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Institutional leadership practices, quality assurance mechanisms, and teaching effectiveness in Chinese Applied Universities

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Abstract

The ongoing reform of higher education in China has intensified the demand for effective institutional leadership, robust quality assurance mechanisms, and improved teaching effectiveness in applied universities. This quantitative descriptive-correlational study examined the relationships among institutional leadership practices, quality assurance mechanisms, and teaching effectiveness in a selected applied university in Jiangxi Province, China. A total of 485 full-time faculty members participated in the study. Data were collected using validated questionnaires based on the Leadership Practices Inventory (LPI), the Baldrige Excellence Framework, and the School Teacher Effectiveness Questionnaire (STEQ). Cronbach's alpha coefficients indicated good to excellent internal consistency across the measurement dimensions. Descriptive findings showed that institutional leadership practices and quality assurance mechanisms were generally rated Agree, while teaching effectiveness was rated Often. Among leadership practices, Encourage the Heart received the highest rating, whereas Challenge the Process received the lowest. For quality assurance, Measurement and Analysis ranked highest, while Workforce ranked lowest. Teaching effectiveness was most evident in maintaining a supportive learning environment and communicating effectively, whereas instructional planning and strategies represented a relative area for improvement. Inferential analyses revealed significant differences in selected teaching effectiveness dimensions according to sex, while differences in institutional leadership and quality assurance assessments were not statistically significant across the respondents' demographic profiles. Spearman's rank-order correlation analyses further demonstrated significant positive relationships among institutional leadership practices, quality assurance mechanisms, and teaching effectiveness. These findings indicate that stronger leadership practices and more developed quality assurance mechanisms are associated with higher perceived teaching effectiveness, although the correlational design does not establish causation. The study proposed a continuous institutional

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improvement program focusing on leadership capacity building, workforce development, evidence-based quality assurance, and innovative instructional planning. By integrating leadership, quality management, and systems perspectives, the findings offered practical insights for university administrators and policymakers seeking to strengthen institutional governance and promote continuous improvement in Chinese applied higher education.

Keywords: institutional leadership practices, quality assurance mechanisms, teaching effectiveness

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1. Introduction

The rapid transformation of higher education in China has placed increasing pressure on universities to enhance educational quality, strengthen institutional accountability, and produce graduates who can effectively respond to the demands of regional and national development. Within this context, applied universities have become a critical component of China's higher education system because of their mandate to cultivate practice-oriented professionals equipped with industry-relevant competencies. Jiangxi Province, application-oriented universities play a particularly important role in supporting local economic modernization, technological innovation, and workforce development. Consequently, improving teaching effectiveness has become a strategic priority for these institutions, as it directly influences student learning outcomes, graduate employability, and institutional competitiveness.

Despite continuous reforms in higher education, many Chinese applied universities continue to face challenges in achieving consistent teaching quality. Reports from educational quality evaluations indicate disparities in instructional delivery, curriculum implementation, faculty development opportunities, and student learning outcomes across institutions. Furthermore, the transition toward outcome-based education and the increasing emphasis on quality assurance have exposed weaknesses in institutional governance structures, particularly in the alignment of leadership practices with quality management systems. While universities have established quality assurance mechanisms and implemented various teaching evaluation systems, concerns remain regarding the effectiveness of these initiatives in producing meaningful improvements in teaching performance and educational outcomes.

Institutional leadership practices have been recognized as a fundamental driver of organizational effectiveness in higher education. Effective leadership provides strategic direction, establishes a culture of excellence, promotes faculty engagement, and facilitates the efficient allocation of institutional resources. Previous studies suggest that leadership significantly influences organizational climate, innovation, and educational performance. However, leadership alone may not be sufficient to ensure sustained teaching quality. The effectiveness of leadership initiatives largely depends on the existence of robust quality assurance mechanisms that translate institutional goals into measurable educational outcomes. Quality assurance mechanisms are systematic processes that monitor, evaluate, and continuously improve educational quality. These mechanisms include curriculum review, faculty evaluation, teaching supervision, performance assessment, accreditation processes, and continuous feedback systems. Studies have shown that well-established quality assurance systems contribute to improved institutional accountability and educational effectiveness (Sun & Ma, 2022). Nevertheless, evidence from Chinese applied universities suggests that quality assurance implementation varies considerably across institutions, with some mechanisms functioning primarily as compliance requirements rather than as tools for continuous improvement. This situation raises questions regarding how leadership practices influence the effectiveness of quality assurance systems and how these mechanisms collectively contribute to teaching effectiveness.

In this study, teaching effectiveness is defined as the extent to which faculty members successfully facilitate student learning, achieve instructional objectives, employ effective pedagogical practices, and contribute to positive educational outcomes. Teaching effectiveness encompasses instructional competence, classroom management, assessment practices, student engagement, curriculum delivery, and professional commitment to teaching. This definition aligns with the measurement indicators used in the study and avoids conceptual inconsistencies that may arise when teaching effectiveness is equated exclusively with student outcomes such as innovation, employability, or practical competencies.

The study is anchored on three complementary theoretical perspectives. Transformational Leadership Theory emphasizes the capacity of institutional leaders to inspire organizational change, motivate stakeholders, and foster innovation. Total Quality Management (TQM) Theory provides a framework for continuous quality improvement through systematic evaluation and stakeholder participation. Systems Theory highlights the interconnected nature of organizational components, suggesting that leadership practices, quality assurance mechanisms, and teaching effectiveness operate as interdependent elements within the university system. Together, these theories provide a comprehensive foundation for examining how leadership and quality assurance interact to influence educational outcomes.

