assist current and future managers in their leadership, management, recruitment, and

professional development. It has a relatively wide influence and reference value for the educational development of the country, society and institutions of higher learning, such as administrators, related personnel, teachers and students.

2. Research Objectives

1. To determine the components and indicators of Resilient Leadership required by Administrators.

2. To develop the model of Resilient Leadership for Administrators of Higher Art Schools in Liaoning Province.

3. Research Hypotheses

Resilient leadership model for administrators of Higher Art Schools in Liaoning Province was fit with the empirical data.

4. Research Method

4.1 Research Design

Used mixed method, both qualitative and quantitative, first the qualitative to determine the components and indicators of the resilient leadership model through content analysis from 20 document and research related, included 9 key informants. After that quantitative method was employed to collected the empirical data from the respondent through survey questionnaire

4.2 Population and Sample

The population were administrators, staff and teachers of 40 Higher Art Schools in Liaoning Province, total 4,494 persons. The sample group is used to select respondents by proportional stratified random sampling by using G*Power program. (Set as Chi-square test at: Df = 174, α err prob = .05, Effect size w = 0.4, power = 0.8), totally at least 324 persons.

4.3 Research Instruments

Use the Chinese website "WJX.cn" to create a five-point rating scale questionnaire and manage it on a professional platform for online data collection. It consists of the following three parts.

Part I: Demographic variables, general information of the respondents, totaling 8 items, such as gender, age, education level, position, working years, etc.

Part II: Rating scale questionnaire (Five-point rating scale), which asks about the development of resilient leadership model for administrators of Higher Art Schools in Liaoning Province, totaling 61 items.

Part III: Suggestions and additional comments (Open Ended). All type of questionnaires will be Likert's rating scale with 5 choices (Likert, R. 1932 p. 1-55).

All of these develop are to use the IOC and Cronbach's alpha coefficient to find the validity and reliability.

Validity and Reliability of the instrument. Through the design of the questionnaire, a total of 65 items were obtained. After the IOC conducted by 5 experts, it was found that there were 61 items that were greater than 0.60 and remained.

Scale reliability, refer to the extent that the measurement instrument will consistently yield similar results when administered to the same sample under similar testing conditions. Cronbach's alpha coefficient will be used to measure the degree of the scale reliability. In this study, Cronbach's alpha coefficient above 0.70 is acceptable. In this study, 61 items were statistically analyzed and the data were obtained. All items were higher than 0.80, and the Cronbach's alpha coefficient was 0.99, indicating that the reliability of this questionnaire is very high.

4.4 Data Collection

The steps for data collection will be as follow:

Step 1: Request permission to collect data for research to the BTU Educational Faculty.

Step 2: Request a letter of recommendation for the researcher from the BTU Educational Faculty.

Step 3: Selection the coordinating teachers to help assist in coordinating data collection in each institution. Those will be oriented to understand the details of the questionnaire administration and data collection.

Step 4: Carry out data collection with the selected samples by sending questionnaires to the coordinator teacher who will help for collect data with the selected samples in each school/college/department.

4.5 Data Analysis

4.5.1 Descriptive statistics to describe the demographic variables and to know the characteristics of resilient leadership studied. The analysis was performed using percentage, mean and standard deviation.

Analyzing the model that the resilientt leadership of administrators should be developed. The arithmetic mean was used by the researchers in Best' analysis (John W. Best, 1997: 190).

Data analysis for frequency and percentage in order to know the status of the sample group, i.e., gender, age range, educational level, position level, professional title, work experience, professional attribute, etc.

Average data analysis, Standard deviations and coefficients distribution to determine the suitability of the indicators for the selection of indicators in the model. by specifying the following criteria, the mean value is equal to or more than 3.00 and the distribution coefficient (CV.) is equal to or less than 20% (Suthitt Khonkan, 2004).

