

Professional team development, information-based innovative teaching, and quality of teaching in Chinese universities

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ISSN: 2243-7703
Online ISSN: 2243-7711

Received: 1 April 2024
Available Online: 15 June 2024

Revised: 15 May 2024
DOI: 10.5861/ijrse.2024.24642

Accepted: 30 May 2024

OPEN ACCESS

Abstract

This study focused on the implementation of professional team development, information-based innovative teaching, and quality of teaching in Chinese Universities. A total of 405 respondents from Hetao University participated in this research. This study carried out a questionnaire survey and employed a descriptive research method to gather data. The results showed the majority of the respondents are female. The respondents agreed with the professional team development in terms of team comprehensive literacy, team structure level, ability to work as a team, and level of internal team management. The respondents agreed with information-based innovative teaching in terms of teaching content innovation, teaching resource innovation, teaching organization innovation, and learning evaluation innovation. Teachers agreed with the quality of teaching in Chinese Universities, especially the teaching method. Teachers' age and length of service have significant differences in the evaluation of professional team development, information-based innovative teaching, and quality of teaching. There is an obvious relationship between professional team development, information-based innovative teaching, and quality of teaching. The better the professional team development and the higher information-based innovative teaching, the better of quality of teaching in Chinese Universities. According to the survey results, the continuous improvement plan of the university is put forward. Such as strengthening the practical training of teachers, strengthening the analysis of learning situations, enhancing the scientific research ability of teachers, and so on to improve professional team development, information-based innovative teaching, and quality of teaching.

Keywords: language motivated strategies, professional team development, information-based innovative teaching, quality of teaching

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1. Introduction

The "National Vocational Education Reform Implementation Plan" and the "National Vocational College Teacher Teaching Innovation Team Construction Plan" put forward clear requirements for professional team development, and plan to build 360 high-level and structured national teams to meet the actual needs of vocational education teaching and training. The importance of the national level and the need for practice make the research on professional team development in universities particularly necessary (Shao et al., 2022).

After more than 20 years of development, the development of professional teams in Chinese universities has achieved great results, and many structured, high-level, and strong professional teams have emerged. However, compared with the realistic demand for high-quality development, the development of professional teams in universities still faces many realistic difficulties. For example, the team's goal positioning is biased. Guo & Chen (2019) pointed out that there is a tendency to "attach importance to teaching, undervaluing scientific research and undervaluing service". The team structure needs to be optimized. At present, there are still unreasonable problems in the structure of full-time and part-time teachers, professional titles and academic qualifications, ability structure, and scale structure, which seriously restricts the development of professional teams in universities to a higher level and structure (Shao et al., 2022).

The rapid development of the Internet has promoted the reform and innovation of higher education and teaching in China. "Internet Plus" connects the Internet with more development fields, including the development model of "Internet Plus education". It is the important responsibility and mission of "double first-class" universities and world-class disciplines to further promote the concursive development of undergraduate teaching, strive to achieve teaching reform and innovation, and constantly improve teaching quality (Liu & Peng, 2020). Chen (2023) pointed out that teaching innovation is a teaching reform activity that seeks new solutions when existing teaching cannot effectively solve the problems in the process of talent training, or when facing new teaching problems. The influence of the Internet environment promotes teaching innovation in universities.

The first is the teaching content. In the social environment of the great development of the Internet, Information technology has also developed at an unprecedented rate, which also affects the development of the whole society. Secondly, teaching methods and means. Teaching method of network media is gradually surpassing the traditional teaching method, playing an increasingly important role in the classroom teaching process. The Internet era has put forward higher requirements for the cultivation of talents in college teaching. Traditional education concepts and teaching modes focus on the inculcation of knowledge and students' ability to master knowledge, while modern college teaching has carried out innovative optimization under the premise of such development, focusing on training students' ability to transform knowledge into means to solve practical problems. The training goal is to change from knowledge talents to applied talents (Chen, 2023).

Teaching quality plays an important role in the future development of a school. With the development and progress of a country, the need for talent is becoming more and more urgent. Schools shoulder the heavy responsibility of talent training. To train more outstanding talents for the country, it is necessary to continuously improve the teaching quality in classroom practice and ensure the effect of classroom teaching. (Shen et al., 2023). To continuously improve teaching quality and meet teaching needs, teachers must constantly improve their abilities in all aspects. Strengthen their learning, constantly improve their professional skills by learning advanced educational concepts, teaching methods and modern teaching mode. Which have an important role in promoting teachers to improve their teaching level (Lv, 2023).