Addressing these gaps is particularly important because applied universities face unique challenges that differ from those of research-oriented institutions. Their strong emphasis on industry relevance, practical instruction, and workforce preparation requires leadership approaches and quality assurance systems that are specifically aligned with applied learning environments. Understanding the relationships among leadership practices, quality assurance mechanisms, and teaching effectiveness can therefore provide valuable insights for institutional improvement and policy development.

Objectives of the study - This study aimed to investigate the relationship among institutional leadership practices, quality assurance mechanisms, and teaching effectiveness in a Chinese applied university. Specifically, it sought to examine how institutional leadership and quality assurance systems contribute to enhancing teaching effectiveness and supporting continuous improvement in higher education institutions. Specifically, this study assessed institutional leadership practices, in terms of Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, Encourage the Heart; identified quality assurance mechanisms in terms of Leadership, Strategy, Customers, Measurement, Analysis & Knowledge Management, Workforce, Operations, Results; and evaluated teaching effectiveness in terms of subject matter knowledge, Instructional Planning and Strategies, assessment, learning environment and effective communication. Moreover, it examined significant relationships among the three. Finally, based on the research results, propose a continuous improvement program for applied universities in China.

2. Methods

This study adopted a quantitative research design using a questionnaire survey to explore the relationship among institutional leadership practices, quality assurance mechanisms, and teaching effectiveness in application-oriented universities in Jiangxi Province. This study involved professional teachers of applied courses from the selected applied Chinese University in Jiangxi Province. There were 2682 full time teachers, as the total population. Using Raosoft's online sample calculator, the number of participants was calculated with a 96% confidence level, a 4% margin of error, and 512 respondents selected. The selected participants varied in age and teaching experience. Their views on leadership practices, quality assurance mechanisms, and teaching effectiveness also differed, particularly among the faculty group. The participants in the study were professional teachers working full-time and teaching applied courses at the selected applied universities in the province.

The researcher adopted standardized questionnaires that consisted of four parts. Part one provided an overview of respondents, including age, sex, highest educational attainment, and length of service in teaching. Part two is Institutional Leadership Practices with five domains: model the way, inspire a shared vision, challenge the process, enable others to act, and encourage the heart. The third part was quality assurance mechanisms, including sub-domains: leadership, strategy, customers, measurement, analysis & knowledge management, workforce, operations, results, with 34 indicators taken verbatim from the National Institute of Standards and Technology. (2023). Baldrige excellence framework (2023–2024): Proven leadership and management practices for high performance. Gaithersburg, MD: U.S. Department of Commerce, National Institute of Standards and Technology. Part four focused on teaching effectiveness, based on the School Teacher Effectiveness Questionnaire (STEQ), reduced to 26 items. The data collected from 50 participants showed that the STEQ was highly reliable with an alpha of .84. The results of pilot testing provided evidence that the questionnaire was a valid measure of teacher

effectiveness**.** The questionnaire is from Akram, (2018). Development and Validation of School Teacher Effectiveness Questionnaire. Journal of Research & Reflections in Education (JRRE), 12(2). including seven sub-domains: subject matter knowledge, instructional planning and strategies, assessment, learning environment, and effective communication with 26 indicators. A four-point Likert scale is used with corresponding verbal agreement (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree).

Table 1
Reliability Statistics

Indicators	Cronbach Alpha	Remarks
Model the Way	0.969	Excellent
Inspire a Shared Vision	0.949	Excellent
Challenge the Process	0.888	Good
Enable Others to Act	0.897	Good
Encourage the Heart	0.946	Excellent
Leadership	0.913	Excellent
Customers	0.923	Excellent
Measurement, Analysis & Knowledge Management	0.921	Excellent
Workforce	0.860	Good
Operations	0.895	Good
Results	0.963	Excellent
Subject Matter Knowledge	0.929	Excellent
Instructional Planning and Strategies	0.910	Excellent
Assessment	0.901	Excellent
Learning Environment	0.911	Excellent
Effective Communication	0.754	Acceptable

George and Mallery (2003) provide the following rules of thumb: " > .9 – Excellent, > .8 – Good, > .7 – Acceptable, > .6 – Questionable, > .5 – Poor, and < .5 – Unacceptable"

Following content validation, the revised questionnaire underwent pilot testing with a group of respondents who had characteristics similar to those of the target participants but were not included in the actual study. The pilot test was conducted to assess the clarity of instructions, the comprehensibility of items, and the overall suitability of the instrument. The data obtained from the pilot test were submitted to a statistician for reliability analysis using appropriate measures, such as Cronbach's alpha. Items with low reliability indices were reviewed, revised, or removed to improve the instrument's internal consistency. Only after achieving acceptable reliability coefficients was the questionnaire finalized for actual administration.