4.5.2 Inferential statistics, for development model of resilient leadership for administrators. Confirmatory factor analysis (CFA) will be employed for finding and estimate the parameter in this situation as follows:

1) Data analysis to take into account the suitability of variables to be analyzed for further components by analyzing the Pearson correlation coefficient. In order to determine the degree and direction of correlation, if the variables are not correlated then there is no common component. There was a statistically significant correlation at the .01 level (p< .01) (Nongluck Wiratchai, 1999). Bartlett's statistical analysis, which is a statistical test of the correlation matrix hypothesis between variables and Identity Matrix, considering the Bartlett's test of Sphericity and the probability that Is there an appropriate correlation to be used for further component analysis. By considering the statistical significance and analysis of the Kaiser-Myers-Allkil index. (Kaiser-Mayer-Olkin Measurers of Sampling Adequacy: MSA) Considering the criterion, a value greater than .80 indicates very good, less than .50 indicates invalid (Kim & Muclle, 1978 cited in Somkiat Thanok, 1996)

2) Confirmatory Factor Analysis by testing the conformity of the structural correlation model and weighting the sub variables used to generate the empirical data indicators obtained from the weighted analysis of the data from the questionnaire. The sub variables used to generate the indicators and to verify the coherence of the research model are the theoretical models created by the researcher by analyzing second-order confirmation elements with the empirical data. Thereafter, the coherence of the research model with the empirical data was examined. If the results of the first data analysis do not meet the specified criteria, the researcher must adjust the model to meet the specified criteria. According to the viewpoint of Nongluck Wirachchai (2005), the statistical values to be used as the audit criteria are as follows:

(1) Chi-square Statistics is a statistical value used to test the statistical hypothesis that the function Harmony is zero. The lower the Chi-square Statistics, the closer to zero the model is consistent with the empirical data.

(2) Harmony Level Index (Goodness-of- Fit Index: GFI), which is the ratio of the difference between the harmonious functions from the model before and after the model was adjusted to the harmonization functions before the model was adjusted GFI values from 0.90-1.00 indicate that the model was consistent with the empirical data.

(3) Adjusted Goodness-of-Fit Index (AGFI), in which the GFI is adjusted taking into account the size of freedom (df), which includes the number of variables and the sample size if the AGFI values from 0.90-1.00 indicate that the model is consistent with the empirical data.

(4) Root Mean Square Error of Approximation (RMSEA) error indicates the dissonance of the model generated with the population covariance matrix which is A value of RMSEA less than 0.05 indicates that the model is consistent with the empirical data.

(5) Apply the results of the analysis to verify the consistency of the model. The following criteria were selected for indicators showing Factor Loading: 1) equal to or greater than 0.7 for parent component (Farrell & Rudd, 2011), and 2) equal to or greater than 0.30 for sub-element and identifier (Point Tacq,1997).

Therefore, the researcher used the statistics based on the opinion of Nongluck Wiratchai (2005) as a criterion to check the consistency between the models developed by the researcher from theory and research to empirical data. The variables used to generate the indicators and to verify the coherence of the research model are the theoretical models created by the researcher by analyzing second-order confirmation components with the empirical data. Thereafter, the coherence of the research model with the empirical data was examined. If the results of the first data analysis do not meet the specified criteria, the researcher must adjust the model to meet the specified criteria.

5. Research Results

The research procedures consisted of two steps;

Step (1) Determining the components and variables of Resilient Leadership required by Administrators. It was qualitative research. The researcher has studied related literatures about the concept, principles, and theories, related research on 20 documents as well as in-depth interview from 9 key informants who were deans, department directors and professors in administration from Chinese and Thai Universities, with more than 5 years' experience from

Higher Art Schools in Liaoning Province and Bangkokthonburi University. Snowball sampling method was employed. Semi-structured interview form was used. Data collection was performed by the researcher. The collected data was analyzed by Content Analysis;

