An Academic Management Model for Enhancing Students' Creativity in Calligraphy Learning at Universities in Guangdong Province

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Abstract

This study aimed to propose an academic management model for enhancing students' creativity in calligraphy learning at universities in Guangdong Province, the People's Republic of China. Employing a mixed-method approach, the research integrated both quantitative and qualitative methodologies. Key informants included 15 administrators and teachers involved in calligraphy education from 14 universities in Guangdong Province, selected through purposive sampling. Additionally, a focus group of 9 expert calligraphy educators and professors provided insights. Data collection involved semi-structured in-depth interviews and focus group discussions, with content analysis used for data interpretation. Findings indicated that the proposed academic management model consists of four interconnected components: (1) enhancing management efficiency based on student development theory, (2) curriculum system management, (3) teaching management, and (4) student activity management. These elements collectively engage stakeholders in improving university education practices.

KEYWORDS: Calligraphy learning; Enhancing students' creativity; Academic management; Universities; Guangdong Province.

Introduction

Calligraphy, as a traditional art and cultural heritage in China, has a long history. The enduring legacy of calligraphy art is closely tied to generations of calligraphy education. Calligraphy education not only enhances students' aesthetic abilities but also cultivates and improves their moral, intellectual, physical, and aesthetic qualities, contributing to the development of students' comprehensive skills (Zhang et al., 2021; Li & Wang, 2022).

With the deepening of economic globalization and educational reform, Chinese calligraphy education has entered a period of significant development opportunities. In recent years, the increasing emphasis on calligraphy education by the government has led to the frequent issuance of relevant policy documents highlighting its importance in enhancing students' quality education. In 2021, the Office of the Academic Degrees Committee of the State Council issued a letter seeking opinions on the "Catalogue of Doctoral and Master's Degrees and Talent Training Disciplines" and its management measures, officially listing calligraphy and art as first-class disciplines. This milestone reflects years of efforts by professionals in the calligraphy field and marks a crucial step

forward for the discipline's development (Chen, 2021; Zhang et al., 2021).

However, these advancements pose new challenges for university administrators in adapting academic management practices to meet the upgraded status of calligraphy as a discipline. Following this elevation, universities must optimize existing academic management models for calligraphy majors, exploring new approaches to enhance students' creativity and cultivate outstanding talents to meet societal and national demands (Li et al., 2022). These initiatives align with the adjustments to subject catalogs and the broader promotion of the calligraphy discipline.

Currently, traditional academic management practices in universities are insufficient for cultivating innovative talents required in the modern era. The conventional approach emphasizes regulation and control of student behavior, often overlooking individual development needs. Furthermore, the past management models were simplistic and one-dimensional, failing to teach students according to their aptitudes and neglecting scientific and practical considerations in teaching. The lack of rational and need-based educational management structures affects academic efficiency and inhibits the development of students' creative awareness and innovation abilities, ultimately failing to realize the potential of university academic management (Wang et al., 2021; Zhang et al., 2021).

With the ongoing development and reform of higher education in China, improving academic management and enhancing student quality have become core themes of reform. Actively exploring academic management models that foster creativity in university students studying calligraphy is a vital trend in the discipline's development. To achieve sustainable academic management models, efforts must focus on three key aspects: curriculum system management, teaching management, and student activity management. Academic management can serve as a link to integrate all stakeholders involved in educational processes, guided by the principles of student development theory (Li et al., 2022; Chen, 2021).

This study is motivated by the increasing importance of calligraphy as a cultural and educational discipline in China, particularly after its recognition as a first-class discipline by the Office of the Academic Degrees Committee of the State Council. With this elevation, universities in Guangdong Province that offer calligraphy majors are faced with new challenges and opportunities in academic management. Traditional academic management models, which emphasize regulation over creativity, are insufficient to meet the demands of cultivating innovative talents in the modern era. This study aims to address this gap by exploring academic management practices that enhance students' creativity in calligraphy learning. By focusing on four key aspects—management concepts, curriculum system management, teaching management, and student activity management—the study will propose a comprehensive academic management model tailored to the unique requirements of calligraphy education.