Prior to data collection, the researcher sought guidance and approval from the research adviser and dissertation committee on the appropriateness and relevance of the research instrument. After incorporating the adviser's recommendations, the questionnaire underwent expert validation. A panel of experts comprising specialists in educational leadership, quality assurance, higher education management, and research methodology evaluated the instrument for content relevance, clarity, comprehensiveness, consistency, and alignment with the study variables. Their comments and suggestions were incorporated to further improve the instrument. Prior to the actual data collection, the researcher secured the necessary approvals and clearances. First, formal approval was obtained from the research adviser and dissertation committee. Subsequently, the researcher applied for ethical clearance from the Lyceum of the Philippines University–Batangas Research Ethics Committee to ensure that the study complied with established ethical standards concerning voluntary participation, confidentiality, anonymity, privacy, and informed consent. Upon obtaining ethical clearance, a formal request letter was sent to the administration of Nanchang University seeking permission to conduct the study and administer the survey to qualified faculty respondents.

Once the necessary permissions were granted, the researcher coordinated with designated university officials and department representatives regarding the schedule and procedures for data collection. Eligible participants were identified based on the study's established inclusion criteria. Before administering the questionnaire, respondents were provided with an informed consent form explaining the purpose of the study, the voluntary nature of participation, the confidentiality of responses, and their right to withdraw from the study at any time without penalty. Only those who voluntarily agreed to participate were included in the study.

The questionnaires were then distributed to the respondents through Q Star, an online survey platform approved by the university. Clear instructions were provided to ensure that respondents understood each item and completed the questionnaire independently. The researcher remained available to address questions and clarify instructions without influencing the respondents' answers. After the survey was completed, the questionnaires were retrieved and checked for completeness and accuracy. Incomplete or improperly answered questionnaires were reviewed and, where appropriate, respondents were requested to provide missing information. The collected data were then organized, coded, tabulated, and encoded into statistical software for analysis. Finally, the encoded data were submitted for statistical treatment and analysis to address the research objectives and test the proposed relationships among institutional leadership practices, quality assurance mechanisms, and teaching effectiveness. The findings served as the basis for developing a continuous improvement plan to enhance leadership effectiveness, strengthen quality assurance systems, and improve teaching effectiveness in Chinese applied universities.

To conduct data analysis, the researcher used the following statistical tools. Weighted averages and rankings were used to determine leadership practices, identify the role of quality assurance mechanisms and teacher qualification guarantee mechanisms. To evaluate the relationship between teaching effectiveness, leadership practices, and quality assurance, the Shapiro-Wilk test shall be used. Furthermore, the Spearman's rho coefficient was used to assess significant correlations among the treatment variables. Finally, all data were analyzed using PASW 26 statistical software and further interpreted at significance levels of α of 0.05 and 0.01. The researcher strictly adhered to the ethical principles and standards governing educational research to ensure the protection of the dignity, rights, and welfare of all participants throughout the study. Prior to data collection, the research proposal was reviewed and approved by the research adviser and dissertation committee. Subsequently, ethical clearance was obtained from the Lyceum of the Philippines University–Batangas Ethics Review Committee to ensure compliance with established ethical guidelines for research involving human participants. In addition, formal permission to conduct the study was obtained from the appropriate authorities at the selected Applied Chinese University.

Participation in the study was entirely voluntary. Before the survey questionnaire was administered, all prospective respondents were provided with an informed consent form that clearly explained the purpose of the study, research procedures, expected duration of participation, potential benefits, and the minimal risks associated with participation. Respondents were informed that their participation was voluntary and that they had the right to decline to participate or withdraw from the study at any stage without penalty, consequence, or loss of benefits. The principles of confidentiality and anonymity were strictly observed throughout the research process. No personal identifiers such as names, employee identification numbers, contact information, or departmental affiliations were included in the final database, reports, or publications resulting from the study. The respondents were identified only by numerical codes for data processing and analysis. The findings were reported in aggregate form to ensure that individual responses could not be traced to any specific participant. To minimize bias and maintain research integrity, the researcher remained objective throughout the study. Data were collected, analyzed, and interpreted solely from participants' responses and statistical results. No personal opinions, assumptions, or subjective judgments were allowed to influence the presentation and interpretation of the findings.

Data privacy and security were also given utmost importance. All completed questionnaires, electronic records, and research documents were stored securely in password-protected digital files and secured storage facilities accessible only to the researcher and authorized members of the research team. The collected data were used exclusively for academic and research purposes and were not disclosed to any unauthorized individual or organization. Upon completion of the study and after the required retention period, all research data will be properly archived or securely disposed of in accordance with institutional policies and ethical research standards. Furthermore, the study adhered to the fundamental ethical principles of respect for persons, beneficence, non-maleficence, justice, and academic integrity. Every effort was made to ensure that participants experienced no physical, psychological, social, professional, or emotional harm as a result of their participation. The researcher remained committed to conducting the study responsibly, transparently, and in full compliance with the ethical standards prescribed by Lyceum of the Philippines University–Batangas, Selected Applied Chinese University,

and internationally accepted research ethics guidelines.

3. Results and discussion

Table 2
Summary Table on Institutional Leadership Practices

Indicators	Weighted Mean	Verbal Interpretation	Rank
Model the Way	3.03	Agree	2
Inspire a Shared Vision	3.02	Agree	3.5
Challenge the Process	2.97	Agree	5
Enable Others to Act	3.02	Agree	3.5
Encourage the Heart	3.04	Agree	1
Composite Mean	3.02	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 a summary of institutional leadership practices based on the five exemplary practices: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart. The overall composite mean of 3.02, verbally interpreted as Agree, indicates that institutional leaders in the participating Chinese applied universities are generally perceived to demonstrate the leadership practices measured in the study. The relatively narrow range of weighted means, from 2.97 to 3.04, further indicates that none of the five leadership dimensions is perceived as substantially stronger or weaker than the others. Nevertheless, the ranking provides useful insight into the leadership behaviors that respondents perceive as relatively more evident and those that may require further strengthening. Lu (2024) emphasizes that the implementation of distributed leadership may be constrained by existing organizational structures.

