

STUDY OF THE ORGANIZATIONAL LEARNING CULTURE OF AN EXCELLENT SCHOOL IN YONGZHOU, CHINA

Ailan Yuan¹
Anchalee Chayanuvat²

Received: 7th July 2021

Revised: 17th April 2022

Accepted: 1st July 2022

Abstract: This research aimed to study excellent schools' organizational learning culture in Yongzhou, China. It adopted a mixed methods approach, collecting both quantitative as well as qualitative data. The quantitative data were gathered from a sample group of 439 teachers from the school who filled out the 39-item questionnaires, while the qualitative data were from in-depth interviews with the three school principals. Quantitative data were analyzed by factor analysis employing both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Qualitative data were analyzed by content analysis for emerging themes.

The findings revealed from the questionnaire data analysis identified five aspects that shaped the organizational learning culture: learning strategies to adapt to changes, sharing vision, establishing a cooperative culture, encouraging innovation, and team learning. From the principals' interviews, four factors emerged. They were similar to those found in factor analyzing the quantitative data except for sharing vision. This could be explained that the principals may have believed that sharing vision was not highly significant for the schools because, as leaders of the schools, it was their responsibility, not the teachers', to participate in planning for the schools.

Keywords: Organizational learning culture; excellent schools

Introduction

As the world changes rapidly, schools are subject to various influences (Sisson & Ryan, 2016; Henning, 2018). For example, as the global economy is closely linked, students have more choices when choosing a school. This has led today's schools to face more challenges, requiring them to learn faster than ever before and urging teachers to become "knowledge workers" to effectively

¹ Ed.D., Candidate in Doctor of Education in Educational Studies, Graduate School of Suryadhep Teachers College, Rangsit University, Thailand. ailanyuan666@gmail.com

² Ed.D., Lecturer Ed.D. Program in Education Studies, Graduate School of Suryadhep Teachers College, Rangsit University, Thailand. chayanuvata@gmail.com

cope with the ever-increasing pressure brought about by the rapidly changing environment (Retna, 2016). Schools need to provide students with the knowledge and skills they need so that students can succeed in a tomorrow full of uncertainty and change (Ariel & Cohen-Vogel, 2016). Therefore, more and more scholars, educators, and policymakers have introduced the concept of "organizational learning" into schools. Hope schools can respond more quickly to the constantly changing external environment, embrace innovation, organize members to learn from each other, improve the professional ability of teachers, and ultimately improve students' academic performance (Downey & Alcaraz, 2019). Thus, all schools must adapt in various ways to cope with changes.

Organizational learning theory has been developed in the practice of management theory since the 1990s (Brix, 2017). The formation of a good organizational learning culture not only contributes to the change of personal knowledge, beliefs, and behaviors but also transforms and promotes team creation, uses and transforms knowledge, uniforms and enhances the organization's ability to continue to innovate to adapt to the ever-changing environment (Xie, 2019). This shows that schools can no longer stay the same as choosing to maintain traditionally and adopt practices more suitable for the 21st-century world.

The type of school in the study is junior high school, which belongs to ordinary elementary education in basic education. Kress & Schmitten (2011) believes that the middle grade is that we must put young people on the right path. This is their last and best chance in life. The development of young children may only surpass the importance of learning and developing good habits. To make future decisions, it is essential to develop personality traits, courage, curiosity, and study habits. Mee & Haverback (2017) point out that the behavior of middle school students in the past three years will change greatly, so this is a critical time for learning.

Research Objectives:

There were three research objectives:

1. To study the organizational learning culture of an excellent school in Hunan.
2. To design a model of organizational learning culture of an excellent school in Hunan.

Literature Review

The organizational learning culture perspective is a perspective that has received attention in recent years. It understands organizational learning more from the collective level, emphasizes establishing a set of norms and values that support organizational learning, and achieves a higher level by changing members' behavior and cognition. Previous studies have shown that organizational learning culture is positively related to organizational learning ability and effectiveness, which positively impacts organizational innovation ability and environmental responsiveness (Fiol & Lyles, 2005; Hurley & Hult, 2008; Kandemir, 2005). Literature has pointed out that organizational learning culture is key to organizational growth and development if learning in the workplace is properly managed.

Organizational learning culture refers to the artifacts developed by people in the process of adapting to the environment inside and outside the organization, as well as the values and basic assumptions (Schein, 1996, p.9). Nelson (2003, p.173) believes that the school organizational culture comprises values and beliefs, traditions and manners, history, and stories. It comprises six major elements, including figures and a code of conduct. The evolution of organizational culture innovation is a spiraling upward process. The change of mindset guides members to change their behavior and style, thus forming a new organizational learning culture. So, in the development process of school organizations, the organizational culture is evolved to increase the efficiency of cultural integration. Generally speaking, different cultures can better promote mutual development only by integrating communication and interaction equally. Therefore, we must strengthen communication and interaction to unblock and integrate culture, and language is the most important tool for inter-subject communication and interaction (Popper & Lipshitz, 2000). This study presents four major theorists who propose concepts of the learning organizations in which organizational learning is a major component. No learning organization can exist without solid learning. In the following section, organizational learning is presented and discussed in relation to the thesis of the study.

