

Professional Competence, Teaching Pedagogy, and Assessment Practices: Basis for Enhanced Faculty Development Plan

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Abstract: This study investigates the interplay between professional competence, teaching pedagogy, assessment practices, and faculty development plans in Chinese universities. Employing descriptive quantitative research, data was collected using a questionnaire with a high Cronbach's alpha score (>0.900). The study involved 405 college teachers from three universities in Anhui Province, China. Results indicate that a strong foundation of professional competence, effective teaching pedagogy, and appropriate assessment practices significantly contribute to faculty development. Respondents reported employing diverse teaching strategies and assessment practices, resulting in positive teaching outcomes and professional growth. The findings provide valuable insights for administrators and educators to enhance faculty development in Chinese universities. Future research should explore additional challenges and considerations to further advance faculty development efforts.

Keywords: Professional competence; Teaching pedagogy; Assessment practice; Faculty development plan

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1. Introduction

In the intricate tapestry of education, teachers assume the pivotal role of weavers, shaping the minds and futures of upcoming generations. Their duty surpasses mere knowledge dissemination; it involves nurturing intellects, fostering critical thinking, and sculpting characters. The impact of teachers extends far beyond the confines of classrooms, permeating into the very fabric of society. As conduits of knowledge and societal pillars, teachers undertake multifaceted and complex social responsibilities^[1]. They act as catalysts for both intellectual and moral development, thereby significantly influencing individual trajectories and, by extension, the advancement of communities and nations.

Contemporary education dynamics necessitate a deep comprehension of the multifaceted dimensions constituting effective teaching. Professional competence, teaching pedagogy, and assessment practices emerge as pivotal variables, each contributing uniquely to educators' holistic development. To unravel the intricacies of these variables is to unveil the complexities of effective teaching, paving the path for more nuanced and

responsive faculty development plans. At the heart of any thriving society lies an education system, with teachers serving as its core foundation. Teachers are not mere purveyors of information; they are architects of the future, molding young minds and imparting the knowledge, skills, and values necessary for navigating the complexities of the world. In society, teachers serve as beacons of progress, cultivating the intellectual and moral capital of the next generation.

In the realm of education, teachers act as linchpins connecting curriculum, institutional objectives, and student outcomes. Their adeptness at navigating the evolving educational landscape is pivotal in shaping the quality of learning experiences. Moreover, the teacher-student relationship is symbiotic, with effective teaching resonating through students' achievements and personal growth.

Teachers are transformative agents, shaping not only the academic prowess of their students but also their character, values, and worldview. However, amidst these transformative roles, teachers encounter various challenges. Gui *et al.* identified several factors influencing education, including teaching methods, evaluation techniques, student engagement, teacher qualifications, parental and societal expectations, disparities between school and family values, and parental communication ^[2]. Consequently, understanding and enhancing teachers' competencies, pedagogies, and assessment practices become imperative in ensuring the continuous growth and resilience of educational systems.

Professional competence encompasses the knowledge, skills, and attitudes empowering teachers to excel in their roles. Delving into this dimension enables an exploration of the foundational elements distinguishing effective teaching. Some scholars also believe that professional capabilities refer to the abilities that teachers should possess in various practices ^[3]. Professional competencies include various psychological characteristics and conditions with professional attributes that teachers, as professional technicians, should possess in teaching activities. These encompass teaching abilities, organizational management abilities, professional reflection abilities, scientific research abilities, and communication and cooperation abilities, among others ^[4].

Research on professional competence encounters challenges in defining and measuring its multifaceted aspects. While there's emphasis on subject knowledge and pedagogical skills, less attention is given to socio-emotional competencies, cultural responsiveness, and adaptability to diverse contexts. Additionally, longitudinal studies examining how professional development impacts teacher effectiveness over time are lacking. Moreover, research often lacks alignment with real-world classroom challenges, hindering practical application and relevance.

Exploring teaching pedagogy involves unraveling the methodologies that resonate most with diverse learner needs. The significance of pedagogy lies in its potential to influence the quality of learning experiences. Despite various instructional approaches, there's a gap in understanding how these strategies interact with diverse student populations and learning contexts. Furthermore, socio-cultural aspects of teaching and learning are often overlooked, impacting equitable instructional outcomes.

