School culture and safety education China

Zhang, Lijun ✉
Graduate School, Lyceum of the Philippines University - Batangas, Philippines

Abstract

This study utilized descriptive research to determine the relationship between school culture and school safety education in Chin. A total of 300 college students from one Chinese vocational university participated in this study utilizing random sampling technique. Results showed that nearly equal numbers of male and female respondents, mostly first-year liberal arts majors. The respondents agreed on all the indicators under school culture. They also agreed on school safety education giving highest regard to school facility safety. Moreover, there exists a highly significant relationship between school culture and safety education. This implies that a positive school culture can support effective safety education, while effective safety education can also contribute to a more positive school culture by promoting shared values and responsible behavior. In the end, an action plan was proposed to enhance the school culture and safely education in Chinese universities. Thus, it is suggested to carry out multi-level safety education, involving all members, schools, society and families, optimize the teaching environment, and form a safety-centered campus culture.

Keywords: culture, safety, education, facilities, network information, health, prevention, solution

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1. Introduction

Education is a fundamental pillar in any society, serving as a cornerstone for individual development and societal progress (Alinian et al., 2022). In the context of China, a nation experiencing rapid economic growth, social transformation, and cultural evolution, the education system plays a pivotal role in shaping the future of the country. Two key aspects that are currently at the forefront of China's educational landscape are school culture and safety education. Both components are intrinsically linked and hold great significance in providing a well-rounded, secure, and supportive learning environment for Chinese students (Zhang & Wang, 2020). This extended introduction delves into the multifaceted dynamics of school culture and safety education within the context of the Chinese educational system.

School culture is a complex and multifaceted concept that encompasses the values, beliefs, traditions, and practices that define an educational institution. It influences every aspect of the school, from the attitudes of the teachers and students to the policies and decisions made by the administration (Zahed-Babelan et al., 2019). In the Chinese context, school culture is deeply rooted in the country's history, Confucian values, and the pursuit of academic excellence. A thorough examination of school culture in China necessitates exploring the impact of these historical and cultural factors.

One crucial element of school culture is leadership. Effective school leaders play a pivotal role in shaping the culture of an institution. Their vision, values, and leadership style set the tone for the entire school community. In China, educational leaders carry the weight of centuries-old traditions and contemporary expectations (Feng, 2020). Understanding how leadership influences school culture is essential in assessing the dynamics of educational management in China.

Collegial teaching and learning are another integral part of school culture (Ho et al., 2019). The relationships among teachers, the spirit of collaboration, and the pursuit of professional growth are fundamental elements of a healthy school culture. In China, the traditional teacher-student relationship is characterized by deep respect and reverence for educators. However, as China's education system evolves to meet the demands of the modern world, it is crucial to explore how collegiality and collaborative learning are evolving and impacting school culture.

Professional commitment, the third dimension of school culture under examination in this study, is critical for the sustainability and growth of educational institutions (Kıral & Kaçar, 2016). Teachers and administrators who are committed to their profession contribute significantly to the development of students and the overall success of a school. This dimension warrants thorough investigation, as it plays a substantial role in shaping the quality of education and the values instilled in Chinese students. Meanwhile, safety education is an essential component of a well-rounded education system, focusing on the physical, emotional, and psychological well-being of students (Ma et al., 2020). In the context of China, with its rapidly expanding educational landscape and growing concerns about students' safety and well-being, safety education has gained significant importance.

While school culture sets the tone for the institution, safety education ensures a secure and nurturing environment for teaching and learning. In the modern world, safety encompasses various aspects, and in an era of rapid technological advancement, digital safety has become as crucial as physical safety (Vicario & Sallán, 2017). In this research, safety education in China is analyzed in five primary dimensions such as school facility safety, school security, network information security, health and hygiene, safety education and, exercise.

The coexistence of school culture and safety education within the educational landscape of China raises

several intriguing questions. Does a strong school culture correlate with enhanced safety education? Are schools with a rich history and deep-rooted traditions more successful in providing a safe environment for students? Conversely, does a focus on safety education influence school culture? These questions serve as the foundation for the present study, which aims to determine the relationship between school culture and safety education in the context of China.