When the five dimensions are considered together, the results reveal a relatively consistent pattern of institutional leadership. The composite mean of 3.02, interpreted as Agree, indicates that institutional leaders are generally perceived to practice all five dimensions of exemplary leadership. More importantly, the relatively narrow difference among the dimensions—only 0.07 between the highest-rated dimension, Encourage the Heart (3.04), and the lowest-rated dimension, Challenge the Process (2.97)—suggests that respondents do not perceive a major imbalance in the overall leadership profile. The ranking nevertheless reveals a meaningful leadership pattern. Institutional leaders are perceived to be relatively stronger in encouraging and recognizing people, followed by modeling expected behaviors. They receive similar assessments in inspiring a shared vision and enabling others to act, while challenging existing processes receives the lowest relative assessment. This may indicate that the leadership environment is comparatively stronger in the relational, behavioral, and motivational dimensions of leadership than in the more change-oriented dimension of organizational leadership. This pattern is particularly relevant to the development of Chinese applied universities. Applied universities must simultaneously maintain institutional standards and respond to rapidly changing educational and professional environments. Consequently, effective institutional leadership requires a balance between stability and innovation, accountability and autonomy, and established standards and continuous improvement. The present results suggest that the participating institutions possess a generally positive foundation across these areas but may benefit from placing additional emphasis on leadership practices that encourage responsible experimentation and organizational learning. Ruan et al. (2024) noted the complex institutional environment within which Chinese university leaders operate, while research on innovation and entrepreneurship education in Chinese higher education has emphasized the increasing need for universities to develop institutional structures that support innovation and practical competencies.

The findings further suggest that the five leadership practices should not be viewed as isolated behaviors. Model the Way establishes credibility and standards; Inspire a Shared Vision provides direction; Enable Others to Act develops participation and capacity; Encourage the Heart reinforces motivation and appreciation; and Challenge the Process creates opportunities for innovation and improvement. The relatively balanced results across the five dimensions indicate that institutional leaders demonstrate each of these functions to some degree. However, the lower relative rating for Challenge the Process suggests that the transition from maintaining effective

institutional practices toward actively experimenting with new ones may represent an important area for further leadership development.

Table 3

Summary Table on Quality assurance mechanisms

Indicators	Weighted Mean	Verbal Interpretation	Rank
Leadership	3.00	Agree	5
Strategy	3.01	Agree	3
Customers	3.01	Agree	3
Measurement, Analysis	3.03	Agree	1
Knowledge Management	2.98	Agree	7
Workforce	2.97	Agree	8
Operations	2.99	Agree	6
Results	3.01	Agree	3
Composite Mean	3.00	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 3 highlights the summary assessment of the quality assurance mechanisms across the eight dimensions examined in the study: Leadership, Strategy, Customers, Measurement and Analysis, Knowledge Management, Workforce, Operations, and Results. The findings reveal an overall composite weighted mean of 3.00, verbally interpreted as Agree. This indicates that the respondents generally perceived the quality assurance mechanisms in the Chinese applied universities included in the study to be present and functioning at a satisfactory level. However, the overall assessment did not reach the Strongly Agree category, indicating that the quality assurance system, while generally viewed positively, still provides opportunities for further strengthening and institutionalization.

The results reveal a highly compressed ranking pattern. Measurement and Analysis received the highest weighted mean, 3.03, while Workforce received the lowest, 2.97. The total difference between these two dimensions is only 0.06. Strategy, Customers, and Results were tied at 3.01, while Leadership and Operations were only slightly lower at 3.00 and 2.99, respectively. Knowledge Management and Workforce occupied the bottom two positions, at 2.98 and 2.97, respectively. This narrow range is an important finding in itself. It indicates that respondents did not perceive any single quality assurance dimension as dramatically stronger or weaker than the others. Instead, the results point toward a relatively balanced but moderate quality assurance system. The institutions appear to have quality assurance mechanisms across all eight areas, but these mechanisms are generally perceived as functioning at a satisfactory rather than highly developed level.

The overall composite mean of 3.00, interpreted as Agree, reinforces this conclusion. The findings suggest that quality assurance in the Chinese applied universities represented in the study is neither characterized by major weaknesses across the system nor by exceptionally strong implementation in any single dimension. Rather, the system appears to have reached a level where the major components are present and recognized, while further institutionalization and integration are needed to move from satisfactory implementation toward a stronger quality culture. The pattern is consistent with recent scholarship on quality assurance in Chinese applied undergraduate universities. Qu (2024) observed that although internal quality assurance has developed in Chinese higher education, quality assurance systems in applied undergraduate institutions remain in the process of development and are not yet uniformly established across institutional contexts. These perspectives provide useful context for understanding why the present respondents may have consistently agreed that the mechanisms are functioning while stopping short of strongly agreeing that they are fully developed.

The results therefore provide an important empirical basis for the succeeding analysis of teaching effectiveness. The overall quality assurance mechanisms were positively assessed, but the uniformly “Agree” ratings indicate that there is room to examine whether stronger variations in quality assurance mechanisms are associated with variations in teaching effectiveness. Such a relationship cannot be inferred from Table 16 alone and would require the appropriate inferential analysis. Nevertheless, the summary provides the descriptive baseline against which the subsequent teaching-effectiveness findings can be interpreted.