Benefit of Research

1. Guidance for Academic Management: The research provides a clear framework and practical recommendations for improving academic management practices in calligraphy education at universities in Guangdong Province.

2. Enhancing Student Creativity: By focusing on innovative approaches to curriculum, teaching, and activities management, the proposed model will empower students to develop creativity and

innovation in calligraphy, meeting the demands of modern educational and societal needs.

3. Policy and Practice Alignment: The findings will serve as a valuable reference for policymakers and university administrators to align academic management practices with national and regional priorities for cultural and educational development.

4. Sustainable Development: The proposed model emphasizes sustainable academic management, ensuring long-term growth and improvement in the quality of calligraphy education in Guangdong Province's universities.

Research Process

Step 1: Conduct a literature review and analyze related research to study the policies and current situation of academic management in universities, particularly focusing on calligraphy education in Guangdong Province.

Step 2: Develop semi-structured interview questions by analyzing the components of academic management, such as management concepts, curriculum system management, teaching management, and student activity management.

Step 3: Conduct in-depth interviews with 15 key informants, selected through purposive sampling. These informants include administrators and teachers engaged in calligraphy teaching from 14 universities in Guangdong Province.

Population and Sample

The research population consists of 96 administrators and teachers of calligraphy majors from 14 universities in Guangdong Province that recruited calligraphy students in 2022. This data was collected from the official websites of the universities and information provided by relevant personnel.

The sample for in-depth interviews includes 15 administrators and teachers actively engaged in calligraphy teaching across the 14 universities. These key informants were purposefully selected to provide in-depth insights for the study.

Instruments

1. Interviews in semi-structure
2. Focus group

Data analysis

1. Frequency Analysis: Perform a frequency analysis of the content from the in-depth interviews to identify key themes and patterns. Based on this analysis, develop a preliminary academic management model.

2. Focus Group Evaluation: Conduct focus group discussions facilitated by the researcher. These discussions involve the evaluation and scoring of the preliminary academic management model derived from the interview results.

3. Model Refinement: Collaboratively refine the draft academic management model through discussions between the researcher and a panel of experts. The final academic management model is proposed to enhance creativity in calligraphy learning for students at universities in Guangdong Province.

Conclusion and discussion

Based on the results of the in-depth interviews, the researcher summarized the frequency of responses for each academic management factor in the frequency based on guide of 15 key informants as follows:

1. Management Concept

1.1 Innovative management concepts and a student-oriented approach focused on serving students (13)

1.2 Management methods centered on serving students (12)

1.3 Innovative learning environments for students (12)

1.4 Work performance and management abilities of educational administrators (10)

1.5 Optimizing the organizational structure of management (10)

2. Curriculum System Management

2.1 Awareness of the curriculum system (10)

2.2 Scientific and rational design and organization of the curriculum system (12)

2.3 Scientific and reasonable course categories, sequencing, and time allocation (11)

2.4 Balancing the inheritance of tradition with innovative development (11)

2.5 Integration of interdisciplinary courses (11)

3. Teaching Management

3.1 Teaching plans emphasizing students' professional skills and comprehensive abilities (8)

3.2 New ideas and innovative teaching methods (10)

3.3 Improving the overall quality of teachers (12)

3.4 Enhancing communication and interaction between teachers and students (8)

3.5 Establishing a corresponding teaching evaluation mechanism (10)

4. Student Activity Management

4.1 Awareness of creating opportunities for student activities (10)

4.2 Guiding students toward comprehensive development (11)

4.3 Regular organization of calligraphy competitions, exhibitions, celebrity lectures, and similar activities for students (11)

4.4 Providing financial support for students' self-initiated academic activities or offering logistical convenience for activity venues (8)

4.5 Providing professional guidance for student activities (8)

Based on the in-depth interview results from 15 key informants, four main factors of the academic management model were identified. These factors form the academic management model for calligraphy learning aimed at enhancing student creativity at universities in Guangdong Province. The specific factors and indices are presented in Table 1 below.