Assessment practices serve as a linchpin in the educational process, offering insights into student progress and informing instructional decisions. While various assessment types exist, there's a gap in understanding their effectiveness in different contexts. Moreover, the overemphasis on standardized testing neglects the importance of formative assessment and cultural responsiveness. Addressing these gaps requires a commitment to inclusive and equitable assessment practices, alongside innovative research methodologies.

By focusing on professional competence, teaching pedagogy, and assessment practices, this study integrates key variables influencing teaching effectiveness. The research offers evidence-based recommendations for enhancing teaching quality, thereby facilitating the continuous improvement of educational institutions and fostering a culture of excellence in teaching and learning.

2. Study objectives

The study aimed to evaluate the professional competence, teaching methods, and assessment practices of college teachers in China. It examined demographic characteristics such as age, gender, education level, and experience. Professional competence was assessed across various dimensions including subject knowledge, research capabilities, teaching qualities, technology proficiency, and professional development. Assessment practices encompassed tools, strategies, formats, and data analysis. Statistical analysis explored differences and correlations among these factors. The study recommended a faculty development plan to enhance identified areas of improvement.

3. Materials and methods

3.1. Research design

The study employed a descriptive research design, aiming to systematically describe the professional competence, teaching pedagogy, and assessment practices of college teachers in China. Utilizing a quantitative approach, numerical data were collected through survey questionnaires developed by the researcher. Descriptive research in education helps analyze phenomena, identify trends, and evaluate interventions, ultimately informing policy, enhancing teaching practice, and supporting evidence-based decision-making.

3.2. Study participants

The study included 405 teachers from 3 selected universities out of a total of 2,982 for the Academic Year 2023–2024. Inclusion criteria comprised active teaching staff with at least one year of teaching experience, regardless of subject or specialization. Random sampling ensured equal opportunity for participation.

3.3. Instruments

The instruments utilized in this study consisted of a carefully adapted questionnaire comprising three scales: professional competence of teachers, teaching pedagogy of teachers, and assessment practices of teachers. These scales were developed based on existing literature and tailored to align with the study's objectives.

To ensure the reliability of the questionnaire, it underwent content validity assessment and pilot testing with 50 participants from a Chinese university. The resulting reliability coefficient for each scale exceeded 0.9, indicating excellent reliability and strengthening the confidence in the questionnaire's effectiveness.

The questionnaire comprised four parts: the first collected demographic information including age, gender, length of service, and highest educational attainment. The second scale, adapted from Hu's publication (2023), titled "A Survey on the Current Status of Education for Normal Students in Local Normal Colleges – Taking the Mathematics and Applied Mathematics Major of Yulin Normal University as an Example," assessed professional competence across five dimensions. The third scale, adapted from Cui's doctoral thesis (2023), titled "Research on the Construction and Application of Teachers TPDCCK Knowledge Framework in Smart Teaching Environment," focused on teaching pedagogy across four dimensions. The fourth scale, adapted from Wang's master's thesis (2022), titled "Research on Secondary Vocational Teaching Evaluation – Taking the Teaching Evaluation of 'Fundamentals of Economics' Portfolio as an Example," analyzed assessment practices across four dimensions. Modifications were made to ensure alignment with the study's objectives and participants' needs, with adjustments made for clarity and relevance.

Recognizing the importance of integrating competence, pedagogy, and assessment, modifications were made to align the scales with fundamental measures in faculty development plans. This comprehensive design

aimed to explore the relationships among these variables and their impact on the enhanced faculty development plan.

Overall, the questionnaire was meticulously crafted to accurately capture participants' professional competencies, pedagogical practices, and assessment realities. By utilizing these scales, the study sought to provide valuable insights into the factors influencing faculty development and contributing to informed decision-making in educational practice.

3.4. Procedure

After the validated questionnaire passed the reliability test, it was distributed using the online platform Questionnaire Star in China, facilitating efficient data collection. Participants from selected universities completed the questionnaires, which included scales measuring professional competence, teaching pedagogy, and assessment practices. They were instructed to provide honest responses based on their experiences.

Once data collection concluded, the collected data were prepared for analysis. They were exported from the platform and imported into SPSS version 22.0 for statistical treatment. SPSS offers diverse tools suitable for descriptive analysis, making it ideal for this study.

Descriptive statistical analysis was conducted to examine the data. Frequencies, percentages, weighted mean, and standard deviations were computed to offer a comprehensive overview of participants' behaviors and attitudes regarding professional competence, teaching pedagogy, and assessment practices.