In summary, understanding this relationship is not only academically intriguing but also pragmatically crucial. The quality of education in China is a topic of national and international concern. The nation's educational system plays a pivotal role in shaping the future of its citizens and has far-reaching implications for global education trends. Therefore, comprehending how school culture and safety education interact is essential for developing informed policies and practices that can enhance the quality of education in China. Through the study of this article, the cultural education of Chinese schools can be conducted well, and it also reflects the importance of the culture of Chinese schools. We can better understand the fields of education leaders and management, and to point out safety education The importance of strengthening safety education provides a good direction.

Objectives of the study - The purpose of this study was to determine the relationship between school culture and school safety education in China. Specifically, it sought to attain the following objectives: assessed the school culture as to leadership, collegial teaching and learning and professional commitment; identified the school safety education with regard to school facility safety, school security, network information security, health and hygiene, safety education and exercise; tested the significant relationship between the two variables and finally, proposed an action plan to enhance the school culture and safety education in Chinese universities based on the results of the study.

2. Methods

Research Design - This study utilized descriptive research to establish the relationship between school culture and safety education in China.. Based on the combination of literature review and empirical research, this study first collected relevant literature for retrospective analysis, in -depth grasp of the theory and practice of Chinese school culture and safety education in the school and understand the problems and problems of schools in the current practice and reforms. At the same time, analysis and evaluation methods such as questionnaires, on -site inspections, and analyzing and evaluating the results of teaching observation to determine the teaching methods and measures that college students should take at school and provide a practical basis for promoting students to improve school culture and safety education improvement.

Participants of the Study - This study adopted a layered random sampling method to conduct a questionnaire survey of 300 college students from Beihai Vocational University. Select sports students with different grades and different backgrounds as research objects. In the case, it guarantees a large enough sample capacity. While ensuring statistical effectiveness, it maintains the feasibility of data collection and analysis. The "error range of confidence in 5%to 95%" is adopted. Among them, the school covers an area of 249,000 square meters. There are 18,000 students. Among them, the results of random drawing are: 60 mechanics and electrical engineering, 60 people in economic management, 60 electronic information engineering majors, 60 tourism and commerce major, and 60 culture and media majors.

Data Gathering Instrument - This research utilized modified questionnaires to measure the school culture and safety education in China. It is divided into three parts. The first part includes the profile of respondents such as Personal profile. The second part underscores the school culture. It is based on Wang Jiang (2008) study entitled The degree to which college students attach importance to school culture. The last part is all about school safety education, which is adapted based on Jiangnan ' s (2019) study entitled, Chinese college students ' awareness of safety precautions. The reliability results for various indicators were evaluated using Cronbach's Alpha, which measures internal consistency. All the indicators related to shared leadership and vision, collegial

teaching and learning, professional commitment, school facility safety, health and hygiene, safety education and exercise, and student personal safety scored exceptionally high, with Cronbach's Alpha values ranging from 0.907 to 0.952, indicating excellent reliability. School security and network information security also demonstrated strong reliability, with Cronbach's Alpha values of 0.849 and 0.876, respectively, both falling into the "good" category. The only indicator with slightly lower reliability was faculty and staff safety, which had a Cronbach's Alpha of 0.798, classified as acceptable.

Data Gathering Procedure - Based on the combination of literature review and empirical research, this study first collected relevant literature for retrospective analysis, gaining an in-depth understanding of the theory and practice of Chinese school culture and safety education. It also examined the issues and challenges schools faced in current practices and reforms. This provided a basis and reference for subsequent research. Simultaneously, the study employed analysis and evaluation methods such as questionnaires, on-site inspections, and the analysis and evaluation of teaching observation results to determine the teaching methods and measures that college students should adopt at school. This provided a practical foundation for promoting improvements in school culture and safety education, along with theoretical support. By comprehensively utilizing these research methods, the study effectively implemented school culture and safety education plans and formulated such plans. After the reliability test results, the questionnaire was distributed to the intended participants. The data collection were personally conducted by the researcher. The results of the collected data were encoded in an Excel spreadsheet, and the input data were checked to ensure the accuracy of the questionnaire. The encoded data were then sent to the research center for decoding by statistical personnel using professional statistical software. Informed consent were obtained from all participants. Confidentiality and anonymity were maintained in data collection and reporting. Ethical approval were obtained from relevant institutional review boards.