To cope with the new round of industrial revolution and technological change, and to cultivate diversified and innovative excellent engineering talents, the traditional teaching quality evaluation method can no longer meet the needs of current engineering education. For applied undergraduate universities, how to cultivate complex high-level technical talents who meet the needs of social development and have international competitiveness, and how to build a new teaching evaluation system have become urgent problems to be solved (Shen, et al., 2023). Therefore, in the era of "Internet +", to achieve the high-quality development of college teaching, This paper constructs different indicator systems from the three variables of professional team development, information-based innovative teaching, and quality of teaching.

Taking application-oriented undergraduate universities as an example, through a questionnaire survey, the current situation of Chinese universities in three aspects is understood. As a representative university in the west of Inner Mongolia, the development of the faculty team is of great significance to the long-term development of Hetao College. At present, the teachers in Hetao College have problems such as a lack of practice, poor age structure, and poor title structure. Through this survey and data analysis, suggestions for improvement are put forward. Compared with the eastern region, the economic development speed is slightly slower, and the educational concept teaching mode and teaching methods have not kept up with the pace of The Times. To meet the needs of the modern economy for teaching, for the high-quality development of schools, and the development of professional teams to a higher level, teachers need to carry out teaching innovation. Through this study, improvement measures are proposed for the problems existing in Hetao College. Teachers will break the old teaching model, carry out teaching innovation, strengthen team cooperation, and promote the better and faster development of college teaching. It is of great significance to improve the teaching quality of Hetao College, expand the influence of Hetao College in the country, and promote the high-quality development of school education.

Objectives of the Study - The purpose of this study is to investigate current teaching situation of Chinese universities from three aspects: professional team development, information-based innovative teaching, and quality of teaching in Chinese universities, to determine the important influence of professional team development and information-based innovative teaching on improving the teaching quality of Chinese higher education. Specifically, it described the profile of the basic situation of University Professors in terms of sex, age, highest educational attainment, and length of service; identified the professional team development in terms of team comprehensive literacy, team structure level, ability to work as a team, and level of internal team management; described the implementation level of information-based innovative teaching in terms of teaching content innovation, teaching resource innovation, teaching organization innovation and learning evaluation innovation; assessed the level of quality of teaching in terms of teacher comprehensive quality ,teaching content, teaching methods, and teaching evaluation; tested the significant differences in responses in professional team development, information-based innovative teaching, and quality of teaching/effectiveness; when grouped according to profile tested the relationship among three variables: professional team development, information-based innovative teaching and quality of teaching in Chinese universities ,On the basis of this, proposed the continuous improvement plan of the universities to improve the teaching quality.

2. Methods

Research Design - The researchers used descriptive research methods in this study. The relationship between three main variables professional team development, information-based innovative teaching, and quality of teaching in Chinese universities will also be examined. Descriptive research is a design that uses observation, questionnaire survey, interview, and other methods to objectively record and truly describe the problems and facts of educational phenomena. It is a research method used to describe the characteristics of the phenomena being studied, to have a fuller understanding of the phenomena being studied and provide clues for further investigation and research (Guo, 2020). In the research, descriptive methods are used to collect relevant information through standardized questionnaires, and then the relationship between variables is analyzed to find the result of the problem.

Participants of the Study - This study applies the random sampling method. The participants are teachers from Hetao College. According to the statistics of the human resources department, Hetao College has 865 full-time teachers. Using with 95% confidence interval and 5% margin of error, and the sample size of target respondents was 405. With the help of statisticians, statistical random sampling is carried out on these target survey subjects.

Data Gathering Instrument - The data of this study was collected by questionnaire survey. The target of the questionnaire is teachers of Hetao College so that these teachers can give data based on their perspectives. The teacher questionnaire consists of four parts: the first part is the personal information of the interviewees. The second part is about professional team development with 20 items, including team comprehensive literacy, team structure level, ability to work as a team, and level of internal team management(Gan et al., 2023). Part three is information-based innovative teaching with 20 items, including teaching content innovation, teaching resource innovation, teaching organization innovation, and learning evaluation innovation(Liu & Huang,2020). Part four is quality of teaching with 21 items, including teacher comprehensive quality, teaching content, teaching methods, and teaching evaluation (Liu & Peng, 2020).