  Step (2) Developing the model of Resilient Leadership for Administrators of Higher Art Schools in Liaoning Province. It was quantitative research. The researcher used the components and variables of resilient leadership required by administrators from step (1) to prepare an instrument as a questionnaire as to collect data from samples in order to develop the model of administrators' resilient leadership of Higher Art Schools in Liaoning Province. Population consisted of 4494 who were High-Level Administrators (Dean, Deputy Dean, Party Secretary, Deputy Party Secretary), Staff (Assistant Dean, Party and Mass Organizations, Administrative Staff, Director of Teaching and Research Office, Department Head, Academic Committee, Teaching Steering Committee, Lab Technician) and Full-time Teachers. They came to 40 Higher Art Schools in Liaoning Province, which were Higher Art Colleges and Universities classified according to the comprehensive university. The sample size was approximate 324 samples, determined by the G*Power program, with a proportional stratified random sampling technique. In order to make accuracy in Confirmatory Factor Analysis, the researcher has increased the sample size to be approximate 380 samples. The researcher employed a questionnaire which composed of three parts; Part I: General information of the respondents (Checklist), Part II: Questionnaire about development of resilient leadership model for administrators of Higher Art Schools in Liaoning Province (five-level rating scale), and Part III: Suggestions and additional comments (Opened End), there were a total of 69 questions. Instrument was developed from step (2) as a questionnaire. The quality of questionnaires was assessed by content validity and reliability. For the content validity, it was checked by five experts and analyzed by Item-Objective Congruence (IOC). The item value was ≥ 0.60. For the reliability, it was analyzed by Cronbach alpha at 0.99. The questionnaires were sent by online, mail, and researcher. The data of demographic variables were analyzed by descriptive statistics; frequency, and percentage. The components and variables of administrators' resilient leadership of Higher Art Schools in Liaoning Province were analyzed by descriptive statistics; Arithmetic Mean ($\bar{x}$), Standard Deviation (S.D.), Skewness (Sk.), Kurtosis (Ku.) and Coefficient of Variation (C.V.). The inferential statistics used in the analysis include Pearson Correlation Coefficients and KMO and Bartlett's Test. The components and variables of administrators' resilient leadership were analyzed by Confirmatory Factor Analysis (CFA) to reduce irrelevant variables, with a statistically ready-made program (SPSS) and AMOS program to analyze models. The value of Relative Chi-square (χ^2/df), Degree of Freedom (df), Statistical

Significance (p), Goodness of Fit Index (GFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI) and Root Mean Square Error of Approximation (RMSEA), all in line with specified criteria. From the research objectives, major findings were revealed as follows:
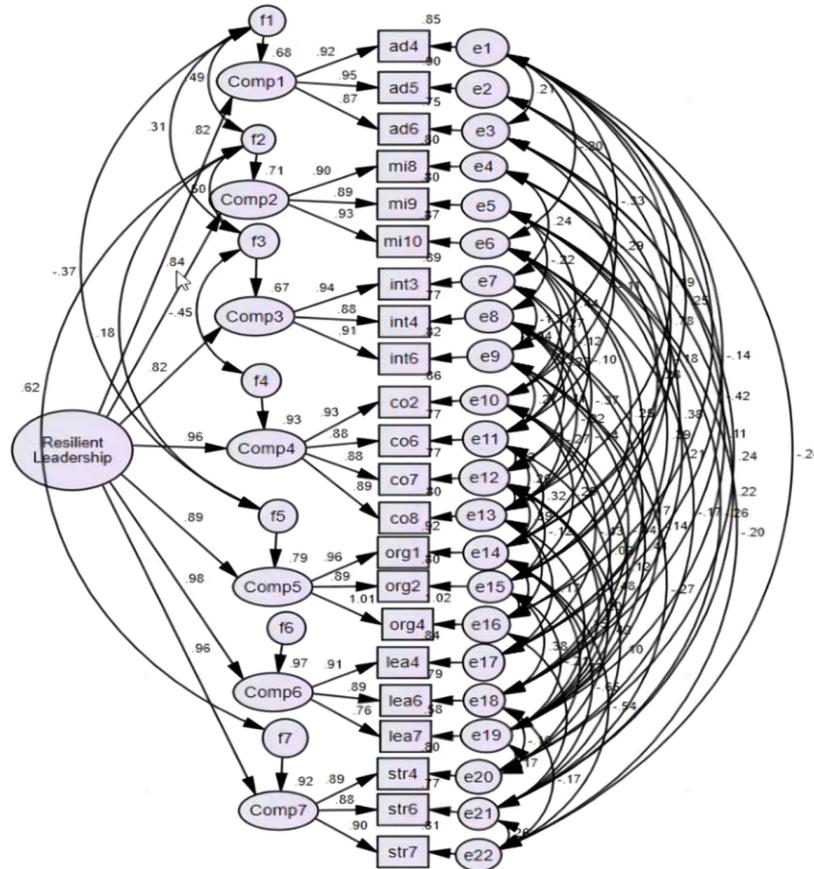
Relative Chi-square = 2.004; df = 121; P = .000;
GFI = .949; TLI = .979; CFI = .989 ; RMSEA = .051;