Table 1: Academic management model factors for enhancing students' calligraphy creativity in universities in Guangdong Province

No.	Factors	Item	Factors for enhancing students' calligraphy creativity
1	Management concept	F1	Innovative management concept and working concept of student-oriented and serving students
		F2	Management way of serving students
		F3	Innovative learning environment for students
		F4	Work level and management ability of education management workers
		F5	Optimizing the management organization structure
2	Curriculum system management	F6	The awareness of curriculum system
		F7	Scientific and reasonable design and setting of the curriculum system
		F8	Scientific and reasonable categories, sequence and time proportion of courses
		F9	The relationship between inheriting tradition and developing innovation
		F10	The interdisciplinary courses
3	Teaching management	F11	Teaching plan to focus on professional skills and comprehensive ability of students
		F12	New ideas and methods of teaching
		F13	To improve the overall quality of teachers
		F14	To enhancing the communication and interaction between teachers and students
		F15	To establish corresponding teaching evaluation mechanism
4	Student activity management	F16	The awareness of creating opportunities for students activities
		F17	To guide the comprehensive development of students
		F18	To regularly organize calligraphy competitions, calligraphy works exhibitions, celebrity lectures and other activities for students
		F19	To provide financial support for students' spontaneous academic activities, or provide convenience for students on the activity site
		F20	To provide professional guidance for student activities

Based on the dimensional division and data analysis from a survey of 300 calligraphy administrators and teachers in Guangdong Province, an academic management model was constructed to enhance students' calligraphy creativity at universities in Guangdong Province. Using confirmatory factor analysis (CFA), a draft academic management model was developed, as illustrated in Figure 1.
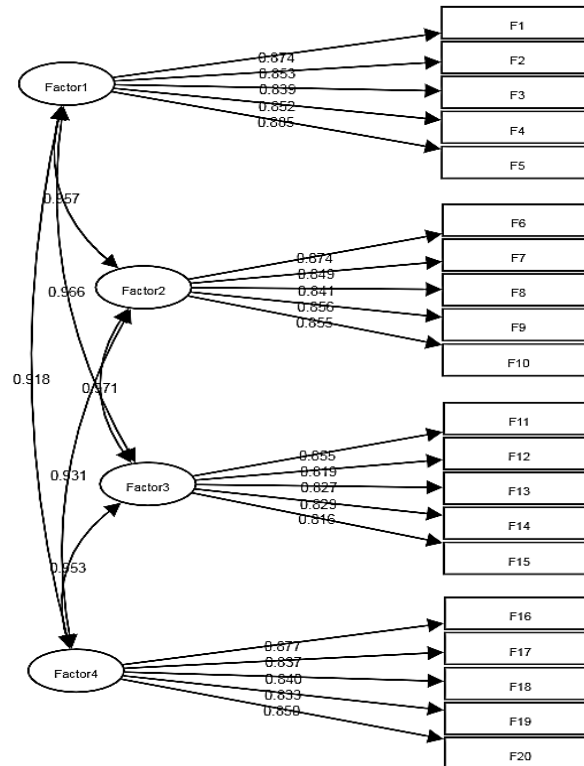
Figure 1: CFA model under standardized estimation

Table 2: Model evaluation index

Criteria	Threshold	Measure	Evaluate
RMSEA	<0.10	0.087	Passed
RMR	<0.05	0.012	Passed
CFI	>0.9	0.943	Passed
NFI	>0.9	0.919	Passed
NNFI	>0.9	0.933	Passed

1. Model fitting

As shown in Figure 1 and Table 2, all model evaluation criteria meet the minimum requirements. The model fits well with the empirical data and is accurate.

2. Quality of Index

In research, factor loadings are commonly used to represent the correlation between a factor and its measured items. As shown in Table 3, the absolute values of the standardized loading factors (Std. Estimate) are greater than 0.6 and exhibit significance, indicating a strong measurement relationship.