The questionnaire has a 4-level Likert scale: strongly agree; agree; disagree; strongly disagree. In addition, the validity and reliability of the questionnaire should be evaluated. As a test for the preliminary study, the researchers will test 30 teachers with a questionnaire to determine its validity, the reliability test results of 12 indicators are all greater than 0.8. With the results of the preliminary test, Cronbach's alpha was used to evaluate the validity and reliability of the questionnaire in the later stage.

Reliability Test Result

Indicators	Cronbach Alpha	Remarks
1.Team comprehensive literacy	0.922	Excellent
2.Team Structure Level	0.899	Good
3.Ability to Work as a Team	0.906	Excellent
4.Level of Internal Team Management	0.888	Good
5.Teaching content innovation	0.876	Good
6.Teaching resource innovation	0.884	Good
7.Teaching organization innovation	0.934	Excellent
8.Learning evaluation innovation	0.918	Excellent
9.Teacher comprehensive quality	0.955	Excellent
10.Teaching content	0.936	Excellent
11.Teaching methods	0.976	Excellent
12.Teaching Evaluation	0.944	Excellent

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

Data Gathering Procedure - To collect research data, the researchers need to contact the relevant school teaching administration in advance, and after approval, the questionnaire will be distributed to the teachers. It was completed using an online questionnaire, so respondents were free to choose according to the school situation. The distribution and collection of data will be carried out by the researchers themselves. The results of the collected data will be coded into an Excel spreadsheet and the entered data will be checked to ensure the accuracy of the questionnaire.

Ethical Considerations - To ensure the confidentiality of the research data, the teachers surveyed remained anonymous throughout the research process, and the questionnaires were completed voluntarily by the participants. It is also explained to the respondents that no information about the questionnaire will be disclosed, and the results of the survey will only be used for academic research. The statistical data collected in this questionnaire survey are all original. In addition, this paper was approved by the LPU University Ethical Review Committee.

Data Analysis - Frequency was the basic information used to describe the interviewee. Composite Mean was used to show the average response of respondents on the indicator for each variable, the implementation of

professional team development, information-based innovative teaching, and quality of teaching. For the P-value, data were grouped according to the profile such as sex, age, highest educational attainment, and length of service, which was used to measure the significant differences in the responses of professional team development, information-based innovative teaching, and quality of teaching, etc. Spearman's rho was used to identify significant relationships between professional team development, information-based innovative teaching, and quality of teaching.

3. Results and discussion

Table 1

Professional Team Development

Indicators	Weighted Mean	Verbal Interpretation	Rank
1.Team Comprehensive Literacy	3.67	Strongly Agree	1
2.Team Structure Level	3.43	Agree	3
3.Ability to Work as a Team	3.40	Agree	4
4.Level of Internal Team Management	3.44	Agree	2
Composite Mean	3.49	Agree	

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

Table 1 shows relevant contents of professional team development are described. The composite mean is 3.49, indicating that the respondents evaluated it as agreed. Among the cited items, team comprehensive literacy had the highest weighted average score of 3.67. The results show that to improve the effectiveness of education, universities must pay attention to the improvement and shaping of teachers' comprehensive quality, set a good example for students by cultivating professional ability, political quality, and moral quality, enhance the scientific content and mode of education, make the process of education more scientific and reasonable, and give full play to the efficiency of education. Political literacy, professional literacy, and moral literacy are important components of teachers' comprehensive literacy (Yang , 2023).

Liu and Jiang. (2021) pointed out that the overall level of teachers in private colleges and universities, especially the ideological and political quality, teaching ability, ethics, and professional development, directly affects the quality of moral education, scientific research level, and social serviceability of private colleges and universities, and directly determines the level of running schools and social reputation of private colleges and universities. Private colleges and universities should face up to the problems existing in the ideological and political construction and professional ability development of teachers, adhere to the leadership of political construction, strengthen professional identity and self-confidence, enhance political literacy and professional ability, guide teachers to love the Party, love the country and love socialism, love education, love school, love health, and be good at taking on the responsibility of teaching and educating people.