Figure 1   Show the second order of resilient leadership model that consistent with the empirical data

Table 1   Show statistical value of administrators' resilient leadership model of Higher Art Schools in Liaoning province

	Latent and observable	Standardized Factor loading	Error	S.E.	C.R.	A.V.E.	p	R^2
	Component 1	0.824	0.32	0.05	0.94	0.83	0.00	0.679
	- ad4	0.924	0.15					
	- ad5	0.947	0.10					
	- ad6	0.868	0.25					
Administrator 's	Component 2	0.840	0.29	0.05	0.93	0.82	0.00	0.706
Resilient	- mi8	0.897	0.20					
Leadership	- mi9	0.892	0.20					
	- mi10	0.932	0.13					

	Latent and observable	Standardized Factor loading	Error	S.E.	C.R.	A.V.E.	p	R²
	Component 3	0.821	0.33	0.06	0.93	0.83	0.00	0.674
	- int3	0.945	0.11					
	- int4	0.877	0.23					
	- int6	0.907	0.18					
	Component 4	0.963	0.07	0.06	0.94	0.80	0.00	0.927
	- co2	0.929	0.14					
	- co6	0.876	0.23					
	- co7	0.877	0.23					
	- co8	0.895	0.20					
	Component 5	0.887	0.21	0.05	0.97	0.91	0.00	0.787
	- org1	0.960	0.08					
	- org2	0.892	0.20					
	- org4	1.012	-0.02					
	Component 6	0.985	0.03	0.04	0.89	0.74	0.00	0.970
	- lea4	0.915	0.16					
	- lea6	0.891	0.21					
	- lea7	0.759	0.42					
	Component 7	0.958	0.08	0.04	0.92	0.79	0.00	0.918
	- str4	0.893	0.20					
	- str6	0.877	0.23					
	- str7	0.902	0.19					

Note:

1: Adaptability and Control,   2: Mindfulness,

3: Interpersonal Relationships and Support,   4: Cooperation and Communication,

5: Organizational Innovation,   6: Learning and Professional Growth,

7: Strategy and Decision.

From Figure and Table above the results of the second order by CFA. With the AMOS, the following confirmative index values were obtained: Relative Chi-square = 2.004, df = 121, p-value = 0.000, GFI = 0.949, TLI = 0.979, CFI = 0.989, RMSEA =0.051. By this evaluate index meet the specified criteria Relative Chi-square < 0.2, p > 0.05, GFI, TLI, CFI ≥ 0.95 and RMSEA ≤ 0.05.

Therefore, it can be concluded that the Administrator' s resilient leadership that have 7 components, there are 1) Adaptability and control, 2) Mindfulness, 3) Interpersonal relationship and support, 4) Cooperation and communication, 5) Organizational innovation, 6) Learning and professional growth, 7) Strategy and decision.