Following data analysis, results were interpreted and synthesized to draw meaningful conclusions. Findings were aligned with research objectives, and significant patterns or trends identified during descriptive analysis were highlighted. The implications of the results were discussed within the context of professional competence, teaching pedagogy, and assessment practices.

This rigorous process ensured a thorough understanding of participants' perspectives and provided valuable insights into the factors influencing faculty development in China's educational landscape. The findings contribute to informed decision-making and potential improvements in teaching practices and educational policies.

3.5. Data analysis

The data analysis for the study was done using SPSS 22.0, which used descriptive statistical techniques. Calculating descriptive statistics such as means, standard deviations, frequencies, and percentages was required. Combination and weighted means to assess the general and particular variable measures. A *P*-value of < 0.05 is considered statistically significant.

The Likert scale was useful in evaluating the actions of the participants. Likert scales were interpreted as follows: values between 3.50 and 4.00 indicated strong agreement, between 2.50 and 3.49 indicated agreement, between 1.50 and 2.49 indicated disagreement, and between 1.00 and 1.49 indicated strong disagreement. Other studies addressed specific research topics such as frequency distribution, percentage, rank, and *t*-tests. Together, these statistical techniques gave participants information about their professional competence, teaching pedagogy, and assessment practices, as well as their behaviors, attitudes, and performance.

3.6. Ethical considerations

Participants' identities remained confidential to uphold privacy. Researchers ensured data analysis respected participants' feelings and accurately represented their contributions. Findings were presented objectively, without personal opinions. Participants were assured of confidentiality and exclusive research use.

4. Results and discussion

Table 1 provides a comprehensive overview of the demographic characteristics of the 405 respondents. The data reveals that the majority of respondents fall within the age range of 31–40 years, comprising 45.2% of the sample. This suggests a significant representation of mid-career professionals. The second-largest age group is 41–50 years, indicating a substantial proportion of experienced educators. The distribution across various age groups reflects a diverse range of experiences and perspectives among the respondents.

In terms of gender, the survey results indicate a predominance of female respondents, comprising 69.6% of the sample. This gender distribution may influence the study’s findings, considering potential gender-related variations in teaching practices and professional development needs.

Regarding length of service, a notable proportion of respondents (31.9%) have 16 years or more of experience, indicating a significant representation of seasoned educators. However, there is also a considerable presence of respondents with 4–9 years of experience (28.1%), suggesting a mix of experienced and relatively new faculty members.

The educational attainment profile of the respondents reveals that the majority hold a bachelor’s degree (72.6%), followed by master’s (16.3%) and doctoral degrees (11.1%). This distribution underscores the importance of accommodating individuals with varying educational backgrounds in faculty development programs.

Overall, the demographic data highlights the diversity within the sample population, encompassing variations in age, gender, teaching experience, and educational qualifications. These insights are essential for understanding the nuanced dynamics of professional competence, teaching pedagogy, and assessment practices in the context of the enhanced faculty development plan outlined in the doctoral paper.

Table 1. Percentage distribution of the respondents’ profile

		Frequency	Percentage (%)
Age (years)	21–30	84	20.7
	31–40	183	45.2
	41–50	104	25.7
	51–60	31	7.7
	> 61	3	.7
Gender	Male	123	30.4
	Female	282	69.6
Length of service (years)	< 4	82	20.2
	4–9	114	28.1
	10–15	80	19.8
	> 16	129	31.9
Highest educational attainment	Bachelor’s degree	294	72.6
	Master’s degree	66	16.3
	Doctoral degree	45	11.1

Table 2 provides an overview of the professional competence of teachers measured within this study. These competencies, encompassing subject matter knowledge, capabilities of academic and science research, personal qualities as a teacher, and modern technology knowledge, collectively demonstrate the competencies

teachers need to complete teaching. The overall composite mean of 3.26 falls within the “Agree” range, indicating a positive perception of faculty competence in the areas assessed.

Many studies prove that the application of modern technology in teaching is widespread, but it is also one of the challenges to developing teachers’ professional competence. Dahri *et al.* underscored the obstacles encountered in delivering professional development programs for teachers, citing limitations such as restricted resources and reliance on traditional training approaches. They note a growing trend of incorporating mobile technology into professional development initiatives due to its flexibility and cost-effectiveness. However, they argue that existing frameworks inadequately support the seamless integration of technology into these programs ^[5].