Ranked second is the content on the level of internal team management, which shows that the team management mechanism of Hetao College is relatively perfect, and the performance management of teaching and research has been greatly recognized by teachers. If the team wants to develop, system construction is the guarantee. The establishment of a professional team as a unit for the whole incentive improves the professional team members' sense of existence and sense of mission. At the same time, the incentive mechanism also needs to have a significant effect on the individual members of the professional team, so that they can obtain the subjective demand for teaching ability reconstruction (Ma, 2018).

The average score for team structure level is 3.43. In terms of team structure, whether it is age structure, education structure, or title structure, the teacher team of Hetao College is relatively reasonable on the whole, and reasonable structure distribution is conducive to the overall development of the team and the effective improvement of teaching quality. He and Liu (2021) pointed out that a scientific team structure is a prerequisite for improving the working efficiency of the community and one of the necessary conditions to ensure effective communication among team members, which is conducive to improving the overall quality of the team and

improving the teaching level.

The average score for ability to work as a team was 3.40. As a whole, the teachers of Hetao College have strong teamwork ability, positive cooperation willingness, and consistent cooperation concept, which is conducive to the development of teaching work and teaching and scientific research work. Teams are more powerful than individuals, and teams are an important carrier for achieving major scientific breakthroughs, promoting communication and learning, enhancing competitiveness and creativity, and maximizing the benefits of scientific research resources. The team is an academic community, jointly undertaking scientific research projects, jointly publishing papers, and jointly owning academic achievements. The team has important values and driving forces for the common improvement of each member's academic influence. Therefore, strengthening team consciousness is an important aspect of improving scientific research ability (Lai, 2023).

Table 2

Information-Based Innovative Teaching

Indicators	Weighted Mean	Verbal Interpretation	Rank
1.Teaching Content Innovation	3.53	Strongly Agree	3
2.Teaching Resource Innovation	3.54	Strongly Agree	1.5
3.Teaching Organization Innovation	3.54	Strongly Agree	1.5
4.Learning Evaluation Innovation	3.52	Strongly Agree	4
Composite Mean	3.53	Strongly 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 shows the relevant contents of information-based innovative teaching are described. The composite mean is 3.53, indicating that the respondents evaluated it as strongly agree. Among the cited items, "teaching resource innovation" and "teaching organization innovation" had the highest weighted average score of 3.54. The results show that Teachers of Hetao College actively carry out innovation in teaching resources and teaching organization, make use of high-quality resources of other universities to supplement their resources, and carry out new teaching organization forms such as flipped classrooms and task-driven, to enhance students' learning interest and effectively improve teaching quality. The relevant research showed that the advantages of the campus practice and the off-campus practice platform are fully utilized to explore the collaborative effectiveness of both sides. The advantage of campus resources can be utilized to provide students with off-campus practice opportunities, which can not only stimulate students' interest in learning but also optimize the teaching process (Yu & Fei, 2019).

To improve the classroom teaching effect, the course runs through the teaching path of online exposition + classroom focus + immersive discussion to promote students' independent learning and achieve effective teaching. Online exposition is the use of high-quality online resources such as wisdom tree online courses, through which students can complete the independent cognition of each course theme and core knowledge points. Classroom focus means that teachers ask questions and communicate in class according to students' knowledge so that students can learn and master curriculum knowledge more deeply. Immersive discussion means that students can freely form a study group and independently choose a discussion topic related to the course based on their professional background. The team will present the topic views in the form of a report in class, and communicate and discuss with teachers and students on site, which help students further will enrich the knowledge they have learned and exercise their communication and critical thinking abilities. (Liu et al, 2023).

Ranked second is the content of teaching content innovation to adapt to the development of the new situation, the teaching content should meet the needs of modern teaching. As college teachers, they should actively innovate and explore the teaching content. At the same time, knowledge can be effectively transferred to the minds of students, so that profound things are integrated into the classroom teaching, and the boring teaching content becomes attractive, which brings the teacher a challenge in the teaching content, which is not only high and deep, but also achievable for students, which is a goal that can be achieved through efforts. Enhance students' exploration enthusiasm and initiative. The integration and innovation of teaching content make the

curriculum have the characteristics of high order and also bring challenges to the construction and application of the curriculum. First, how to integrate the spirit of The Times, ideals and beliefs, subject frontier, and ability cultivation into the traditional teaching content, without greatly increasing the class hours; The second is how to make students understand these "high-level" contents without spending too much extracurricular time (Wang, 2019).