Table 4
Summary Table on Teaching Effectiveness

Indicators	Weighted Mean	Verbal Interpretation	Rank
Subject Matter Knowledge	3.00	Often	3.5
Instructional Planning and Strategies	2.98	Often	5
Assessment	3.00	Often	3.5
Learning Environment	3.05	Often	1.5
Effective Communication	3.05	Often	1.5
Composite Mean	3.02	Often	

Legend: 3.50 – 4.00 = Always; 2.50 – 3.49 = Often; 1.50 – 2.49 = Sometimes; 1.00 – 1.49 = Never

Table 4 presents the summary of the respondents' Teaching Effectiveness across five dimensions: Subject Matter Knowledge, Instructional Planning and Strategies, Assessment, Learning Environment, and Effective Communication. The overall composite mean of 3.02, verbally interpreted as Often, indicates that the respondents generally demonstrate the identified teaching effectiveness practices on a regular basis. The results show that all five dimensions fall within the same verbal interpretation of Often, with weighted means ranging from 2.98 to 3.05. This narrow range of 0.07 indicates a relatively consistent pattern across the different dimensions of teaching effectiveness.

The results showed that respondents most frequently modified teaching methods to make lessons relevant to students' lives, followed by using appropriate materials, technology, and resources. The comparatively lower ratings concerned teaching students according to individual differences and using available resources to meet students' learning needs. However, the present findings are descriptive and do not establish that any particular instructional strategy yields superior student outcomes. Recent research in Chinese higher education has likewise emphasized the role of classroom interaction, rapport, and teacher support in fostering student engagement (Li, 2024). The overall rank ordering presents an interesting pattern. The respondents rated Learning Environment and Effective Communication highest, followed by Subject Matter Knowledge and Assessment, while Instructional Planning and Strategies received the lowest rating. The differences, however, are very small. The highest weighted mean is 3.05, whereas the lowest is 2.98, yielding a range of only 0.07. Consequently, the dimensions should not be viewed as substantially different in practical magnitude. Instead, the ranking provides a relative ordering of respondents' reported frequency of teaching practices. The narrow range also indicates that teaching effectiveness among the respondents appears to be broad-based rather than concentrated in only one or two dimensions. All five areas received an "Often" interpretation.

The overall composite mean of 3.02, interpreted as Often, provides further evidence of this generally positive pattern. However, the absence of any dimension rated Always should be noted. Based on the study's scale, a mean of 3.50 or higher would be required to reach the "Always" category. Thus, while respondents regularly report practicing the behaviors measured, the findings also point to opportunities for increasing the consistency and comprehensiveness of these practices. For Chinese applied universities, the findings have implications for faculty development and institutional quality improvement. Since Learning Environment and Effective Communication emerged as the highest-rated dimensions, professional development programs may build upon these existing strengths while strengthening the comparatively lower-rated areas of Instructional Planning and Strategies. Faculty development could emphasize differentiated instruction, student-centered instructional design, authentic learning activities, technology integration, and strategies for addressing diverse learning needs. At the same time, the existing strengths in classroom climate and communication can be used to support the implementation of these instructional innovations. The present findings provide descriptive evidence that these dimensions are regularly practiced by the respondents. They can therefore serve as a baseline for identifying faculty development priorities and monitoring improvements in teaching practices over time.

Recent literature on internal quality assurance similarly emphasizes the importance of aligning institutional purposes, people, and processes so that quality assurance becomes an integrated organizational practice rather than an isolated technical activity (Krooi et al., 2024). In the Chinese context, the development of quality assurance has likewise increasingly emphasized internal systems, quality culture, and continuous improvement within

institutions (Qu, 2024).

Table 5

Relationship Between Institutional Leadership Practices and Quality Assurance Mechanisms

Model the Way	r-value	p-value	Interpretation
Leadership	.348**	0.000	Highly Significant
Strategy	.295**	0.000	Highly Significant
Customers	.529**	0.000	Highly Significant
Measurement, Analysis	.404**	0.000	Highly Significant
Knowledge Management	.374**	0.000	Highly Significant
Workforce	.272**	0.000	Highly Significant
Operations	.381**	0.000	Highly Significant
Results	.401**	0.000	Highly Significant
Inspire a Shared Vision			
Leadership	.312**	0.000	Highly Significant
Strategy	.312**	0.000	Highly Significant
Customers	.486**	0.000	Highly Significant
Measurement, Analysis	.413**	0.000	Highly Significant
Knowledge Management	.399**	0.000	Highly Significant
Workforce	.289**	0.000	Highly Significant
Operations	.352**	0.000	Highly Significant
Results	.371**	0.000	Highly Significant
Challenge the Process			
Leadership	.290**	0.000	Highly Significant
Strategy	.205**	0.000	Highly Significant
Customers	.384**	0.000	Highly Significant
Measurement, Analysis	.259**	0.000	Highly Significant
Knowledge Management	.252**	0.000	Highly Significant
Workforce	.253**	0.000	Highly Significant
Operations	.317**	0.000	Highly Significant
Results	.309**	0.000	Highly Significant
Enable Others to Act			
Leadership	.231**	0.000	Highly Significant
Strategy	.302**	0.000	Highly Significant
Customers	.364**	0.000	Highly Significant
Measurement, Analysis	.286**	0.000	Highly Significant
Knowledge Management	.286**	0.000	Highly Significant
Workforce	.223**	0.000	Highly Significant
Operations	.254**	0.000	Highly Significant
Results	.326**	0.000	Highly Significant
Encourage the Heart			
Leadership	.348**	0.000	Highly Significant
Strategy	.320**	0.000	Highly Significant
Customers	.501**	0.000	Highly Significant
Measurement, Analysis	.369**	0.000	Highly Significant
Knowledge Management	.333**	0.000	Highly Significant
Workforce	.371**	0.000	Highly Significant
Operations	.431**	0.000	Highly Significant
Results	.466**	0.000	Highly Significant