Conceptual Framework

Figure 1 is the conceptual framework of this study based on the theories presented below.

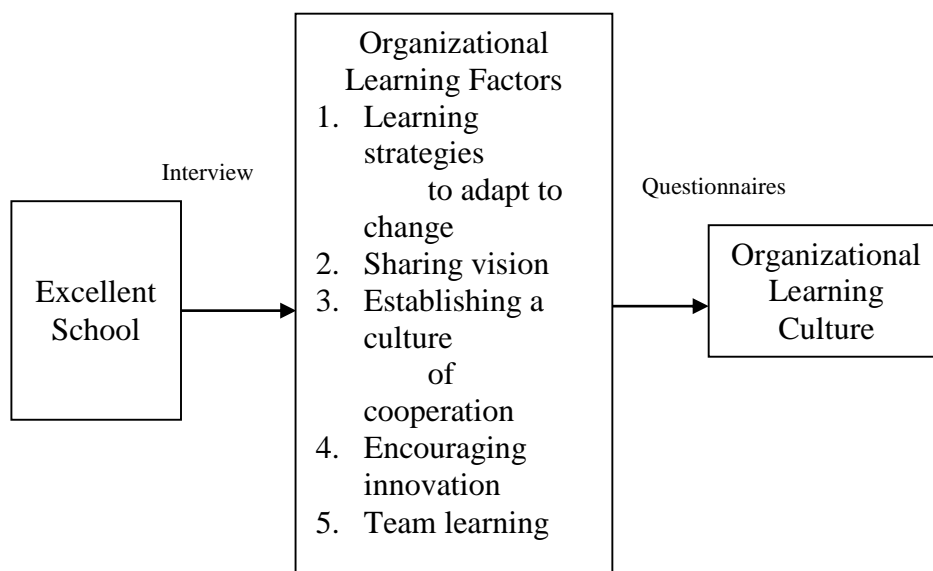


Figure 1. Conceptual Framework of this Study

Research Instrument

Research Design

This research aimed to investigate the organizational learning culture of excellent schools. Questionnaires were used to collect data from the teachers in their schools to study the organizational learning culture of an excellent school in Yongzhou. Interviews with the principal verify the questionnaire results and hope to obtain more information about the school culture.

Population

The researcher selected an excellent school in Yongzhou. In this study, 439 full-time teachers filled out the questionnaire.

Research Instruments

The two research instruments were adopted, the teachers' questionnaires and the principals' interviews.

The Questionnaire for the Teachers

The first part of the questionnaire included general information about the teacher, such as age, gender, educational background, and working time in the school.

The initial stage of quantitative research was the development of the variable table of the organizational learning process and variable scale of organizational learning effect (Marsick & Watkins, 2003, Fullan, 2007; Reese, 2020; Hord, 2004; Collinson & Cook, 2007; Garvin & Gino, 2008; Brix, 2019) the participants were asked to fill the questionnaire. The main part of the organizational learning process force variable scale includes five aspects: Learning strategies to adapt to changes (9 items), Sharing vision (9 items), and Establishing a culture of cooperation (7 items).; Encouraging innovation (7 items); Team learning (7 items) (see Appendix B). The questionnaire respondents were asked to select a score from 1-5, a Likert scale that was close to their opinions of what happened in the schools, value 5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree (Likert (1932).

The Interviews for the Principals

The researchers intentionally created a sufficiently wide range of questions to obtain answers, which can be used for reference later. The interview questions were as follows: 1. Can you tell me about your school's learning strategies to adapt to changes? 2. What is the culture of cooperation in your school? Please explain. 3. Does the school encourage innovation? In what ways? 4. Do you think teachers in your school can work in teams?

Data Analysis

Quantitative data were analyzed by factor analysis employing both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Qualitative data were analyzed by content analysis for emerging themes.

Findings

The following sections explain the details of the findings of Part one of the questionnaire respondents of three schools.

Table 1. Summary of General Information of the Questionnaire from the Three Excellent Schools

Items	Category	Number (person)	Percentage
Gender	Male	258	58.77
	Female	181	41.23
	Total	439	100
Age	18-29	133	30.3
	30-39	97	22.1
	40-49	144	32.8
	50 and above	65	14.8
	Total	439	100

Items	Category	Number (person)	Percentage
Education Background	Bachelor's degree	402	91.58
	Master's degree	6	1.37
	Doctoral degree	1	0.22
	Others	30	6.83
	Total	439	100
Length of service	Less than one year	72	16.4
	1-5 years	174	39.64
	6-10 years	33	7.51
	More the ten years	160	36.45
	Total	439	100

To summarize, 439 teachers from the target schools participated in this questionnaire survey. Most teachers in the target school are young people aged 18-29, accounting for 30.3 percent. Most teachers have a bachelor's degree, accounting for 91.58 percent. Most teachers have served in the school for more than one year but less than five years.