The average score for learning evaluation innovation is 3.52. The teachers of Hetao College also agree with the innovation of teaching evaluation. The innovation of teaching evaluation is helpful to comprehensively evaluate the growth and development of students, and achievement is not the only criterion to measure the progress of students. The innovation of the evaluation system can help students actively participate in classroom teaching, activate the classroom atmosphere, improve the teaching effect, and contribute to the long-term development of the school. One of the main characteristics of teaching evaluation in the new era is to place talent training and student development in the central link of teaching evaluation activities (Cao & Chen,2020). Teachers give personalized, relevant, and stimulating evaluations so that students are full of joy. Students have a great sense of satisfaction and joy, which greatly improves the effectiveness of evaluation (Wu, 2023). With the teaching goal shifting from knowledge imparting to the cultivation of ability, thinking, and quality, teaching assessment naturally cannot stay at the knowledge level, it is necessary to assess the effect of students' ability and thinking training.

Table 3

Quality of Teaching in Chinese Universities

Indicators	Weighted Mean	Verbal Interpretation	Rank
1.Teacher Comprehensive Quality	3.56	Strongly Agree	2.5
2.Teaching Content	3.56	Strongly Agree	2.5
3.Teaching Method	3.61	Strongly Agree	1
4.Teaching Evaluation	3.55	Strongly Agree	4
Composite Mean	3.57	Strongly 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 the relevant contents of quality of teaching in Chinese universities are described. The composite mean is 3.57, indicating that the respondents evaluated it as strongly agree. Among the cited items, teaching method had the highest weighted average score of 3.61. The results show that teachers at Hetao College are actively exploring advanced teaching methods, such as autonomous, cooperative, and inquiry-based teaching methods. Different teaching methods are used to complete teaching tasks and ensure the quality of teaching activities. The teaching method is directly related to the quality of classroom teaching. Scientific teaching methods can improve the quality of teaching and ensure a good learning effect for students. Therefore, teachers should pay attention to the improvement and innovation of teaching methods.

From the perspective of the teaching process, teaching is not only a special cognitive process but also a process of the development of students' emotions, attitudes, and values. From the point of view of teaching methods, teaching is not only the method of teacher teaching, but also the method of student learning, and the method of teacher teaching should be based on the method of student learning. From the perspective of students' learning methods, the three new learning methods of autonomy, cooperation, and inquiry form an organic whole. Autonomous learning highlights the subjectivity of students' learning, cooperative learning emphasizes the value of students' mutual learning, and inquiry learning aims to combine students' direct experience and indirect experience. The new learning method of autonomy, cooperation, and inquiry proposed by the new curriculum reform is not in opposition to the traditional teaching method, nor is it intended to replace the traditional teaching method, but to break the single teaching method in the reform of classroom teaching mode and form a method system that attaches equal importance to teaching and learning (Wang, 2023).

Ranked second is the content of teacher comprehensive quality and teaching content. The comprehensive quality of teachers in Hetao College is high. Whether it is professional ethics or professional quality, the teachers

of Hetao College are strictly demanding themselves to be the guide of students' growth. The improvement of teaching quality in classroom teaching practice requires teachers not only to have professional knowledge and skills but also to have a higher comprehensive quality. Only with good comprehensive literacy can teachers improve their teaching methods in teaching activities, deal with the problems in teaching activities accurately and timely, and ensure the smooth development of teaching activities.

The professional level and comprehensive quality of teachers play an important role in the improvement of teaching quality in classroom teaching practice. Schools should do a good job in the improvement of teachers and constantly improve their professional level and comprehensive quality, to ensure the continuous improvement of teaching quality. In the future, the role of teachers will be a combination of diversity and professionalism, becoming the navigator of students' learning process, the evaluator of students' learning, the creator of learning situations, the communicator of students' development, the developer of learning resources and the independent learner of professional growth. At the same time, teachers must possess higher and more comprehensive professional qualities. Including research literacy, innovation literacy, interdisciplinary literacy, information literacy, etc. (Li & Zhao, 2022).