Safina *et al.* acknowledged Miller’s work, which evaluated the significance of specific personal qualities and professional competencies according to administrators within the Louisiana public school system ^[6]. The study aimed to identify the attributes deemed most crucial for the success of classroom teachers, as perceived by these administrators.

Table 2. Summary table on professional competence of teachers

Indicators	Weighted mean	Verbal interpretation	Rank
Subject matter knowledge	3.31	Agree	2
Capabilities of academic and science research	3.15	Agree	4
Personal qualities as a teacher	3.33	Agree	1
Modern technology knowledge	3.23	Agree	3
Composite mean	3.26	Agree	

Karakose *et al.* surveyed prospective mathematics teachers enrolled in seven university faculties of education across various regions of Turkey. They found that these prospective teachers, who exhibited positive attitudes toward the teaching profession, paradoxically experienced higher levels of anxiety related to classroom management ^[7]. This finding suggests that teachers’ anxiety about classroom management may be attributed to the importance they place on this aspect of teaching, consistent with the result that classroom management ranked as their primary concern.

In summary, the table indicates that effective classroom management and a strong understanding of teaching methods are perceived as the most crucial elements in teaching pedagogy. Professional development is also considered important while teaching innovation ability is considered valuable but ranks slightly lower in priority according to the respondents. The composite mean reinforces the overall agreement on the importance of these pedagogical aspects.

Table 3. Summary table on teaching pedagogy

Indicators	Weighted mean	Verbal interpretation	Rank
Teaching method knowledge	3.32	Agree	2
Classroom management	3.34	Agree	1
Teaching innovation ability	3.24	Agree	4
Professional development	3.31	Agree	3
Composite mean	3.30	Agree	

Table 4 provides a summary of the assessment practices of teachers from four dimensions: usage of

assessment tools, assessment strategy, approaches or format for assessment, data analysis, and application. The overall composite mean of 3.18 reflects a general agreement among teachers regarding the importance of these assessment practices. The balanced view indicates teachers value a holistic approach, incorporating data analysis, varied assessment tools, strategic planning, and diverse assessment formats to ensure effective teaching.

The selection of classroom teaching evaluation methods should be consistent with the purpose of evaluation and the value orientation of evaluation. This requirement cannot be fulfilled by a single evaluation method. Each evaluation subject can choose appropriate evaluation methods based on their value needs, including theoretical, scientific, and artistic evaluation methods [8]. Above all, carrying out effective learning and appropriate classroom assessment could be highly challenging for the teachers to do.

Table 4. Summary table on assessment practices of teachers

Indicators	Weighted mean	Verbal interpretation	Rank
Usage of assessment tools	3.20	Agree	2
Assessment strategy	3.16	Agree	3
Approaches or format for assessment	3.13	Agree	4
Data analysis and application	3.24	Agree	1
Composite mean	3.18	Agree	

Table 5 compares responses on professional competence when categorized based on profile. It was observed that there was a significant difference in subject matter knowledge and capabilities of academic and scientific research when grouped according to age, suggesting that age has an impact on the perceived subject matter knowledge of teachers, indicating that age affects perceptions of teachers' research capabilities.

New teachers with different teaching experiences show extremely significant differences in teaching practice ability and comprehensive education ability, significant differences in teacher ethics practice ability, and no independent development ability [9]. There are significant differences, indicating that the characteristics of teaching experience have the greatest impact on the teaching practice and comprehensive educational ability of new teachers. New teachers with different teaching experiences show extremely significant differences in teaching practice ability and comprehensive education ability, significant differences in teacher ethics practice ability, and no independent development ability. There are significant differences, indicating that teaching experience characteristics have the greatest impact on new teachers' teaching practices and comprehensive educational abilities.

In summary, the result indicates that age, gender, length of service, and highest educational attainment have varying levels of impact on the perceived professional competence of teachers, particularly in the areas of subject matter knowledge and capabilities of academic and scientific research.