Table 2 Show the rank order of Squared Multiple Correlations

Components	R^2	Rank order
Comp6 Learning and Professional Growth.	0.970	1
Comp4 Cooperation and Communication.	0.927	2
Comp7 Strategy and Decision.	0.918	3
Comp5 Organizational Innovation.	0.787	4
Comp2 Mindfulness.	0.706	5
Comp1 Adaptability and Control.	0.679	6
Comp3 Interpersonal Relationships and Support.	0.674	7

From Table 2 in these components that important listed in the following order were the component 6: Learning and professional growth, the component 4: Cooperation and communication, the component 7: Strategy and decision, the component 5: Organizational innovation, the component 2: Mindfulness, the component 1: Adaptability and control, and the component 3: Interpersonal relationship and support, respectively. And the standardized regression weights or factor loading are 0.985, 0.963, 0.958, 0.887, 0.840, 0.824 and 0.821 respectively.

There was total 22 observed variables of administrators' resilient leadership of Higher Art Schools in Liaoning Province. Details were as follows;

1) Learning and professional growth, it's the latent variable that consisted of 3 observable or indicators: lea4, lea6, and lea7.

2) Cooperation and communication, it's the latent variable that consisted of 4 observable or indicators: co2, co6, co7, and co8.

3) Strategy and decision, it's the latent variable that consisted of 3 observable or indicators: str4, str6, and str7.

4) Organizational innovation, it's the latent variable that consisted of 3 observable or indicators: org1, org2, and org4.

5) Mindfulness, it's the latent variable that consisted of 3 observable or indicators: mi8, mi9, and mi10.

6) Adaptability and control, it's the latent variable that consisted of 3 observable or indicators: ad4, ad5, and ad6.

7) Interpersonal relationship and support, it's the latent variable that consisted of 3 observable or indicators: int3, int4, and int6.

In conclusion the model of resilient leadership for administrator at higher art school in Liaoning province as showed in Figure2

Figure 3 Resilient Leadership model Conceptual Chart for Administrators of Higher Art Schools in Liaoning Province

6. Discussion

Discussion about major findings of determining the components and indicators of Resilient Leadership required by Administrators:

There were 7 components and 22 indicators of Resilient Leadership required by Administrators which consisted of (1) Learning and professional growth, (2) Cooperation and communication, (3) Strategy and decision, (4) Organizational innovation, (5) Mindfulness, (6) Adaptability and control, and (7) Interpersonal relationship and support. The major findings were revealed as such because these components and corresponding indicators can improve the resilient leadership for administrators of Higher Art Schools in Liaoning Province and even the whole country. Administrators' resilient leadership can give full play to the initiative and enthusiasm of everyone in the organization and improve the organization's self-regulation and adaptability, which has become the development trend of management research in the new century. This research finding was in accordance with the theories or research of Li Ping, (2019), Jiang Mengting, (2020), Pang Yu, (2020), and Zhang Yuzhuo & Huang Qiao, (2021), which was found that "Behavioral characteristics of resilient leadership", "Resilience leadership improvement path", "Realistic requirements for improving unit management resilience",

"Logic ideas for improving unit management resilience", "Five phases characteristics of leader's resilience", "Competence composition of leader's resilience", "Leaders' actions to inspire resilience", "The thinking dimension of creating a resilient organization", "Practical strategies for building resilient organizations", "Key factors to enhance the resilience of school leaders", "Higher education leaders must successfully complete 5 tasks to maximize resilience", etc. Also, the findings were in the same direction with Hoffman, (2004), Earvolino-Ramirez, (2007), and Lane & Richardson,   (2013).