Exploratory Factor Analysis Process for the Three Schools

KMO and Bartlett tests were performed to determine the suitability of the sample for exploratory factor analysis or late exploratory factor analysis. The results are shown in Table 2 below:

KMO and Bartlett's Test Tables		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.973
Bartlett's Test of Sphericity	Approx. Chi-Square	22671.97
	df	595
	Sig.	.000

Bartlett's spherical test value is large enough, and the Sig value is 0.000, less than 0.05, which has a correlation and is suitable for factor analysis. The KMO value is 0.973, which is more than 0.6. It is suitable for factor analysis.

Extract Common Factors

Table 3 is the result of factor contribution, that is, the result of principal component extraction. The eigenvalues represent the importance of the common factor and explain how much information of the original variable can be expressed after the common factor is extracted. The variance contribution rate measures the relative importance of public factors; the larger the value is,

the more public factors contribute. The cumulative contribution rate is the amount of original information accumulated after the first common factors are extracted according to the variance contribution rate. Table 4.19 captures the results of the six common factors. From the table, the cumulative variance contribution rate is 83.8, which shows that these five common factors can explain the original information well. The total information is 83.232%, which is higher than 75%.

Table 3. *Total Variance Explained*

Factor	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	26.484	71.83	71.83	28.014	71.83	71.83	10.753	27.571	27.571
2	2.144	4.882	76.712	1.904	4.882	76.712	7.813	20.033	47.604
3	1.582	2.721	79.433	1.061	2.721	79.433	6.515	16.704	64.308
4	1.336	2.041	81.474	0.796	2.041	81.474	5.923	15.186	79.495
5	1.136	1.758	83.232	0.686	1.758	83.232	1.457	3.737	83.232
6	0.815	2.09	85.89	-	-	-	-	-	-

Common Factor Naming

Table 4 shows the factor loading matrix after rotation. Through factor rotation, each factor will have a clearer meaning. The rotation method is the orthogonal rotation method standardized by kaiser. The absolute value of the option is set to the minimum standard of 0.4, and the value less than 0.4 will not be displayed in the table, making the components of the common factor clear.

Table 4. *Rotated Factor Matrix*

Item	Rotated Factor Matrix				
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
2					0.797
3					0.91
4					0.715
5					0.905
6					0.326
7					0.936
8					0.835
9					0.847
10		0.725			

Item	Rotated Factor Matrix				
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
11		0.788			
12		0.707			
13		0.878			
14		0.942			
15		0.703			
17		0.758			
18		0.859			
19			0.651		
20			0.654		
21			0.682		
22			0.747		
23			0.751		
24			0.752		
26	0.873				
27	0.851				
28	0.949				
29	0.783				
30	0.757				
31	0.804				
32				0.802	
33				0.731	
35				0.686	
36				0.75	
37				0.751	
38				0.829	
39				0.835	

Note: Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization. a. Rotation converged in 4 iterations.

It can be clearly seen from Table 4.20 that the factor load after rotation is between 0.60-0.8, which is higher than the standard of 0.6, indicating that the questionnaire has good structural validity. Therefore, common factors can be named according to the above results. F1 dominated items 26-31, entitled "Encouraging Innovation"; F2 dominated items 10-15,17,18, entitled "Sharing Vision"; F3 dominated items 19-24, entitled "Establishing a Culture of Cooperation"; F4 dominated items 32, 33, 35-39, entitled "Team Learning"; F5 dominated item 2-9, entitled "Learning Strategies to Adapt to Changes".

Confirmatory Factor Analysis

Through exploratory factor analysis of N=439 samples, this research has initially obtained a five-factor model of organizational learning, including learning strategies to adapt to changes, sharing vision, establishing a cooperative culture, encouraging innovation, and team learning. To further test the rationality of the five-dimensional structure of organizational learning, this research continues to conduct confirmatory factor analysis to test the theoretical relationship between the observed indicators and their respective dimensions. Considering the small sample size, this study uses AMOS, which is more suitable for small samples, for confirmatory factor analysis.

Model Fit Indices

The fit of the confirmatory factor analysis index of the organizational learning questionnaire is shown in Table 4.25. In the chi-square test of goodness of fit, the structural model fit index CMIN/DF is 2.155, and the fit index is between 1-3, indicating a high degree of fit. In addition, RMSE=0.0974<0.1, GFI=0.911>0.9, CFI=0.902>0.9, TLI=0.914>0.9, confirmatory factor analysis indicators are all within a reasonable range. Thus, the five-factor model of organizational learning culture has been confirmed.

Table 4.25 *Model Fit Indices*

Fit Indexes	Model Fit Indices	
	Acceptable Level Result	Value with a non-significant p-value
Chi-square		
Normed Chi-square (CMIN/DF)	<3.00	2.155
Goodness-of-fit Index	>= 0.90	0.911
Adjusted Goodness-of-fit Index	>= 0.90	0.974
Tucker-Lewis Index (TLI)	>= 0.90	0.914
Comparative Fit Index (CFI)	>= 0.90	0.902
Root Mean Square of Error Estimation (RMSEA)	<= 0.10	0.097

Five-Factor Model of Organizational Learning Culture

The confirmatory factor test is used to fit the five-factor ideal model obtained by exploratory factor analysis. Finally, a fully standardized solution of the five-factor model of organizational learning culture is obtained. The analysis result is shown in Figure 2.