Table 5. Differences in responses on the professional competence of teachers when grouped according to profile

		λ^2c / U	<i>P</i> -value	Interpretation
Age	Subject matter knowledge	15.104	0.004	Significant
	Capabilities of academic and scientific research	10.651	0.031	Significant
	Personal qualities as a teacher	4.604	0.330	Not significant
	Modern technology knowledge	2.262	0.688	Not significant

Table 5 (Continue)

		λ^2c / U	<i>P</i> -value	Interpretation
Gender	Subject matter knowledge	14,284.5	0.004	Significant
	Capabilities of academic and scientific research	13,589.0	0.000	Highly significant
	Personal qualities as a teacher	15,219.5	0.042	Significant
	Modern technology knowledge	14,921.5	0.020	Significant
Length of service	Subject matter knowledge	18.491	0.000	Highly significant
	Capabilities of academic and scientific research	11.324	0.010	Significant
	Personal qualities as a teacher	14.330	0.002	Significant
	Modern technology knowledge	4.856	0.183	Not significant
Highest educational attainment	Subject matter knowledge	9.179	0.010	Significant
	Capabilities of academic and scientific research	0.790	0.674	Not significant
	Personal qualities as a teacher	6.865	0.032	Significant
	Modern technology knowledge	0.609	0.737	Not significant

Table 6 compares responses on teaching pedagogy when grouped according to profile. Notably, except for professional development and classroom management, the computed *P*-values for each profile were all above 0.05. This suggests no statistically significant differences in responses based on age, gender, length of service, and highest educational attainment.

These results imply uniformity in teaching pedagogy when grouped according to profile. For instance, exploring the impact of age on teaching pedagogy reveals intriguing insights. The data indicates no significant variations across dimensions of teaching method knowledge, classroom management, teaching innovation ability, and professional development, consistent with Zhang *et al.*'s research results [10]. Novice teachers often have relatively new educational concepts and methods, dare to break through the constraints of regulations, and can provide multiple understandings for the community of practice, promote the reproduction of practical wisdom, and realize the innovative development of the community of practice.

In summary, the result suggests that, overall, age and highest educational attainment do not significantly impact the perceived teaching pedagogy of individuals. However, there are some variations based on gender and length of service, with classroom management and professional development showing significance in the context of gender, and teaching method knowledge showing significance in the context of length of service.

Table 6. Differences in responses on teaching pedagogy when grouped according to profile

		λ^2c / U	<i>P</i> -value	Interpretation
Age	Teaching method knowledge	2.900	0.575	Not significant
	Classroom management	3.750	0.441	Not significant
	Teaching innovation ability	3.421	0.490	Not significant
	Professional development	2.041	0.728	Not significant
Gender	Teaching method knowledge	15,500.5	0.071	Not significant
	Classroom management	15,210.5	0.041	Significant
	Teaching innovation ability	16,401.5	0.361	Not significant
	Professional development	15,244.0	0.038	Significant

Table 6 (Continue)

		λ^2c / U	<i>P</i> -value	Interpretation
Length of service	Teaching method knowledge	9.592	0.022	Significant
	Classroom management	7.149	0.067	Not significant
	Teaching innovation ability	3.109	0.375	Not significant
	Professional development	7.584	0.055	Not significant
Highest educational attainment	Teaching method knowledge	3.262	0.196	Not significant
	Classroom management	4.204	0.122	Not significant
	Teaching innovation ability	2.694	0.260	Not significant
	Professional development	4.157	0.125	Not significant

Table 7 compares responses on the assessment practices of teachers when they are categorized by various demographic profiles. Except for approaches or format for assessment, when grouped according to age, all computed *P*-values exceeded 0.05, indicating no statistically significant differences across profiles. This suggests a uniform perception of assessment practices of teachers.

The significant result for “approaches or format for assessment” in the age group suggests that university teachers may need to consider age-related factors when designing assessments. This could involve adapting assessment formats to align with the preferences or learning styles of different age groups. However, it is crucial to interpret these findings cautiously and consider the context of the specific university setting and the characteristics of the teacher population involved in the study.

Among the demographic analyses conducted, differences in assessment approaches or formats were slightly significant when teachers were grouped by age, possibly due to generational disparities, technological proficiency, or pedagogical preferences. This suggests a need for considering age-related factors when designing assessments to align with diverse learning styles. However, caution is urged in interpretation, considering specific university contexts and teacher characteristics. Notably, no significant differences were found based on gender, length of service, or educational attainment, indicating consistent assessment practices regardless of these demographics among university teachers.