Discussion about major findings of developing the model of Resilient Leadership for Administrators of Higher Art Schools in Liaoning Province:

The major findings were revealed as such because the development of the resilient leadership model of administrators can enable the members of the organization to have the space for self-adjustment, self-selection, self-management and adaptation to environmental changes under certain conditions, and conduct dynamic management. Resilient leadership model is marked by humanization, pays attention to equality, respects innovation and intuition, emphasizes speed and change, and realizes the transformation from tacit knowledge to explicit knowledge based on information sharing, virtual integration, competition and cooperation, so as to create competitive advantages. This research finding was in accordance with the theories or research of Wang Li & Liao Falan, (2013), Li Jiaqiang, (2017), Lu Jiangyong & Xiang Peirong, (2021), and Zhang Hongguo, (2021) which was found that "Flexibility and resilience -- the strategic choice of crisis decision-making of grass-roots leaders", "The benefits that mindfulness brings to us", "High reliability organization(HRO)", "The crisis command system", "Cultivate balanced thinking", "Inspire collective wisdom - Extraordinary charisma", "Personal resilience: A gateway to organizational health and progress". Also, the findings were in the same direction with Arond-Thomas, (2004), Herrman et al. (2011), Donovan, G. F. (2013) and Farrar, (2017).

7. Recommendations

1. Recommendation for Policies Formulation

After a crisis, risk or accident occurs, can the organization quickly recover from it and restore to normal operation or achieve the purpose of optimizing operation. And they can fully realize the importance of the pre-event behavior, so that the organization can keep alert to the early signals of the crisis under normal conditions. Resilient leadership has also been studied from the perspective of various industries or fields, such as business, politics or

education. Understanding the model of resilience in the higher education environment will help current and future administrators to lead, manage, recruit and develop professionally. Higher education leaders are facing the reality of resilience and need to accept change and maintain survival. In higher education, resilience has two independent structures: the ability to absorb and withstand interference, and the ability to adapt, modify and change when needed. The vulnerability of university external threats forces many university leaders to face huge changes and critically examine their mission. Resilience goes beyond specific response measures and means the existence of organizational resources and capabilities that can be activated when adverse conditions arise. At the basic level, resilience reflects the concept of helping organizational leaders manage the current crisis and build the ability to cope with future interference. Resilience proves that universities are in a changing state, with stronger, more complex and interconnected systems, which require organizational resilience.

2. Recommendation for Practical Application

By sorting out the relevant literature on resilient leadership at home and abroad, and interviewing education key informants. Through content analysis, the components and indicators of resilient leadership required by administrators are obtained. Understand the importance of these indicators, as well as their application and actual effects in different management fields. Design a questionnaire and apply it to a specific population and sample. Through empirical research and statistical data analysis, a resilient leadership model for administrators of Higher Art Schools in Liaoning Province is developed. This model can bring some guidance and influence to the administrators of Higher Education in Liaoning Province and even the whole country. Through statistical data to verify the resilient leadership model for administrators of Higher Art Schools in Liaoning Province. After comparing the corresponding standard value and the hypothesis testing, it is found that the resilient leadership model that developed is consistent with the empirical data. Finally, a set of feasible development model is determined, which can be applied to the practice of administrators in domestic and foreign higher education in management. Leaders can refer to this model to consider their own problems in management and crisis, and improve themselves according to the development model of resilient leadership to make their leadership more resilient. It has practical application and promotion significance for higher education, school development, management of teachers, personnel and students.

3. Recommendation for Further Research

Through systematic and sustained research, this dissertation expects to get a set of development models of resilient leadership with theoretical and practical significance. It aims

to formulate action policies for building a high-quality characteristic university and taking the path of sustainable development. Cultivate a healthy force leading China's development, contribute management ideas and wisdom to mankind, and have senior management talents and leaders with international vision, innovation ability, entrepreneurship and sense of social responsibility. Higher education can benefit from the research of resilient leadership model and how the model can help organizations become more innovative, intelligent, adaptive and successful. Cultivate the resilience and leadership of administrative managers, so that they can diverge their thinking under difficult circumstances, have clear goals, and effectively deal with various problems to obtain the best solution. To comprehensively improve management ability in administrative work, academic, personnel, education and teaching, talent training, etc. So as to develop resilient and visionary leaders, highly dedicated teachers and proactive students. Make contributions to Higher Education in the 21st century.