In the teaching process, teachers attach great importance to the grasp of the depth and width of the teaching content, pay attention to the updating of the teaching content, and adjust the teaching content appropriately according to the learning situation of students. Student-centered, result-oriented, quality continuous improvement is the core concept of the quality of higher education in the world, among which student-centered is both the starting point and the home. In the process of education, students are not the passive receivers, but the subjects of learning and development. Any educational influence can only be effective after the active absorption and transformation of students, and teaching should actively adapt to the characteristics and needs of students (Chen 2023).

Curriculum quality is the primary factor affecting the continuous improvement of education and teaching quality in universities (Feng & Hao, 2018). Teaching content means that teachers take the subject knowledge system as the basis, teaching materials, teaching materials and social culture as the basis, and closely combine the development trend and frontier of the subject. It is the basis of teachers' classroom teaching (Lai, 2019). The average score for teaching evaluation is 3.55. The teachers of Hetao College are also actively carrying out the reform of teaching evaluation. Pay attention to the evaluation of the learning process, peacetime scores should fully and objectively reflect the efforts and progress of students in the learning process, and scientifically set the proportion of peacetime scores and final scores, which will help to activate the classroom atmosphere, improve the teaching effect, and benefit the long-term development of the school.

Teaching evaluation should guide the formation of students' advanced abilities, cultivate students' comprehensive ability to solve complex problems and stimulate students' initiative, creativity, and other subjective development. In terms of the forms and standards of evaluation, research questions, project-based activities, task-based work, teamwork and cooperative exercises, and observational and investigative assignments should be emphasized in the learning process. Written assignments or examination papers should increase the proportion of non-standard answers to reflect students' mastery of basic theories, basic knowledge, and basic skills. It fully embodies the organic combination of classroom teaching and extracurricular practice knowledge points, guides students to form critical thinking, innovative consciousness, and innovative ability, and examines students' ability to comprehensively apply theory and practice.

Table 4 displays the association between Professional Team Development and Information-Based Innovative Teaching. The computed r-values indicate a strong direct correlation and the resulting p-values were less than the alpha level. This means that a significant relationship exists and implies that the better the professional team development, the better the information-based innovative teaching. The professional team has the same teaching concept and teaching goal and strives to achieve the innovation of teaching content, teaching method, teaching means and teaching evaluation in the team cooperation, and pursues the development of the team as a whole in

the innovation.

Table 4

Relationship Between Professional Team Development and Information-Based Innovative Teaching

Team Comprehensive Literacy	rho-value	p-value	Interpretation
Teaching Content Innovation	.560**	0.000	Highly Significant
Teaching Resource Innovation	.598**	0.000	Highly Significant
Teaching Organization Innovation	.594**	0.000	Highly Significant
Learning Evaluation Innovation	.593**	0.000	Highly Significant
Team Structure Level			
Teaching Content Innovation	.634**	0.000	Highly Significant
Teaching Resource Innovation	.655**	0.000	Highly Significant
Teaching Organization Innovation	.749**	0.000	Highly Significant
Learning Evaluation Innovation	.698**	0.000	Highly Significant
Ability to Work as a Team			
Teaching Content Innovation	.692**	0.000	Highly Significant
Teaching Resource Innovation	.684**	0.000	Highly Significant
Teaching Organization Innovation	.699**	0.000	Highly Significant
Learning Evaluation Innovation	.626**	0.000	Highly Significant
Level of Internal Team Management			
Teaching Content Innovation	.596**	0.000	Highly Significant
Teaching Resource Innovation	.630**	0.000	Highly Significant
Teaching Organization Innovation	.739**	0.000	Highly Significant
Learning Evaluation Innovation	.627**	0.000	Highly Significant

Legend: Significant at p-value < 0.01

As a community of teachers with the same professional background and common goals, the professional team will inevitably have a profound impact on teachers' teaching ability and teaching methods and means. Professional team building not only requires the improvement of individual teachers' teaching ability but also requires the complementarity of teaching ability and knowledge reserve among individual teachers (Ma Li, 2018). There will be close contact between the members of the professional team. In the aspect of discipline construction and academic research, high-quality resources can be used together to realize resource sharing; Disciplines and academic directions can complement and help each other. Team teachers have more opportunities to carry out various discussion activities, exchange teaching and research experience, and explore academic ideas (Wang & Gan, 2023).