Table 7. Differences in responses on the assessment practices of teachers when grouped according to profile

		λ^2c / U	<i>P</i> -value	Interpretation
Age	Usage of assessment tools	3.966	0.411	Not significant
	Assessment strategy	1.469	0.832	Not significant
	Approaches or format for assessment	9.648	0.047	Significant
	Data analysis and application	5.317	0.256	Not significant
Gender	Usage of assessment tools	16,398.5	0.359	Not significant
	Assessment strategy	16,424.0	0.375	Not significant
	Approaches or format for assessment	16,395.5	0.361	Not significant
	Data analysis and application	17,008.5	0.738	Not significant

Table 7 (Continue)

		$\lambda 2c / U$	<i>P</i> -value	Interpretation
Length of service	Usage of assessment tools	2.284	0.516	Not significant
	Assessment strategy	4.601	0.203	Not significant
	Approaches or format for assessment	2.833	0.418	Not significant
	Data analysis and application	1.919	0.589	Not significant
Highest educational attainment	Usage of assessment tools	9.179	0.790	Not significant
	Assessment strategy	0.010	0.674	Not significant
	Approaches or format for assessment	9.179	0.790	Not significant
	Data analysis and application	0.010	0.674	Not significant

Table 8 displays the association between professional competencies and teaching pedagogy. The computed *r*-values indicate a strong direct correlation and the resulting *P*-values were less than 0.05. Online teaching experience will affect teachers' classroom teaching ^[11]. This suggests a significant relationship between professional competence and teaching pedagogy, indicating that the more proficient teachers are in their professionalism, the better their teaching methods tend to be. When confronted with new technologies, teachers proactively and cautiously explore the integration of technology and subject teaching ^[11].

In summary, these findings underscore the interconnectedness of various professional competencies and their association with effective teaching pedagogy. From a university teacher's perspective, focusing on continuous professional development, integrating technology into teaching practices, and fostering a strong foundation in subject matter knowledge enhance teaching effectiveness across diverse aspects.

Table 8. Relationship between professional competencies and teaching pedagogy

		ρ -value	<i>P</i> -value	Interpretation
Subject matter knowledge	Teaching method knowledge	0.714**	0.000	Highly significant
	Classroom management	0.676**	0.000	Highly significant
	Teaching innovation ability	0.633**	0.000	Highly significant
	Professional development	0.676**	0.000	Highly significant
Capabilities of academic and scientific research	Teaching method knowledge	0.747**	0.000	Highly significant
	Classroom management	0.678**	0.000	Highly significant
	Teaching innovation ability	0.688**	0.000	Highly significant
	Professional development	0.727**	0.000	Highly significant
Personal qualities as a teacher	Teaching method knowledge	0.684**	0.000	Highly significant
	Classroom management	0.674**	0.000	Highly significant
	Teaching innovation ability	0.663**	0.000	Highly significant
	Professional development	0.679**	0.000	Highly significant
Modern technology knowledge	Teaching method knowledge	0.757**	0.000	Highly significant
	Classroom management	0.722**	0.000	Highly significant
	Teaching innovation ability	0.738**	0.000	Highly significant
	Professional development	0.726**	0.000	Highly significant

Table 9 reveals the association between professional competencies and assessment practices of teachers. The computed r-values indicate a strong direct correlation. Classroom teaching evaluation can promote teacher professionalism and classroom teaching^[8]. The resulting *P*-values were all below 0.05, signifying significant relationships.

This suggests a significant relationship between professional competence and the quality of teachers' assessment practices, indicating that the more competent teachers are in their professionalism, the better their assessment practices tend to be. As research on assessment has grown, so has the link between assessment and teacher competency. Mou proposed the significance of continued in-depth research based on dynamic assessment^[12].

The results suggest that teachers with higher competencies in these areas tend to employ diverse assessment practices effectively. The overall findings emphasize the integral connection between teachers' proficiency in subject matter, research skills, personal qualities, and technological knowledge with their adept utilization of assessment tools and strategies in the educational context.