The results of this study found that 3 of the 7 components had the highest comprehensive statistical values, namely, "Learning and Professional Growth", "Cooperation and Communication" and "Strategy and Decision".

1. "Learning and Professional Growth", it consists of:

(1) Leaders can transform the power of change and positive thoughts into reflective resilience, and learn, grow, and evolve from traumatic experiences.

(2) Leaders use appropriate forms (individual learning and collective learning) to ensure organizational learning and optimize organizational structure to better respond to environmental changes.

(3) Continuous organizational learning is an effective way for organizations to enhance their ability to diagnose crisis, restore normal operation and management, and survive the crisis smoothly.

2. "Cooperation and Communication", it consists of:

(1) Leaders can establish and maintain an effective leadership team and cultivate resilience and optimism in facing today's challenges.

(2) Leaders can communicate regularly and widely, and understand the situation while helping to build a sense of pride in the smooth progress of the event.

(3) Through peer review, leaders can visit other forces, learn from others and share good practices.

(4) Leaders work with teams to develop communication skills and are good at mediating mutual misunderstandings, confusion, accusations, alienation and hostility.

3. "Strategy and Decision", it consist of**:**

(1) Leaders integrate emergency agencies into the standardized organizational system and coordination structure through flexible organizational construction and adjustment.

(2) Leaders are good at sharing short-term decisions, medium-term commitments and future long-term strategies and taking innovations.

(3) Leaders can use technology to improve the ability to discover, identify, manage and control potential risks.

This has pointed out the direction of management for the administrators of Higher Art Schools in Liaoning Province, defined the management objectives, and composed the management guidelines. In the future, the administrators can consciously and effectively manage their own organizations in accordance with the above 3 aspects, so that the leaders of Higher Education in Liaoning Province and even the whole country can maximize their resilient leadership. It has a wide range of influence and reference value for the educational development of the country, society and universities, such as administrators, relevant personnel, teachers and students.

Bibliography

Arond-Thomas, M. (2004**). Resilient leadership for challenging times**. Physician Executive, 30(4), 18-21.

Barbara M. Byrne. (2016). **Structural Equation Modeling with AMOS Basic Concepts, Applications, and Programming**, Third Edition. First Published 2016 eBook Published 30 June 2016. Pub. New York: Imprint Routledge.

Cortina, J. M. (1993). **What is coefficient alpha? An examination of theory and applications**. Journal of Applied Psychology, 78(1), 98–104.

Connor, K. M., & Davidson, J. R. T. (2003). **Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC)**. Depression & Anxiety (1091-4269), 18(2), 76–82.

Creswell, J. W., & Plano Clark, V. L. (2018). **Designing and Conducting Mixed Methods Research** (3 ed.). Los Angeles: SAGE Publications, Inc.

Donovan, G. F. (2013). **Personal resilience: A gateway to organizational health and progress**. Frontiers of Health Services Management, 30(2), 36-42.

Earvolino-Ramirez, M. (2007). **Resilience: A concept analysis**. Nursing Forum, 42(2), 73-82.

Field, A. (2005). **Discovering statistics using SPSS** (2nd ed.). Thousand Owes CA: Sage.

Faul, F., Refolded, E., Buchner, A. & Lang, A. G. (2009). **G*Power 3.1: Tests for correlation and regression analysis**. Behavior Research Methods. 41 (4): 1149-1160.

Farrar, J. J. (2017). **Resilient leadership**. International Journal of Emergency Services, 6(3), 238-246.

Hoffman, J. N. (2004). **Building resilient leaders**. Leadership, 34(1), 35-38.

Hermann, H, Distort, D.E, MD; Diaz-Granados, N,MSc.; Berger, E. L, DPhil;Jackson, B, PhD& Yuen, T, BSc. (2011). **What is resilience**?. Canadian Journal of Psychiatry, 56(5), 258-65.