Legend: Significant at p-value < 0.01

Table 5 presents the relationship between the five dimensions of institutional leadership practices and the eight dimensions of quality assurance mechanisms. The analysis employed Spearman's rho to determine the direction and strength of the relationships. The results reveal a consistent pattern: all 40 relationships are positive and statistically significant at the 0.01 level, with p-values of 0.000 as reported in the table. The rho-values range from 0.205 to 0.529, indicating relationships that are generally weak-to-moderate to moderate in strength. These findings demonstrate that more favorable assessments of institutional leadership practices are consistently associated with more favorable assessments of quality assurance mechanisms in the Chinese applied-university context.

The results provide strong empirical evidence of a consistent positive association between institutional leadership practices and quality assurance mechanisms among the respondents. All five leadership dimensions—

Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart—were significantly and positively related to all eight QA dimensions—Leadership, Strategy, Customers, Measurement and Analysis, Knowledge Management, Workforce, Operations, and Results. The range of rho-values from 0.205 to 0.529 indicates that the relationships vary in strength. The strongest observed relationship was between Model the Way and Customers (rho = 0.529), followed by Encourage the Heart and Customers (rho = 0.501) and Inspire a Shared Vision and Customers (rho = 0.486). The weakest relationship was between Challenge the Process and Strategy (rho = 0.205). Despite this variation, every relationship remained statistically significant at $p < .01$. These findings suggest that institutional leadership should be regarded as an important organizational context within which quality assurance mechanisms operate. In particular, the results highlight the relevance of credible role modeling, shared vision, innovation-oriented leadership, empowerment, recognition, and encouragement to favorable perceptions of institutional QA. Nevertheless, because the analysis is correlational, these findings should not be used to conclude that leadership practices directly cause improvements in QA mechanisms.

For the participating Chinese applied universities, the results point toward a quality-assurance approach that integrates leadership behavior with institutional systems. Strengthening QA should therefore involve not only policies, procedures, indicators, and monitoring mechanisms but also leadership practices that establish quality values, communicate institutional direction, support participation, encourage responsible innovation, and recognize the contributions of faculty and staff. This integrated perspective is particularly important in applied universities, where quality must connect institutional governance with teaching, students, stakeholders, workforce development, operational processes, and measurable results. The findings further suggest that future institutional development efforts may prioritize two complementary areas. First, the relatively strong associations involving Customers indicate an opportunity to further leverage leadership practices to strengthen student and stakeholder responsiveness. Second, the comparatively weaker relationships involving Workforce, particularly Enable Others to Act and Challenge the Process, indicate an opportunity to strengthen faculty and staff participation, professional development, empowerment, and workforce planning within the quality-assurance system. Such initiatives would help move quality assurance from a primarily compliance- and measurement-oriented system toward a more participatory culture of continuous improvement.

At the 0.01 level of significance, all 40 correlation tests in Table 5 are statistically significant. Therefore, the null hypotheses stating that there is no significant relationship between each dimension of institutional leadership practices and each dimension of quality assurance mechanisms are rejected. The positive rho-values indicate that the relationships are direct: higher assessments of institutional leadership practices tend to be accompanied by higher assessments of quality assurance mechanisms. This interpretation is compatible with research showing that leadership in Chinese higher education is strongly influenced by institutional structures and governance arrangements. Ruan et al. (2024) found that Chinese university leaders tend to emphasize structural dimensions of leadership**.**

Table 6

Relationship Between Institutional Leadership Practices and Teaching Effectiveness

Model the Way	r-value	p-value	Interpretation
Subject Matter Knowledge	.437**	0.000	Highly Significant
Instructional Planning and Strategies	.485**	0.000	Highly Significant
Assessment	.446**	0.000	Highly Significant
Learning Environment	.436**	0.000	Highly Significant
Effective Communication	.565**	0.000	Highly Significant
Inspire a Shared Vision			
Subject Matter Knowledge	.466**	0.000	Highly Significant
Instructional Planning and Strategies	.512**	0.000	Highly Significant
Assessment	.419**	0.000	Highly Significant
Learning Environment	.446**	0.000	Highly Significant
Effective Communication	.558**	0.000	Highly Significant

Challenge the Process			
Subject Matter Knowledge	.295**	0.000	Highly Significant
Instructional Planning and Strategies	.333**	0.000	Highly Significant
Assessment	.283**	0.000	Highly Significant
Learning Environment	.342**	0.000	Highly Significant
Effective Communication	.403**	0.000	Highly Significant
Enable Others to Act			
Subject Matter Knowledge	.344**	0.000	Highly Significant
Instructional Planning and Strategies	.291**	0.000	Highly Significant
Assessment	.296**	0.000	Highly Significant
Learning Environment	.338**	0.000	Highly Significant
Effective Communication	.366**	0.000	Highly Significant
Encourage the Heart			
Subject Matter Knowledge	.435**	0.000	Highly Significant
Instructional Planning and Strategies	.446**	0.000	Highly Significant
Assessment	.416**	0.000	Highly Significant
Learning Environment	.471**	0.000	Highly Significant
Effective Communication	.559**	0.000	Highly Significant