Table 5 shows the association between Professional Team Development and Quality of Teaching in Chinese Universities. The computed r-values indicate a strong direct correlation and the resulting p-values were less than the alpha level. This means that a significant relationship exists and implies that the better the professional team development, the better the quality of teaching. The quality of the professional team is directly related to the quality of teaching. The consistency of the teaching concept is conducive to the effective operation of the professional team, the rationality of the age and title of the professional team is conducive to the continuity of teaching, and the consistency of the cooperation willingness of the professional team is conducive to the rapid development of teaching quality. The professional team shall have a clear direction for teaching reform, and a reasonable composition structure of the professional team, and the members of the professional team shall be a teaching collective formed based on long-term cooperation, with a reasonable title, knowledge, and age structure, a good teaching practice platform, and a clear task requirement of teaching reform.

The basic characteristics of university professional teams are mainly reflected in eight aspects: improving teaching quality as the goal, building a harmonious collective as the support, focusing on teaching and educating people as the promise, strengthening teaching construction as the foundation, deepening teaching reform as the driving force, realizing teaching innovation as the symbol, optimizing teaching resources as their responsibility, and pursuing the best teaching performance. It can be summarized as "clear goals", "complementary members", "division of labor and cooperation", "effective communication", and "remarkable performance" (Ma, 2018).

Table 5*Relationship Between Professional Team Development and Quality of Teaching in Chinese Universities*

Team Comprehensive Literacy	rho-value	p-value	Interpretation
Teacher Comprehensive Quality	.683**	0.000	Highly Significant
Teaching Content	.608**	0.000	Highly Significant
Teaching Method	.642**	0.000	Highly Significant
Teaching Evaluation	.655**	0.000	Highly Significant
Team Structure Level			
Teacher Comprehensive Quality	.600**	0.000	Highly Significant
Teaching Content	.698**	0.000	Highly Significant
Teaching Method	.498**	0.000	Highly Significant
Teaching Evaluation	.643**	0.000	Highly Significant
Ability to Work as a Team			
Teacher Comprehensive Quality	.608**	0.000	Highly Significant
Teaching Content	.644**	0.000	Highly Significant
Teaching Method	.508**	0.000	Highly Significant
Teaching Evaluation	.657**	0.000	Highly Significant
Level of Internal Team Management			
Teacher Comprehensive Quality	.594**	0.000	Highly Significant
Teaching Content	.688**	0.000	Highly Significant
Teaching Method	.530**	0.000	Highly Significant
Teaching Evaluation	.686**	0.000	Highly Significant

Legend: Significant at p -value < 0.05

Table 6 presents the association between Information-Based Innovative Teaching and Quality of Teaching in Chinese Universities. The computed r -values indicate a strong direct correlation and the resulting p -values were less than the alpha level. This means that a significant relationship exists and implies that the better the information-based innovative teaching, the better the quality of teaching. Teaching innovation adapts to the inevitable requirements of the development of The Times. Teaching innovation is a choice for schools to achieve long-term development, such as pursuing excellence in innovation, seeking development in innovation, and achieving high-quality leap forward in innovation. As a local college of higher education, Hetao College must realize teaching innovation to seek development in the fierce market competition.

Table 6*Relationship Between Information-Based Innovative Teaching and Quality of Teaching in Chinese Universities*

Teaching Content Innovation	rho-value	p-value	Interpretation
Teacher Comprehensive Quality	.706**	0.000	Highly Significant
Teaching Content	.674**	0.000	Highly Significant
Teaching Method	.588**	0.000	Highly Significant
Teaching Evaluation	.633**	0.000	Highly Significant
Teaching Resource Innovation			
Teacher Comprehensive Quality	.735**	0.000	Highly Significant
Teaching Content	.677**	0.000	Highly Significant
Teaching Method	.607**	0.000	Highly Significant
Teaching Evaluation	.643**	0.000	Highly Significant
Teaching Organization Innovation			
Teacher Comprehensive Quality	.767**	0.000	Highly Significant
Teaching Content	.829**	0.000	Highly Significant
Teaching Method	.725**	0.000	Highly Significant
Teaching Evaluation	.801**	0.000	Highly Significant
Learning Evaluation Innovation			
Teacher Comprehensive Quality	.813**	0.000	Highly Significant
Teaching Content	.811**	0.000	Highly Significant
Teaching Method	.718**	0.000	Highly Significant
Teaching Evaluation	.773**	0.000	Highly Significant