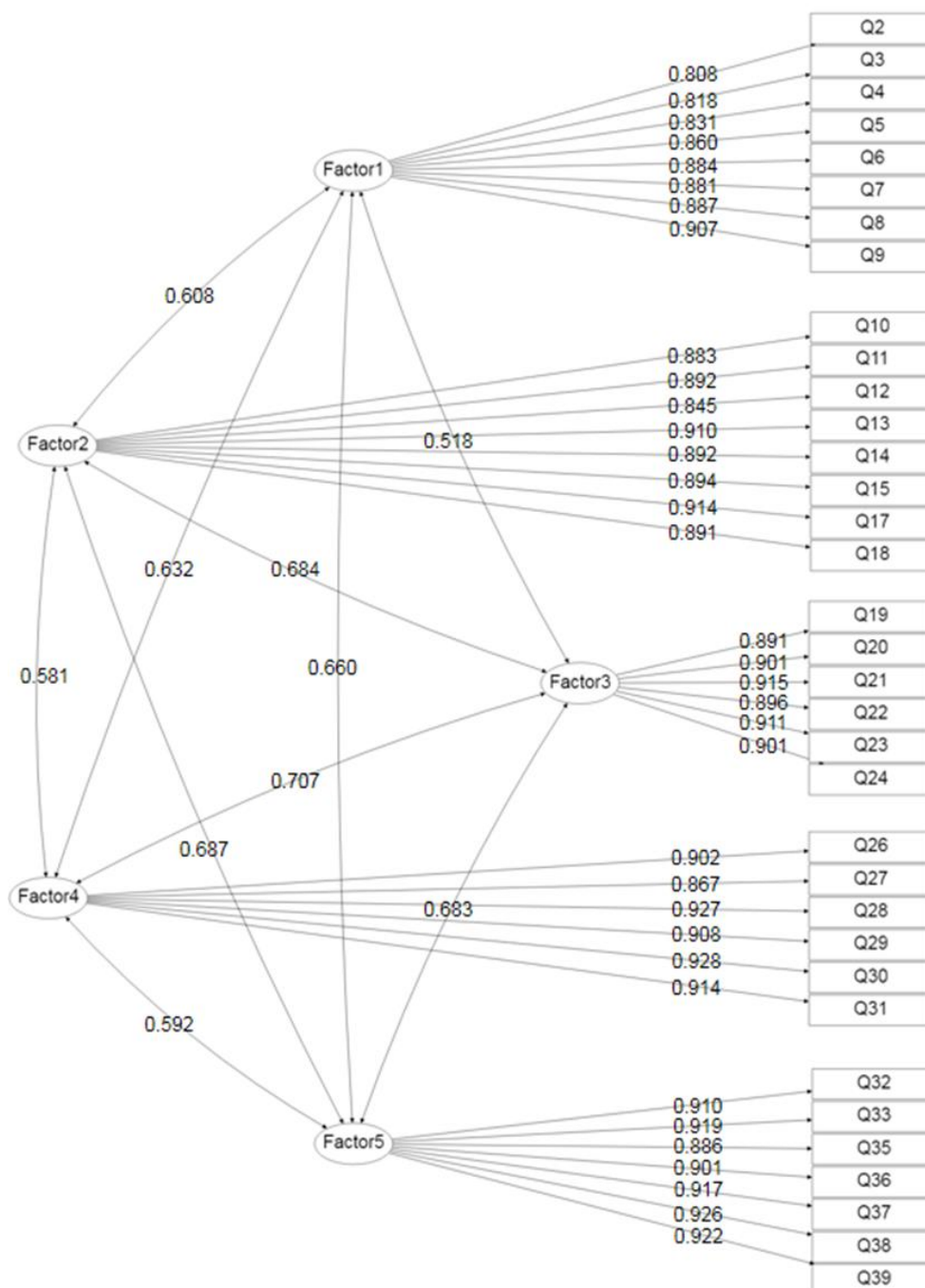


Figure 2. Five-factor Model of Organizational Learning Culture

Findings from the In-depth Interviews

Developing content categories is a set of procedures whereby data are combined in new ways after open coding by making connections between categories. When categorizing the 19 themes, they can be divided into four concepts: learning strategies to adapt to changes, establishing a culture of cooperation, encouraging innovation, and team learning.