Table 3: Regression weights

Factor	Item	Coefficient of off-standard load (Coef.)	Std. Error	z (CR value)	Coefficient of standardized load (Std. Estimate)
	F1	1	-	-	0.874
	F2	0.997	0.049	20.363	0.853
Factor1	F3	1.016	0.052	19.735	0.839
	F4	0.961	0.047	20.324	0.852
	F5	1.058	0.048	21.976	0.885

Table 3: (cont.)

Factor	Item	Coefficient of off-standard load (Coef.)	Std. Error	z (CR value)	Coefficient of standardized load (Std. Estimate)
	F6	1	-	-	0.874
	F7	0.925	0.046	20.26	0.849
Factor2	F8	0.937	0.047	19.895	0.841
	F9	0.976	0.047	20.592	0.856
	F10	1.01	0.049	20.533	0.855
	F11	1	-	-	0.855
	F12	0.999	0.055	18.299	0.819
Factor3	F13	0.966	0.052	18.597	0.827
	F14	0.988	0.053	18.699	0.829
	F15	1.097	0.06	18.187	0.816
	F16	1	-	-	0.877
	F17	1.007	0.051	19.64	0.837
Factor4	F18	0.939	0.048	19.761	0.84
	F19	1.055	0.054	19.443	0.833
	F20	1.068	0.053	20.203	0.85

As shown in Table 3, the absolute values of the coefficients of standardized loadings (Std. Estimate) are greater than 0.8, exceeding the standard value of 0.6. Therefore, they exhibit significance, indicating a strong measurement relationship.

3. Quality of Factors

Average Variance Extracted (AVE) and Composite Reliability (CR) are commonly used for aggregate (convergent) validity analysis.

Table 4: Factor loading

Model AVE and CR value results		
Factor	Average Variance Extraction (AVE)	Combined Reliability (CR)
Factor1	0.741	0.934
Factor2	0.731	0.932
Factor3	0.688	0.917
Factor4	0.718	0.927

A confirmatory factor analysis (CFA) was conducted to evaluate the four factors and 20 measured items of the academic management model proposed in this study. As shown in Table 4, the AVE values for all four factors exceeded 0.5, and the CR values were above 0.7, indicating strong convergent validity for the data. These results confirm that the CR and AVE values for all factors meet the minimum criteria, demonstrating the reliability of the measurement model.

Additionally, a panel of nine experts from the focus group provided valuable guidance and constructive suggestions for refining the academic management model in calligraphy education aimed at enhancing students' creativity in universities across Guangdong Province. The experts assessed both the individual factors of the academic

management model and the overall model, contributing to its comprehensive evaluation and validation. See Table 5 and Table 6 below for details:

Table 5: Model factor evaluation results

Items	Management concept					Curriculum System Management					Teaching Management					Student Activities Management					Total 4-20
Degree NO.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
1					✓				✓						✓					✓	19
2				✓					✓				✓						✓		15
3				✓						✓				✓					✓		17
4					✓				✓						✓					✓	19
5				✓					✓					✓					✓		16
6					✓					✓				✓					✓		18
7				✓					✓					✓				✓			15
8			✓							✓					✓				✓		17
9				✓					✓						✓					✓	18
Total	38					39					39					38					154
Mean	4.22					4.33					4.33					4.22					17.11
St. Points	80.56					83.33					83.33					80.56					
Note	The possible score range is 9-45; every factor median score is 27. The average total factor mean is 4.28.																				

As shown in Table 5, the experts rated the factors as follows: the total score for the evaluation of the management concept is 38 points, with an average score of 4.22; the curriculum system management received a total score of 39 points, with an average score of 4.33; the teaching management also received a total score of 39 points, with an average score of 4.33; and the student activity management received a total score of 38 points, with an average score of 4.22. The overall average score across all factor items is 4.28

Based on the established hundred-point scoring criteria—where scores are classified as unqualified ($X < 60$), basically qualified ($60 \leq X < 70$), qualified ($70 \leq X < 80$), good ($80 \leq X < 90$), and excellent ($90 \leq X \leq 100$)—the scores for the four factors of the academic management model (management concept, curriculum system management, teaching management, and student activity management) all exceed 80 points. This indicates that the experts rated the model factors as "good," affirming the model's validity and applicability.