Table 9. Relationship between professional competencies and assessment practices of teachers

		rho-value	P-value	Interpretation
Subject matter knowledge	Usage of assessment tools	0.607**	0.000	Highly significant
	Assessment strategy	0.604**	0.000	Highly significant
	Approaches or format for assessment	0.544**	0.000	Highly significant
	Data analysis and application	0.603**	0.000	Highly significant
Capabilities of academic and scientific research	Usage of assessment tools	0.641**	0.000	Highly significant
	Assessment strategy	0.674**	0.000	Highly significant
	Approaches or format for assessment	0.601**	0.000	Highly significant
	Data analysis and application	0.658**	0.000	Highly significant
Personal qualities as a teacher	Usage of assessment tools	0.681**	0.000	Highly significant
	Assessment strategy	0.655**	0.000	Highly significant
	Approaches or format for assessment	0.605**	0.000	Highly significant
	Data analysis and application	0.680**	0.000	Highly significant
Modern technology knowledge	Usage of assessment tools	0.684**	0.000	Highly significant
	Assessment strategy	0.692**	0.000	Highly significant
	Approaches or format for assessment	0.615**	0.000	Highly significant
	Data analysis and application	0.690**	0.000	Highly significant

Table 10 illustrates the association between teaching pedagogy and assessment practices of teachers. The computed r-values indicate a strong direct correlation, and the resulting *P*-values were less than 0.05. This suggests that a significant relationship exists, implying that the better the teaching pedagogy, the better the teachers' assessment practices. Assessment serves teaching, and its purpose is to enhance teaching. The proper utilization of teaching evaluation strategies can enhance the quality of education and teaching, as highlighted by Pan^[13].

In conclusion, the discussion underscores the need for a shift from traditional teaching evaluation methods to embrace innovative, practice-based approaches. Prioritizing student engagement and individualized assessment can enhance teaching quality and support holistic student development. By integrating systematic

evaluation knowledge and fostering a culture of continuous improvement, educators can adapt to diverse learning needs and promote effective teaching practices, ultimately fostering student success in today’s educational environment.

Table 10. Relationship between teaching pedagogy and assessment practices of teachers

		rho-value	P-value	Interpretation
Teaching method knowledge	Usage of assessment tools	0.714**	0.000	Highly significant
	Assessment strategy	0.684**	0.000	Highly significant
	Approaches or format for assessment	0.595**	0.000	Highly significant
	Data analysis and application	0.714**	0.000	Highly significant
Classroom management	Usage of assessment tools	0.740**	0.000	Highly significant
	Assessment strategy	0.701**	0.000	Highly significant
	Approaches or format for assessment	0.633**	0.000	Highly significant
	Data analysis and application	0.699**	0.000	Highly significant
Teaching innovation ability	Usage of assessment tools	0.794**	0.000	Highly significant
	Assessment strategy	0.792**	0.000	Highly significant
	Approaches or format for assessment	0.702**	0.000	Highly significant
	Data analysis and application	0.791**	0.000	Highly significant
Professional development	Usage of assessment tools	0.771**	0.000	Highly significant
	Assessment strategy	0.763**	0.000	Highly significant
	Approaches or format for assessment	0.662**	0.000	Highly significant
	Data analysis and application	0.782**	0.000	Highly significant

5. Conclusion and recommendation

The study’s demographic analysis reveals that the majority of respondents are females aged 21–30, holding Master’s degrees, and possessing over 11 years of teaching experience. Additionally, a significant portion of respondents have master’s or doctoral degrees, reflecting a high level of educational attainment and competency in subject matter knowledge, teaching professionalism, and technology integration. However, there are variations in professional competence across demographic groups, indicating a need for targeted professional development initiatives.

Diversity is evident in the age distribution of respondents, with substantial representation in both younger and older age groups, suggesting a mix of early-career and experienced educators. While the study does not directly address teaching pedagogy, the demographic profile implies potential variability in instructional approaches and strategies among respondents. Moreover, there is a balanced distribution of gender among respondents, with slight differences in teaching experience, indicating potential variability in assessment practices based on experience levels.

Based on the findings, recommendations are proposed to enhance faculty development and improve teaching pedagogy and assessment practices. These include allocating resources for ongoing training programs, fostering a culture of continuous improvement among teachers, encouraging scholarly research on effective teaching methods, advocating for budget allocations for faculty development initiatives, updating certification standards, ensuring curriculum designs incorporate diverse assessment methods, and conducting further

research on the intersection of professional competence, teaching pedagogy, and assessment practices with other disciplines. These recommendations aim to promote faculty development and improve teaching quality in Chinese colleges.

Disclosure statement

The author declares no conflict of interest

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