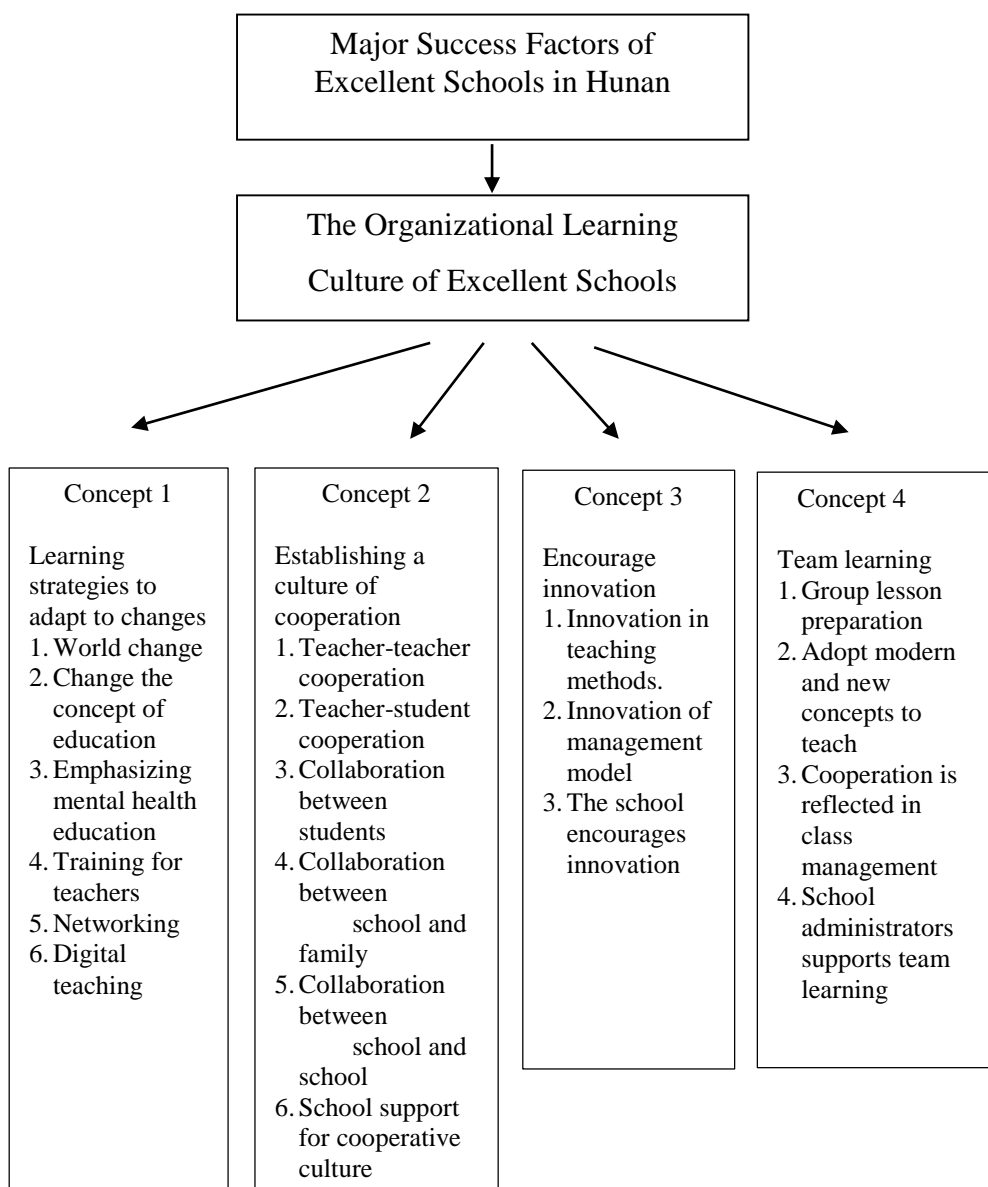


Figure 3. A Map Showing the Data Analysis Process

There were 192 thought units within the first step, and the units were grouped into 19 categories, which eventually were coded into four concepts.

There were six development content categories, namely 1. World change 2. Change the concept. 3. Emphasizing mental health education, 4. Training for teachers, 5. Networking, 6. Digital teaching, and finally, the coding unit/concept as "Learning strategies to adapt to changes."

Six development content categories under the coding unite "Established culture of cooperation," 1. Teacher-teacher cooperation, 2. Teacher-student cooperation, 3. Collaboration between students, 4. Collaboration between school and family, and 5. Collaboration between school and school, 6. School support for cooperative culture.

The third box show 3 Development content, namely: 1. Innovation in teaching methods, 2. Innovation of management model, 3. The school encourages innovation under the final coding unit of "Encouraging Innovation."

The fourth box contained three development content categories: 1. Group lesson preparation, 2. Adopt modern and new concepts to teach, 3. Cooperation reflected in class management, 4. School administrators support team learning. They were major elements of "Team Learning."

The following proposed model for organizational learning culture based on responses to the questionnaire and interview reveals that the schools are excellent because of their organizational learning culture. The teachers and principals mentioned this learning culture consisted of 4 common aspects. They learn strategies to adapt to changes, share visions, establish a cooperative culture, encourage innovation, and encourage team learning.