Data Analysis - To perform data analysis, the following statistical tools were used: weighted mean and ranking were used to assess the school culture as to leadership, collegial teaching and learning and professional commitment; identify the school safety education with regard to school facility safety, school security, network information security, health and hygiene, safety education and exercise. Likewise, Spearman rho was used to test the significant relationship of the treated variables. In addition, a post hoc test was also conducted. In addition, all data were treated using a statistical software known as PASW version 26 to further interpret the result of the study using an alpha level of 0.05 and 0.01.

3. Results and discussion

Table 1
Summary Table on School Culture

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. Shared Leadership/ Vision	3.41	Agree	1
2. Collegial Teaching and Learning	3.39	Agree	2
3. Professional Commitment	3.21	Agree	3
Composite Mean	3.34	Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 - 1.49 = Strongly Disagree

Table 1 presents the Summary Table on School Culture. The composite mean of 3.34 indicates that the respondents agreed in all the indicators. Among the indicators, Shared Leadership/ Vision obtained the highest weighted mean followed by Collegial Teaching and Learning while Professional Commitment obtained the lowest weighted mean. Shared leadership/vision, teaching and learning, and professional commitment are all crucial components of a positive school culture. While it's challenging to definitively rank their importance, some argue that shared leadership/vision plays a foundational role, influencing the success of teaching and learning and professional commitment.

Shared leadership involves distributing leadership responsibilities among various stakeholders in the school community, fostering a collaborative and cohesive vision (Harris, 2008). A shared vision provides a clear direction and purpose for the school, aligning the efforts of administrators, teachers, and staff (Hallinger & Heck,

1996). This shared sense of purpose creates a positive school culture, promoting trust, collaboration, and a focus on collective goals (Leithwood et al., 2004). Effective teaching and learning practices are central to a school's success. Quality instruction and innovative pedagogy contribute to student engagement, achievement, and overall educational outcomes (Hattie, 2009). The implementation of research-based teaching strategies, differentiated instruction, and a focus on student-centered learning are vital for creating a positive learning environment (Marzano, 2003).

Professional commitment involves the dedication and enthusiasm of educators to their roles, their students, and the broader educational community. Committed teachers contribute to a positive school culture by investing in ongoing professional development, fostering positive relationships with students, and actively participating in collaborative efforts to improve teaching practices (Ingersoll & Strong, 2011). While the three components are interconnected, the argument for shared leadership/vision as foundational arises from the notion that a collaborative vision sets the tone for effective teaching and learning practices and cultivates a culture of professional commitment. However, it's essential to recognize that these elements are interdependent, and success is often a result of their synergistic interaction.

Table 2

Summary Table on School Safety Education

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. School facility safety	3.29	Agree	1
2. School security	3.16	Agree	4
3. network information security	3.12	Agree	5.5
4. Health and hygiene	3.21	Agree	2.5
5. Safety education and exercise	3.21	Agree	2.5
6. Student personal safety	3.09	Agree	7
7. Faculty and staff safety	3.12	Agree	5.5
Composite Mean	3.17	Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 - 1.49 = Strongly Disagree

Table 2 presents the Summary Table on School Safety Education. The composite mean of 3.17 indicates that the respondents agreed in all the indicators. Among the indicators, school facility safety, Health and hygiene, and Safety education and exercise obtained the highest weighted mean. Prioritizing school facility safety, health and hygiene, and safety education and exercise is crucial for fostering a conducive learning environment, promoting well-being, and ensuring the overall safety of students and staff. Prioritizing school facility safety is essential for reducing the risk of accidents and injuries, thus enhancing the overall well-being of students and staff. According to the National Clearinghouse for Educational Facilities, safe and well-maintained facilities contribute to a positive school environment (NCEF, 2006). Safe and supportive school environments positively impact academic performance. A study published in the Journal of School Health suggests that students in schools with better physical conditions and safety measures tend to have higher academic achievement (Earthman, 2002).