Legend: Significant at p -value < 0.01

Innovation is the best combination of ideas and the market. The Conference on Innovative Education organized by UNESCO proposed to enrich the educational content by developing new teaching courses, giving full play to the positive synergistic role of schools and families, innovating the teaching content, and

encouraging students to think divergent, dare to question and implement open teaching mode. Improve students' various abilities (Wang & Yu, 2019).

With the development of information resource management, education, and teaching are becoming interconnected, intelligent, and networked, and a new teaching model represented by knowledge, big data, and even smart data is gradually emerging (Sun, et al., 2020). In this context, explore innovative classroom teaching concepts, try to introduce innovative thinking, networking, and intelligent teaching modes into classroom teaching, and enrich teaching resources around student-centered (Zheng et al., 2022).

With the deepening of basic education reform, high-quality curriculum design and implementation has become a common pursuit. Educational teaching evaluation has been paid more and more attention because of its attribute of "monitoring the achievement of curriculum objectives" (Tang & Zhou, 2023). In recent years, with the deepening of evaluation research, the academic community has a new understanding of its purpose and function, that is, the significance and value of evaluation lies not only in identifying the merits and disadvantages of learning results, but also in supervising and promoting learning, helping students to timely understand learning situations, reflect on and adjust learning strategies and methods. Continuous improvement of learning effect (Cheng & Xie, 2023).

4. Conclusions and recommendations

The study showed that female teachers, aged between 36 and 45 years old, with master's degrees, and those who worked for 21 years or more accounted for the largest proportion in terms of sex, age, highest educational attainment, and length of service. The respondents agreed with the professional team development. At the same time, team comprehensive literacy was given a high degree of recognition, and the ability to work as a team was given the lowest assessment. Respondents agreed with information-based innovative teaching. A higher evaluation of the teaching resource innovation and teaching organization innovation, and the lowest evaluation of learning evaluation innovation. Respondents agreed with the quality of teaching in Chinese Universities, especially the teaching method, but, the lowest evaluation of teaching evaluation. Teachers' age and length of service had significant differences in the evaluation of professional team development, information-based innovative teaching, and quality of teaching. The ability to work as a team when grouped according to highest educational attainment had significant differences. There was an obvious relationship between professional team development, information-based innovative teaching, and quality of teaching. The better of the professional team development and the higher information-based innovative teaching, the better of quality of teaching in Chinese Universities. According to the survey results, the continuous improvement plan of the university was put forward. The purpose of the continuous improvement program is to improve professional team development, information-based innovative teaching, and quality of teaching.

Local government leaders should lead and support the school-enterprise cooperation between universities and enterprises. It can formulate strategic plans for school-enterprise cooperation, improve relevant laws and regulations and cooperation mechanisms, organize and coordinate cooperation between institutions of higher learning and enterprises, promote exchanges and cooperation, and provide needed services for schools and enterprises. School administrators or principals can conduct a comprehensive evaluation of schools according to the research on professional team development, information-based innovative teaching, and quality of teaching. The faculty should conduct in-depth cooperation according to the relevant system requirements of the school to carry out teaching research and scientific research. Making full use of modern information teaching means, constantly improving teaching quality through teaching reflection, promoting the overall development of the team, and contributing to the long-term development of the school. The human resource management office should further enhance the recruitment and training of teachers. The recruitment of teachers should not only consider the professional quality but also pay attention to the comprehensive quality of teachers. By providing rich training resources for teachers, teachers can keep up with the pace of the development of The Times and serve teaching better. The continuous improvement plan formulated can be used for reference by relevant

schools. Future researchers may conduct surveys and in-depth studies on private universities, secondary vocational and technical schools, etc, to determine teachers' evaluation of professional team development, information-based innovative teaching, and quality of teaching.

5. References

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