Hair, J. F., Hult, G. T. M., Ringle, C. M., and Sarstedt, M. (2022**). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)**, 3rd Ed., Sage: Thousand Oaks.

Jiang Mengting. (2020). **The Connotation and Enhancement Logic of Unit Management Resilience**. Leadership Science (24), 71-73.

Kelloway, E.K. (2015). **Using Mplus for Structural Equation Modeling; A Researcher's Guide**. CA: Sage Publications.

Liu, X. (2010). **Using and developing measurement instruments in science education: A Rasch modeling approach**. Charlotte, NC: Information Age.

Lane, K. E., McCormack, T. J., & Richardson, M. D. (2013). **RESILIENT LEADERS: ESSENTIAL FOR ORGANIZATIONAL INNOVATION**. International Journal of Organizational Innovation (Online), 6(2), 7-25.

Li Jiaqiang. (2017). **Mindful Leadership Promotes Organizational Change.** Tsinghua Management Review (04), 66-73.

Li Ping. (2019). **The Connotation of Resilient Leadership and its Improvement Path**. Decision and Information (11), 97-104.

Lu Jiangyong & Xiang Peirong. (2021). **Crisis Process Management: How to Improve Organizational Resilience?**. Foreign Economics and Management (03), 3-24.

Meyers, L. S.; Glenn,G.; & Guarino, A. J. (2006). **Applied Multivariate Research: Design and Interpretation**. Thousand Oaks; London; New Delhi: Sage.

Nunnally J. C. & Bernstein I. H. (1994). **Psychometric theory**. New York, NY: McGraw- Hill.

Nonglak Viratchai, (2005). **Statistics Chuan Singh**. Bangkok: Chulalongkorn University Press.

Pang Yu. (2020). **Leadership resilience from the perspective of risk society: representation, concept and framework**. Journal of Shaanxi Administration Institute (01), 20-24.

Qi Jia, Li Yi & Cao Xiaoxu. (2021**). On the problems and Countermeasures of the development of higher art education in China**. Art Education Research (07), 82-83.

Shamer, S., Mukherjee, A., Kumar, A. & Dillon, W. R. (2005). **A simulation study to investigate the use of cutoff values for assessing model fit in covariance structure models**. Journal of Business Research, 58, 935-943.

Sergeant, J., & Laws-Chapman, C. (2012). **CREATING A POSITIVE WORKPLACE CULTURE**. Nursing Management (through 2013), 18(9), 14-9.

Van Gorder, Christopher D, FACHE. (2013). **Building organizational and personal resilience**. Frontiers of Health Services Management, 30(2), 25-30.

Wu zhihong. (2001). **Educational administration**. People's Education Press.

Wang Li & Liao Falan. (2013). **Analysis on the "Elasticity" and "Resilience" of Grassroots Leaders in Crisis Decision-Making.** Leadership Science (05), 59-60.

Weiner-Friedman, H. (2016). **Resilient leadership and effective school reform (Order No. 10098982)**. Available from ProQuest Central.

Wang Jing & Chen Yu. (2017). **Re-research on the ideas and countermeasures to promote the internationalization of higher art education in Liaoning**. Journal of Dalian University (04), 71-74.

Wang Yong & Cai Juan. (2021). **Research on the impact mechanism of positive leadership of enterprise managers on organizational resilience**. Journal of Capital University of Economics and Trade (02), 92-102.

Yu Xiaonan & Zhang Jianxin (2007). **Comparison of the application of the Self-Resilience Scale and the Connor-Davidson Resilience Scale**. Psychological Science (05), 1169-1171.

Zhang Jing. (2019). **Promote the development of higher art education in the new era with cultural confidence**. Art Education (04), 221-222.

Zhang Hongguo. (2021). **Leaders' Resilience and Leadership Improvement Ideas**. Leadership Science (02), 88-90.

Zhang Yuzhuo & Huang Qiao. (2021). **The thinking direction and practical strategy of leaders to build a resilient organization**. Leadership Science (08), 54-57.