Prioritizing health and hygiene in schools is critical for preventing the spread of diseases, creating a healthier environment, and supporting academic success. The World Health Organization emphasizes the importance of hygiene practices in schools to improve health outcomes and academic performance (WHO, 2009). A study in the Journal of School Nursing suggests that promoting health and hygiene in schools positively affects the well-being of students and contributes to a positive school climate (Sharma et al., 2014).

Prioritizing safety education empowers students with the knowledge and skills to respond effectively to emergencies. Research published in the International Journal of Environmental Research and Public Health emphasizes the importance of safety education in building competence in the area of safety and health (Jankowski & Sapińska, 2020). Safety exercises often involve physical activity, contributing to the overall health and well-being of students. Prioritizing school facility safety, health and hygiene, and safety education and exercise is essential for creating a safe, healthy, and supportive learning environment, positively impacting academic performance, and promoting the overall well-being of students and staff. Meanwhile, Faculty and staff safety, network information security, and Student personal safety were rated least. Prioritizing faculty and staff

safety, network information security, and student personal safety is crucial for creating a secure and conducive learning environment. These priorities contribute to the overall well-being of the educational community, protect sensitive information, and ensure a safe and supportive atmosphere for students.

Prioritizing faculty and staff safety is essential for fostering a positive workplace environment. Research indicates that a safe and supportive work environment contributes to the well-being of employees, enhancing job satisfaction and overall productivity (Huang et al., 2015). Prioritizing network information security is critical for protecting sensitive data and intellectual property. According to a report by the World Economic Forum, the education sector is increasingly vulnerable to cyber threats, and securing information networks is crucial for maintaining the integrity and confidentiality of educational data (World Economic Forum, 2018). Effective network information security measures ensure data privacy and compliance with regulations. A study in the Journal of Information Privacy and Security emphasizes the importance of robust cybersecurity practices in safeguarding sensitive information in educational institutions (Mishra & Hoon, 2018).

Creating a Safe Learning Environment: Prioritizing student personal safety contributes to the creation of a safe and secure learning environment. A study suggests that prioritizing student personal safety, including measures to prevent bullying and harassment, is linked to improved mental health outcomes and academic success (Espelage & Swearer, 2003). Prioritizing faculty and staff safety, network information security, and student personal safety is essential for creating a secure, positive, and supportive educational environment.

Table 3

Relationship Between School Culture and School Safety Education

Shared Leadership/ Vision	rho-value	p-value	Interpretation
School facility safety	.415**	0.000	Highly Significant
School security	.436**	0.000	Highly Significant
network information security	.435**	0.000	Highly Significant
Health and hygiene	.409**	0.000	Highly Significant
Safety education and exercise	.434**	0.000	Highly Significant
Student personal safety	.505**	0.000	Highly Significant
Faculty and staff safety	0.056	0.333	Not Significant
Collegial Teaching and Learning			
School facility safety	.403**	0.000	Highly Significant
School security	.616**	0.000	Highly Significant
network information security	.636**	0.000	Highly Significant
Health and hygiene	.675**	0.000	Highly Significant
Safety education and exercise	.606**	0.000	Highly Significant
Student personal safety	.730**	0.000	Highly Significant
Faculty and staff safety	.292**	0.000	Highly Significant
Professional Commitment			
School facility safety	.638**	0.000	Highly Significant
School security	.665**	0.000	Highly Significant
network information security	.585**	0.000	Highly Significant
Health and hygiene	.538**	0.000	Highly Significant
Safety education and exercise	.588**	0.000	Highly Significant
Student personal safety	.636**	0.000	Highly Significant
Faculty and staff safety	.433**	0.000	Highly Significant