Table 6: Model evaluation results

Degree / NO.	1	2	3	4	5
1				✓	
2				✓	
3				✓	
4				✓	
5					✓
6				✓	
7					✓
8				✓	
9				✓	
Total:			38		
Standard points			80. 56		
Mean:			4. 22		
Note	The possible score range is 9-45 points; the median score is 27 points.				

The average expert evaluation score for the model is 4.22, with an overall expert score of 38 points. According to the established hundred-point scoring criteria, this corresponds to a score of 80.56 points, which exceeds 80, indicating that the overall evaluation of the model is "good."

Finally, through the evaluation conducted by the expert focus group, the academic management model was unanimously endorsed by all nine experts. The overall assessment of the model was deemed both "good" and "feasible," as illustrated in Figure 2.
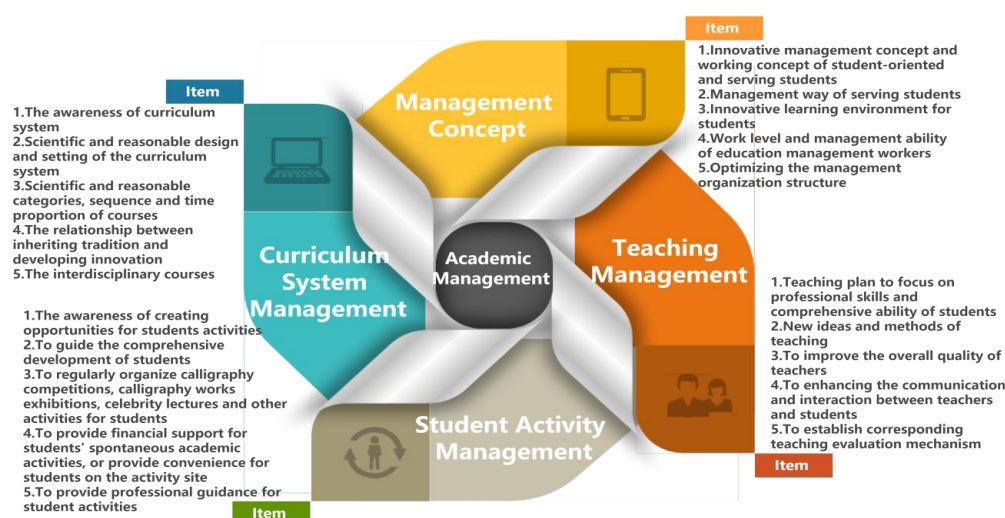
Figure 2: Tan Fengting's academic management model for calligraphy learning aims to enhance the creativity of students at universities in Guangdong Province.

Based on the proposed model, this study identified four factors and 20 analysis items from a comprehensive literature review and in-depth interview data. Using confirmatory factor analysis (CFA) and structural equation modeling (SEM), an academic management model for calligraphy learning was developed to enhance the creativity of students at universities in Guangdong Province.

This research aims to provide guidelines and references for academic management practices to enhance students' calligraphy creativity in Guangdong Province universities. By synthesizing insights from literature reviews and in-depth interviews with university administrators and teachers, the study aspires to facilitate the construction and sustainable development of an academic management model. Grounded in the principles of academic management, the proposed management concept is guided by the theory of student development and focuses on curriculum system management, teaching management, and student activity management. Academic management serves as a crucial link to integrate various stakeholders in university education.