Legend: Significant at p-value < 0.01

Table 6 presents the relationship between institutional leadership practices and teaching effectiveness among the respondents in Chinese applied universities. Institutional leadership practices were examined through five dimensions: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart. Teaching effectiveness was assessed through Subject Matter Knowledge, Instructional Planning and Strategies, Assessment, Learning Environment, and Effective Communication. Spearman's rho was used to determine the direction and strength of the relationships. The results reveal a highly consistent pattern. All 25 relationships between institutional leadership practices and teaching effectiveness are positive and statistically significant at the 0.01 level, with all reported p-values equal to 0.000. The rho-values range from 0.283 to 0.565, indicating generally moderate positive relationships, with some relationships approaching a relatively strong level. These findings indicate that respondents who reported more favorable perceptions of institutional leadership practices also tended to report more favorable perceptions of teaching effectiveness.

The findings have several implications for institutional leadership and faculty development in Chinese applied universities. First, the universal positive relationships indicate that teaching effectiveness should not be viewed independently from the institutional leadership environment. Although leadership cannot be claimed to cause teaching effectiveness based on these correlational findings, the consistent associations suggest that leadership practices and teaching practices form interconnected aspects of institutional functioning. Research on Chinese higher education has similarly emphasized student engagement, teacher support, classroom climate, and meaningful interaction as important components of students' educational experiences (Li, 2024; Xu et al., 2024). Nevertheless, the present finding remains correlational and should not be interpreted to mean that customer-oriented automatically produces more effective teaching. Previous Research has highlighted the growing importance of data-informed decision-making and the use of evidence in institutional management (Kalim & Bibi, 2023).

Overall, this demonstrates a strong and consistent empirical relationship between institutional leadership practices and teaching effectiveness. All 25 relationships were positive and statistically significant at $p < .01$, with rho values ranging from 0.283 to 0.565. This means that more favorable perceptions of institutional leadership practices tended to coincide with more favorable perceptions of teaching effectiveness across all five teaching dimensions. The strongest relationship in the table was between Model the Way and Effective Communication (rho = 0.565, $p < .01$). This was followed closely by Encourage the Heart and Effective Communication (rho = 0.559, $p < .01$) and Inspire a Shared Vision and Effective Communication (rho = 0.558, $p < .01$). The weakest relationship was between Challenge the Process and Assessment (rho = 0.283, $p < .01$). Despite being the weakest coefficient, it remained statistically significant, demonstrating that all leadership dimensions were positively associated with all teaching-effectiveness dimensions. The results therefore indicate that institutional leadership

practices are closely connected with the perceived quality of teaching in Chinese applied universities. Leadership characterized by role modeling, shared vision, responsible innovation, empowerment, recognition, and encouragement is consistently associated with teaching practices involving disciplinary knowledge, instructional planning, assessment, learning environment, and communication.

Table 7

Relationship Between Quality Assurance Mechanisms and Teaching Effectiveness

Leadership	r-value	p-value	Interpretation
Subject Matter Knowledge	.320**	0.000	Highly Significant
Instructional Planning and Strategies	.348**	0.000	Highly Significant
Assessment	.316**	0.000	Highly Significant
Learning Environment	.381**	0.000	Highly Significant
Effective Communication	.380**	0.000	Highly Significant
Strategy			
Subject Matter Knowledge	.330**	0.000	Highly Significant
Instructional Planning and Strategies	.242**	0.000	Highly Significant
Assessment	.287**	0.000	Highly Significant
Learning Environment	.292**	0.000	Highly Significant
Effective Communication	.427**	0.000	Highly Significant
Customers			
Subject Matter Knowledge	.496**	0.000	Highly Significant
Instructional Planning and Strategies	.546**	0.000	Highly Significant
Assessment	.472**	0.000	Highly Significant
Learning Environment	.559**	0.000	Highly Significant
Effective Communication	.652**	0.000	Highly Significant
Measurement, Analysis			
Subject Matter Knowledge	.388**	0.000	Highly Significant
Instructional Planning and Strategies	.419**	0.000	Highly Significant
Assessment	.333**	0.000	Highly Significant
Learning Environment	.435**	0.000	Highly Significant
Effective Communication	.469**	0.000	Highly Significant
Knowledge Management			
Subject Matter Knowledge	.386**	0.000	Highly Significant
Instructional Planning and Strategies	.365**	0.000	Highly Significant
Assessment	.293**	0.000	Highly Significant
Learning Environment	.403**	0.000	Highly Significant
Effective Communication	.441**	0.000	Highly Significant
Workforce			
Subject Matter Knowledge	.367**	0.000	Highly Significant
Instructional Planning and Strategies	.369**	0.000	Highly Significant
Assessment	.300**	0.000	Highly Significant
Learning Environment	.350**	0.000	Highly Significant
Effective Communication	.396**	0.000	Highly Significant
Operations			
Subject Matter Knowledge	.453**	0.000	Highly Significant
Instructional Planning and Strategies	.477**	0.000	Highly Significant
Assessment	.407**	0.000	Highly Significant
Learning Environment	.438**	0.000	Highly Significant
Effective Communication	.526**	0.000	Highly Significant
Results			
Subject Matter Knowledge	.431**	0.000	Highly Significant
Instructional Planning and Strategies	.431**	0.000	Highly Significant
Assessment	.385**	0.000	Highly Significant
Learning Environment	.451**	0.000	Highly Significant
Effective Communication	.554**	0.000	Highly Significant