Figure 4. A Model for Organizational Learning Culture

Discussion of Findings

Through all the quantitative and qualitative research results, to improve the school's organizational learning ability and effectiveness, and competitiveness of the school, the basic framework of the organizational learning school has emerged: the school should have learning strategies to adapt to changes, be willing to share concerns both within the school and beyond, and establishing a culture of cooperation, encouraging innovation and team learning. School teachers have a strong awareness of independent learning and organizational learning. Engström & Käkälä (2019) proposed different forms of organizational learning. There must be a learning system, an incentive, and an innovation mechanism. There must be a teacher learning process that supports open communication, communication, and dialogue systems; encourages innovation and autonomy; have school expectations and clear goals; share information and participate in decision-making; have a cultural environment of trust and cooperation.

Learning Strategies to Adapt to Changes

Research shows that learning strategies that adapt to changes are one of the main characteristics of an organizational learning culture. Today's society is an era of rapid technological development and knowledge changes with each passing day. Especially in the context of the new curriculum reform of basic education, new learning techniques are widely used, subject boundaries are blurred, and learning will be integrated with the curriculum. This means facing the challenge of a strict distinction between the curriculum and the standard structure. Schools must actively respond to such changes and formulate learning strategies to adapt to changes so that teachers can learn comprehensively, including changes in thinking, innovations in teaching methods, and teaching forms. Teachers should have a strong sense of independent learning and team learning; teachers must have great enthusiasm for learning and realize that lifelong learning is not only an idea, an attitude but also a need, which is necessary for life. Learning is a kind of responsibility, a kind of transcendence and mediocrity. Learning is a kind of reflection and dialogue, a kind of interaction, a kind of survivability. To build an organizational learning school, everyone in the team needs to have a strong desire and ability to learn, have a strong learning atmosphere, continuously improve thinking patterns and abandon bad ways of thinking, focus on system thinking and solve problems with a global perspective. Good at using conflict to learning, good at innovation, and continuous pursuit of personal and organizational development (Garvin, 2008; Nisbet & Shucksmith, 2017; Collinson & Cook, 2007; Banisch & Olbrich, 2019).

Therefore, school leaders should have learning strategies to cope with changes. Secondly, create a positive learning atmosphere, share the cultural atmosphere, learn in action, continuously stimulate schoolteachers' desire and ability to learn, and form a spiritual temperament of self-transcendence. Schools should also construct a system and incentive mechanism for organizational learning so that schoolteachers can form a holistic, dynamic, holistic, and interactive thinking mode and consciously improve it. Under the school's common vision, cultivate the team learning spirit of schoolteachers.

Share Vision and Established Cooperative Learning Culture

The results show that the basic condition for establishing an organizational learning school is that the school must have a common vision and establish a cooperative learning culture. Without a shared vision, there can be no learning organization. A common vision is a common goal from the heart of all members of an organization. The integration of the common vision within a group can determine the code of conduct supported by everyone and connect itself with the organization with the goals, values, and missions shared by all. Be proactive and sincere. Organizations are trying to bring everyone together with a common vision. As individuals, they must be good at integrating the school's ideas into actual behaviors and work hard to realize the common aspirations in the organization (Senge, 2014; Retna, 2016).

The unique personality of each school means that the school's common values permeate the day-to-day behavior of faculty and staff, including honor, making promises, and the individual's ability to improve organizational learning. At the same time, as a learning organization school, it must cultivate a culture in which everyone's learning is valued, encouraged, and supported. In such a school, all the faculty and staff will consciously collaborate, learn, and work together to solve problems directly related to classroom teaching practices that can positively impact student learning. Within the school, shared values and visions play a particularly important role in implementing the school's rules of conduct. The role of these rules shows that the students' learning responsibility, a good environment, smooth communication, personal ambitions, and team goals are organic. Balance, trust atmosphere, etc. This coordinated team effort is rooted in The shared values and vision to achieve the ultimate goal have played a good role in promoting students and school professionals to obtain high-quality learning capabilities (Lau & Chung, 2019; Harris & Jones, 2018; Lerer & Peysakhovich, 2017; Elbaz, 2018; Harris & Jones, 2018).

The school culture of a learning school is a culture of learning and sharing, which is mainly manifested in First, professional cooperation. The school has

different professional learning communities to discuss and solve professional problems. The second is power-sharing. Teachers like to discuss some issues together and support each other. The third is to act and reflect. Teachers like collective reflection, collective exploration, and sharing. The school's learning and sharing culture is a positive culture. In schools with a learning and sharing culture, teachers often discuss and solve problems together. The fourth is the sense of effective energy. Teachers like to work in school and have a sense of belonging (Deal & Peterson, 2016).

Encourage Innovation

The core system guarantees that constructing organizational learning in school encourages innovation. School management is naturally inseparable from the school's strict and complete rules and regulations. The System is the institutional framework for the orderly operation of schools. At the same time, it is the source of school development and innovation. The school system is the internal norms and laws governing the behavior of the various components of the school and the behavior of the school itself. It is also to maximize the mobilization and exert the enthusiasm and potential of the behavior of the various components and the behavior of the school itself because it is the commonality of teachers' and students' promises (Schleicher, 2015; Saadat, 2016; Speck, 2019).