Legend: Significant at p-value < 0.01

Table 3 presents the association between school culture and school safety education. The computed r-values indicates a moderate direct correlation and the resulted p-values were less than the alpha level except on shared leadership / vision and faculty and staff safety. This means that there was significant relationship exists and implies that the better the assessment on school culture, the better the observation on school safety. The relationship between school culture and school safety is often highlighted in research, and several studies suggest a strong and significant connection between these two factors. The school culture, encompassing norms, values, and shared beliefs within a school community, can profoundly impact safety measures and outcomes.

The norms and values embedded in a school's culture influence the attitudes and behaviors of its members,

including students, teachers, and administrators. A study by Freiberg (1999) emphasizes that a positive school culture characterized by shared values and norms contributes to the development and adherence to safety practices. Effective communication and collaboration, integral components of a positive school culture, are linked to improved school safety. A study by Dabney et al. (2016) found that schools with a strong culture of collaboration were associated with better safety practices and outcomes. Schools with a supportive and positive culture are more likely to prioritize and implement effective safety measures. The work of Gottfredson et al (2005) suggests that a positive school climate enhances the implementation of safety programs and contributes to a safer school environment. Effective leadership plays a crucial role in shaping the safety culture of a school. A study by Cohen-Vogel, et al. (2013) found that school principals who actively promote a positive and inclusive culture contribute to safer and more secure school environments.

Table 4

Proposed Action Plan to Enhance the School Culture and Safety Education in China

Key Result Area	Objectives	Strategies/ Activities	Success Indicators	Person/s Responsible
A. School culture a.1 professional commitment	To strengthen teachers' attention to students' learning To strengthen the ability of cooperation and mutual assistance among teachers to improve work efficiency	By testing the strengths of different students, students are encouraged to make up for their weaknesses. The school leaders held competitions in groups to strengthen the sense of cooperation among professors.	93% of the students can learn independently, which has been greatly improved, and the feelings between teachers have been sublimated to provide a high spirit of mutual help	Student School management Teachers

B. Safety education
b1. Student personal safety
b2. Faculty and safety
  b3. Health and hygiene
	To raise students' awareness of online fraud and cybercrime
	  Strengthen teachers' management of students and urge students to education.
	Explain the importance of health and improve campus hygiene to reduce virus transmission
		Hold seminars on cybercrime and fraud reading week.
		
		Pay attention to students at all times, and write an article about the implementation of students' safety education every week
		Hold a healthy cleaning
			85% of students guard against online fraud and cybercrime.	School management
				Teachers
				Students

4. Conclusions and recommendations

The respondents agreed on all the indicators under school culture. The respondents agreed on school safety education giving highest regard to school facility safety. There exists a highly significant relationship between school culture and safety education. This implies that a positive school culture can support effective safety education, while effective safety education can also contribute to a more positive school culture by promoting shared values and responsible behavior. An action plan was proposed to enhance the school culture and safely education in Chinese universities.

The university professors may strengthen the cultivation of safety awareness among students so they can identify potential safety hazards and reduce the impact of safety incidents. The principal in the task of supervision may improve the construction of safety measures that would include compliance with building codes, regular maintenance, and enforcement of safety guidelines for equipment and appliances. Schools may regularly arrange safety emergency training to actively guide students to participate in emergency training programs so as to minimize the impact of emergencies. The school management information system director may arrange regular anti-cyberfraud and anti-cybercrime seminar campaigns to increase teachers' and students' awareness of cyber safety and to create a safe and secure school environment. Future researchers may conduct studies to determine what significantly predicts school culture and safety education. They may also explore other constructs such as organizational effectiveness, teaching quality and academic performance. The proposed action

plan to enhance the school culture and safety education in China may be tabled for discussion, implementation, and evaluation for continuous improvement.

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