Legend: Significant at p-value < 0.01

Table 7 presents the relationship between the eight dimensions of Quality Assurance (QA) Mechanisms—Leadership, Strategy, Customers, Measurement and Analysis, Knowledge Management, Workforce, Operations, and Results—and the five dimensions of Teaching Effectiveness, namely Subject Matter Knowledge, Instructional Planning and Strategies, Assessment, Learning Environment, and Effective Communication. Spearman's rho was used to determine the direction and strength of the relationships. The results show that all 40 correlation coefficients are positive and statistically significant at the 0.01 level, with p-values of 0.000. Thus, the null

hypothesis stating that there is no significant relationship between Quality Assurance Mechanisms and Teaching Effectiveness is rejected. These findings indicate that higher levels of perceived quality assurance mechanisms are consistently associated with higher levels of perceived teaching effectiveness among the respondents in Chinese applied universities. However, because the analysis is correlational, the findings should be interpreted as evidence of association and not as proof that QA mechanisms directly cause improvements in teaching effectiveness. This is consistent with research emphasizing that leadership in Chinese higher education involves coordination, institutional direction, professional relationships, and capacity building rather than merely administrative control (Ruan et al., 2024).

Across all eight QA mechanisms, Effective Communication emerges as the teaching-effectiveness dimension most consistently associated with quality assurance. It has the highest correlation within seven of the eight QA dimensions: Leadership ($\rho = .380$), Strategy ($\rho = .427$), Customers ($\rho = .652$), Measurement and Analysis ($\rho = .469$), Knowledge Management ($\rho = .441$), Workforce ($\rho = .396$), Operations ($\rho = .526$), and Results ($\rho = .554$). This recurring pattern is notable because communication serves as a link between institutional systems and classroom practices. Quality assurance policies, strategic objectives, student feedback, performance information, knowledge resources, workforce development, operational procedures, and institutional results must all be communicated effectively to influence everyday academic work. In the Chinese applied-university context, where institutions must simultaneously respond to governmental quality expectations, regional development needs, industry demands, and student learning requirements, communication can provide an important link between institutional priorities and teaching practice. Research on Chinese university faculty has emphasized the importance of occupational well-being and organizational conditions, while more recent research on HRM reforms in Chinese public universities highlights the complexity of balancing institutional requirements with faculty development and professional needs (Cao & Zhang, 2022; Xia et al., 2024).

Conversely, Assessment generally demonstrates the lowest or among the lowest correlations across the eight QA mechanisms. Its coefficients range from 0.287 for Strategy to 0.472 for Customers. This pattern suggests that although assessment is significantly associated with QA mechanisms, its relationship with institutional quality processes is comparatively less pronounced than that of communication and learning environment. One possible interpretation is that classroom assessment may remain relatively localized within teachers' instructional responsibilities, whereas mechanisms such as communication, operational support, and stakeholder responsiveness are more visibly connected to institution-wide quality systems. This finding highlights an area for further development: quality assurance systems may benefit from more explicit integration of institutional data, program-level outcomes, and classroom assessment practices. Such integration would allow assessment evidence to contribute more systematically to curriculum review, instructional improvement, faculty development, and institutional decision-making. Quality assurance research in applied Chinese universities similarly emphasizes the integration of processes, standards, monitoring, and continuous improvement as important elements of internal quality systems (Qu, 2024).

4. Conclusions and recommendations

The following conclusions were drawn from the study's results: Institutional leadership was generally strong but needs greater innovation and process reform. Quality assurance systems are well-established; gaps lie in staff development, knowledge sharing, and data-driven institutional improvement. Teachers performed well overall, yet instructional planning and student-centered, tech-enhanced teaching strategies need improvement. Leadership, quality assurance, and teaching effectiveness are positively correlated and interdependent. A continuous improvement framework is proposed to boost leadership innovation capacity, workforce development, and student-centered teaching, translating research into evidence-based institutional actions. The following recommendations are hereby forwarded: Educators can boost teaching effectiveness through improved lesson planning and differentiated, student-centered, tech-supported, practice-focused methods. Training, peer observation and coaching align learning outcomes and assessments, fostering shared professional knowledge. Deans and department chairs should prioritize process reform to encourage innovation, trials, evidence-based decisions and

continuous improvement. They can enable faculty to test new teaching practices and build channels for faculty input on academic policies and quality assurance. University administrators shall integrate leadership, quality assurance and teaching effectiveness into one quality system. Internal evaluation data should drive improvement instead of only compliance. The HR Office should strengthen workforce quality assurance. Annual faculty competency assessments can identify training needs in pedagogy, digital skills, industry engagement, and leadership. The Student Affairs Office needs systematic student feedback loops for quality assurance: record concerns, assign to relevant units, resolve issues and inform students of outcomes. Future research may expand this study across Chinese university types, regions and disciplines. Comparisons between applied universities and other higher education institutions can test whether consistent patterns exist.

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