At the same time, Van and Besthorn (2017) proposed the establishment of a scientific and reasonable incentive and innovation mechanism conducive to promoting schoolteachers' organizational learning and the innovation and sharing of school knowledge. It is necessary to pay attention to the motivation of individuals and, more importantly, teachers' motivation. The motivation of job contribution should pay more attention to the motivation of teachers' work innovation, not only the motivation of teachers' work results but also the motivation of teachers' work process.

Team Learning

The focus of establishing an organizational learning school is how to let the team learn. Team interactions are related. Through dialogue and skill discussions, a small number of employees have changed their collective thinking, learned to mobilize their energy and actions to achieve common goals, and gained greater wisdom and abilities than the team. The sum of the talents of individual members. Specifically, organizational learning theory focuses on organizations' individual and collective learning problems. The theory of learning organization focuses on using diagnostic and evaluation tools to assess the quality of the organizational learning process, build a specific learning organization model, and promote organizational

improvement. Organizational learning schools are committed to cooperation between teachers and encourage teachers to adopt cooperation strategies. Group and team learning is an important form of organizational learning. Through the research of these three schools, organizational learning forms have diversified. Teachers' learning forms can be divided into two types: individual teacher learning and teacher organization learning (Banisch & Olbrich, 2019; Koeslag-Kreunen, 2018; Hayhoe, 2017; Zoethout & Mulder, 2017).

Therefore, developing a learning organization school is an important manifestation of a synthetic learning organization school to promote the organic combination of various forms of individual and organizational learning.

Recommendations

Recommendations for the Use of the Findings

Interested parties who may wish to use the findings are recommended to carefully study the context of this study. This study was conducted in Hunan's three excellent schools, which greatly differ from most ordinary schools. The way the schools were managed was also different. Besides, Hunan is only one region in China, a super big country. The contexts of schools and regions vary.

Secondly, if these findings are to be used, maybe more research should be done in different contexts such as bigger regions and other types of schools.

Third, it created the first scale tool for schoolteachers' organizational learning. Although it is a preliminary exploration and needs to be continuously improved, it provides a practical basis for the scale of future scale development.

Recommendation for Future Researchers

Only three schools were selected for this study, typically not representative of the performance of all schools in Hunan. When inferring the findings to other schools, the researcher must consider the unique cultural background of the school's development and the teachers' quality. Because the case studies are contextual and unique, the research conclusions can be used for reference to a certain extent. However, how to structure the organization of learning, schools still need to conduct school-based research according to the specific situations of each school.

In the future, researchers need to go deeper into the schoolteacher team to conduct in-depth team learning research, explore the human obstacles and influencing factors of team learning, how to improve the mental model in

China, and how to extend the team learning experience of teachers to the management team and students. The team, and even the entire school's research, their commonality, and particularity, do in-depth research on the learning organization school. You can also conduct comparative research in different regions of China to explore the influence and differences of social politics, economy, and regional culture on the construction of learning-oriented schools. Educational research is endless. Researchers who do research with a sincere sense of responsibility will contribute to developing educational theory and practice.

REFERENCES

- Aghahosseini, T., Sobhaninejad, M., & Abedi, A. (2016). The effective factors in the management effectiveness of high schools from the viewpoint of managers and teachers. *Daneshvar Raftar*, 13(18), 57.
- Ariel Tichnor-Wagner, A., Harrison, C., & Cohen-Vogel, L. (2016). Cultures of learning in effective high schools. *Education Administration Quarterly*, 52, 602–642.
<https://doi.org/10.1177/0013161X16644957>
- Argyris, C. (1977). Double loop learning in organizations. *Harvard Business Review*, 55(5), 115.
- Argyris, C., & Schon, D. A. (1978). *Organizational learning*. Reading, MA: Addison-Wesley Pub. Co.
- Banisch, S., & Olbrich, E. (2019). Opinion polarization by learning from social feedback. *The Journal of Mathematical Sociology*, 43(2), 76.
- Brix, J. (2017). Exploring knowledge creation processes as a source of organizational learning: A longitudinal case study of a public innovation project. *Scandinavian Journal of Management*, 33(2), 113.
- Collinson, V., & Cook, T. F. (2007). *Organizational Learning: Improving Learning. Teaching and Leading in School Systems*.
- De Houwer, J., Barnes - Holmes, Y., & Barnes - Holmes, D. (2016). Riding the waves: A functional - cognitive perspective on the relations among behavior therapy, cognitive behavior therapy, and acceptance and commitment therapy. *International Journal of Psychology*, 51(1), 40-44.
- Deal, T. E., & Peterson, K. D. (2016). *Shaping school culture*. John Wiley & Sons.
- Downey, D. B., Quinn, D. M., & Alcaraz, M. (2019). The distribution of school quality: Do schools serving mostly white and high-SES children produce the most learning? *Sociology of Education*, 92(4), 386-403.
- Engström, A. & Käkälä, N. (2019), "Early steps in learning about organizational learning in customization settings: A communication