The summary points are as follows:

1. Management Concept

Chinese university administrators should adopt and incorporate scientific management concepts, such as student development theory, to establish a student-centered and service-oriented approach. This transformation requires shifting work methods from merely managing students to serving them. Universities should recruit professional talents in educational management, innovate within existing frameworks, and create an enabling campus environment that fosters creativity and innovation. This aligns with optimizing organizational structures and cultivating high-quality, innovative talents (Zhang et al., 2021;

Chen, 2020). Advanced management concepts should guide and enhance practical academic management work.

2. Curriculum System Management

University administrators should evaluate the current learning models of calligraphy students, considering their learning content and personal development plans. Administrators need to arrange courses scientifically, prioritize interdisciplinary learning, and emphasize cultivating students' innovative abilities and comprehensive qualities (Liu et al., 2019; Johnson et al., 2020). This includes designing a curriculum system that promotes creativity and high-quality talent cultivation in calligraphy education.

3. Teaching Management

Administrators should study educational policies deeply, align their strategies with their university's resource characteristics, and focus on talent cultivation goals. Enhancing the quality of teaching staff, adopting innovative teaching methodologies, and respecting the individual development of students are critical. Interaction and communication between teachers and students should be strengthened, and effective teaching evaluation mechanisms should be established (Wang & Li, 2022; Smith et al., 2021).

4. Student Activity Management

Administrators should proactively create opportunities for students to engage in activities, such as organizing calligraphy competitions, exhibitions, and master lectures. Financial and logistical support should be provided for student-led activities, with a focus on comprehensive development, sound personality cultivation, and creative practical abilities (Zhao et al., 2023; Thompson & Jones, 2021).

This model emphasizes the integration of innovative academic management strategies, grounded in

theoretical and practical frameworks, to enhance the creativity of students in calligraphy learning at universities in Guangdong Province.

Recommendations

1. Recommendations for Policy Formulation

1.1 Supportive Policies for Calligraphy Education: Education departments at all levels should actively introduce relevant policies and implement systematic and comprehensive support measures for calligraphy education. These policies should focus on funding, infrastructure, and curriculum development.

1.2 Quality Assessment and Supervision: Teaching and research departments should prioritize the assessment and supervision of calligraphy education quality in universities to ensure alignment with national educational standards.

1.3 Strengthening Teaching Staff Development: education administrative departments should enhance efforts to build high-quality teaching teams in universities, providing professional training and development programs for calligraphy educators.

1.4 Encouragement of Societal Involvement: education administrative departments should encourage community organizations and individuals to organize calligraphy competitions, exhibitions, and cultural activities to promote engagement and appreciation for the art form.

2. Recommendations for Academic Management Practices in Universities

2.1 Management Concepts: University administrators should actively adopt and integrate scientific management concepts, such as student development theory, to create student-centered and service-oriented approaches in academic management.

2.2 Curriculum System Management: Administrators should design and implement a well-structured curriculum that organizes the sequence and time allocation of calligraphy courses scientifically and effectively, incorporating interdisciplinary elements to enhance innovation.

2.3 Teaching Management: Focus should be placed on adopting innovative teaching concepts and methodologies, ensuring respect for students' foundational skills and individual development needs. Effective teacher-student interaction and robust teaching evaluation systems should also be prioritized.

2.4 Student Activity Management: Administrators should proactively create opportunities for student participation in activities by organizing regular calligraphy competitions, exhibitions, and lectures by calligraphy masters. Resources such as funding and venues should be made readily available for student-led initiatives.

3. Recommendations for Further Research

3.1 Calligraphy Education Talent Pipeline: Future research should explore effective strategies for fostering collaboration between universities and primary and secondary schools to create practical channels for the development of calligraphy education talents.

3.2 Leadership Traits in Academic Management: Investigate the role and impact of leadership traits in academic management, particularly in shaping policies and practices that enhance calligraphy education.

3.3 University-Industry Collaboration: Examine the potential for stronger partnerships among universities, industry associations, and enterprise institutions to enhance the creativity and practical skills of university calligraphy students.

3.4 Employment Preparedness for Calligraphy Graduates: Explore strategies to improve the employability of calligraphy graduates by aligning academic programs with labor market demands and offering career readiness training.

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