- perspective," *The Learning Organization*, Vol. 26 No. 1, pp. 27-43.
<https://doi.org/10.1108/TLO-09-2018-0150>
- Elbaz, F. (2018). Teacher thinking: A study of practical knowledge.
- Fiol, C. M., & Lyles, M. A. (2005). Organizational learning. *The Academy of Management Review*, 10(A), 803.
- Garvin, D. A., Edmondson, A. C., & Gino, F. (2008). Is yours a learning organization? *Harvard business review*, 86(3), 109.
- Garvin, D. A. (2000). *Learning in action: A guide to putting the learning organization to work*. Boston: Harvard Business School Press.
- Hayhoe, R. (2017). The evolution of modern Chinese educational institutions. In *Contemporary Chinese education* (pp. 26-234). Routledge.
- Harris, A., & Jones, M. (2018). Leading schools as learning organizations.
- Henning, K. (2018). How artificial intelligence changes the world. In *Developing Support Technologies* (pp. 277-284). Springer, Cham.
- Hurley, R. F., & Hult, G. T. M. (2008). Innovation, market orientation, and organizational learning: an integration and empirical examination. *Journal of Marketing*, 62(3), 42-54.
- Kandemir, D., & Hult, G. T. M. (2005). A conceptualization of an organizational learning culture in international joint ventures. *Industrial marketing management*, 34(5), 430-439.
- Kress, S., Zechmann, S., & Schmitt, J. M. (2011). When performance matters: The past, present, and future of consequential accountability in public education. *Harv. J. on Legis.*, 48, 185.
- Koeslag-Kreunen, M. G., Van der Klink, M. R., Van den Bossche, P., & Gijssels, W. H. (2018). Leadership for team learning: the case of university teacher teams. *Higher Education*, 75(2), 191-207.
- Lau, K. W., Lee, P. Y., & Chung, Y. Y. (2019). A collective organizational learning model for organizational development. *Leadership & Organization Development Journal*.
- Lerer, A., & Peysakhovich, A. (2017). Maintaining cooperation in complex social dilemmas using deep reinforcement learning. arXiv preprint [arXiv:1707.01068](https://arxiv.org/abs/1707.01068).
- Mezirow, J., & Associates. (2000). *Learning as transformation: Critical perspectives on a theory in progress*. San Francisco: Jossey-Bass
- Mee, M., & Haverback, H. R. (2017). Middle school principals' perceptions and preferences when hiring teachers. *American Secondary Education*, 45(3), 38.
- Nelson, L. (2003). A case study in organizational change: Implications for theory. *The Learning Organization*, 10(1), 18.
- Nisbet, J., & Shucksmith, J. (2017). Learning strategies.

- Parisi, G. I., Kemker, R., Part, J. L., Kanan, C., & Wermter, S. (2019). Continual lifelong learning with neural networks: A review. *Neural Networks*, 113, 54-71.
- Retna, K. S., & Ng, P. T. (2016). The application of learning organization to enhance learning in Singapore schools. *Management in education*, 30(1), 10-18.
- Popper, M., & Lipshitz, R. (2000). Organizational learning: Mechanisms, culture, and feasibility. *Management Learning*, 31(2), 181-196.
- Saadat, V., & Saadat, Z. (2016). Organizational learning has a key role in organizational success. *Procedia-Social and Behavioral Sciences*, 230, 219-225.
- Schein, E. H. (1996). Three cultures of management: The key to organizational learning. *Sloan Management Review*, 38(1), 9.
- Schleicher, A. (2015). *Schools for 21st-Century Learners: Strong Leaders, Confident Teachers, Innovative Approaches*. International Summit on the Teaching Profession. OECD Publishing. 2, rue Andre Pascal, F-75775 Paris Cedex 16, France.
- Senge, P. M. (2014). *The fifth discipline field book: Strategies and tools for building a learning organization*. Currency.
- Senge, P. M. (2014). *The fifth discipline field book: Strategies and tools for building a learning organization*. Currency.
- Sisson, P., & Ryan, J. (2016, September). An Integrated organizational learning models perspective: eight ways to learn. In *Academic Conferences and Publishing International* (pp. 1143-1148).
- Smith, L. B., Jayaraman, S., Clerkin, E., & Yu, C. (2018). The developing infant creates a curriculum for statistical learning. *Trends in cognitive sciences*, 22(4), 325-336.
- UNESCO, G. E. C. Global Education Coalition UNESCO. (2020).
- Van Wormer, K., & Besthorn, F. H. (2017). *Human behavior and the social environment, macro level: groups, communities, and organizations*. Oxford University Press.
- Watkins, K. E., & Marsick, V. J. (2003). *Dimensions of the learning organization*. Warwick, RI: Partners for the Learning Organization.
- Watkins, K. and Marsic, V. (1993), "Sculpturing the Learning Organization" Jossey-Bass.
- Winkler, M. K., & Fyffe, S. D. (2016). *Strategies for cultivating an organizational learning culture*. Washington, DC: Urban Institute, 9.
- Xie, L. (2019). Leadership and organizational learning culture: a systematic literature review. *European Journal of Training and Development*.
- Zoethout, H., Wesselink, R., Runhaar, P., & Mulder, M. (2017). Using transactivity to understand the emergence of team learning. *Small group research*, 48(2), 190-214.