

Teaching management, quality and academic achievement in Chinese universities

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Received: 23 April 2024
Available Online: 31 May 2024

Revised: 2 May 2024
DOI: 10.5861/ijrsm.2024.1033

Accepted: 23 May 2024

ISSN: 2243-7770
Online ISSN: 2243-7789

OPEN ACCESS



Abstract

This study explored the current situation of teaching management, teaching quality, and students' academic achievement in Chinese universities and the relationships among them to put forward teaching improvement strategies. The survey was conducted among 405 undergraduates randomly selected from Chinese universities. Descriptive quantitative design was used to describe and interpret the three variables. The results of this study revealed that majority of the respondents are female, sophomore, and students majoring in humanities and social sciences. In general, the teaching management of Chinese universities is sustainable but still needs improvement in the efficiency of online course selection, the construction of textbook management system, the construction of teaching management personnel, the management level of study rooms, teaching methods and content. Generally speaking, the teaching quality of Chinese universities is sustainable but also needs to be improved in the aspects of curriculum diversity assessment, the scientific and comprehensive design of final exams, and students' comprehensive practice and innovation ability. The academic achievements of undergraduates in Chinese universities are good. They have a strong sense of active learning and a certain ability to think independently and have a wide range of interests, are willing to challenge different things, and have a strong ability to solve learning difficulties. There was significant difference on daily teaching management, instruction and learning, and ontological academic achievement when grouped according to year level. There was also a significant relationship among teaching management, teaching quality and students' academic achievement. A proposed teaching improvement plan for Chinese Universities was developed based on the results.

Keywords: teaching management, teaching quality, academic achievement, quality of personnel training, employment rate

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1. Introduction

In the post-pandemic era, job opportunities have decreased, but the size of graduates has continued to expand. According to statistics from China's Ministry of Education, the number of college graduates in 2023 will reach 11.58 million. Affected by the epidemic, many college graduates in recent years are waiting for employment. With the recovery of the epidemic, more students have begun to look for jobs, and the employment competition has become more intense. In many universities, the first-time underemployment rate for undergraduates is 25 percent or more. According to data released by Central China Normal University, the initial employment rate of fresh graduates in 2021 and 2022 is 72.78 percent and 76.98 percent, respectively. At Inner Mongolia University in the west, the figures were 64.9 percent and 74.2 percent, respectively. Some universities in remote areas and private universities have even lower undergraduate employment rates.

From the standpoint of the universities, the low employment rate is mainly because the quality of talent training is not high, and it is difficult to match social demand. The academic achievement of students is a key indicator of the quality of talent training in universities, which is of great significance in promoting the all-round development of students, guiding teachers to continuously improve teaching work and assisting universities to carry out education and teaching activities (Ren,2022). This means that the academic achievement of Chinese college students still needs to be improved. If Chinese universities want to improve the employment rate of students, the key is to improve the academic achievement of students. The teaching management and teaching quality are important factors affecting students' academic achievement. Therefore, it is necessary to study the current situation of teaching management and teaching quality, and explore the relationship between the three, and then put forward improvement strategies.

The purpose of this study is to determine teaching management, teaching quality, and student academic achievement in Chinese universities in order to propose a teaching improvement plan. Specifically, this study described the profile of respondents in terms of sex, year level, and major; determined the teaching management of the school in terms of daily teaching management, teaching support management, and teaching evaluation management; assessed the teaching quality of the school in terms of instruction, assessment, and learning; analyzed the student academic achievement in terms of ontological academic achievement, extended academic achievement, and developmental academic achievement; tested the differences of responses when grouped according to profile variables; tested the relationships among teaching management, teaching quality, and student academic achievement; and proposed a teaching improvement plan based on the results of the study.

2. Method

Research Design - Descriptive research is a method of collecting materials, analyzing materials, and describing the laws, characteristics, and development of objects in order to obtain final descriptive results. As a type of descriptive research, descriptive quantitative research design is suitable for measuring variables or establishing relationships between variables. Therefore, this study adopts a descriptive and quantitative research design to collect data of the survey objects and conduct data analysis, so as to describe and interpret the status quo of teaching management, teaching quality and students' academic achievement in Chinese universities and their relationships. The questionnaire included descriptive items to investigate participants' attitudes towards teaching management and quality, as well as their academic achievement.

Participants - In this study, three Chinese universities of different levels were selected as research objects: Inner Mongolia University, Inner Mongolia Normal University and Hetao College. Their employment rates of undergraduates were ranked in order from the highest to the lowest. Inner Mongolia University is a comprehensive

university in China. At present, it has about 20,000 undergraduates. Inner Mongolia Normal University has distinct characteristics of teacher education and ethnic education. It is a comprehensive normal university with about 24,000 undergraduates. Hetao College is a local application-oriented undergraduate college with about 10,000 undergraduate students. The study used a random sampling method with an initial sample size of 385 people determined by Raosoft calculator, achieving a 5% margin of error with 95% confidence level. To expand the study, the sample was later expanded to 405 students.

Instrument - On the basis of relevant literature research, this study identified three variables: teaching management, teaching quality and academic achievement. The questionnaire has four parts. The first part consists of three basic information: gender, year level, and major. The second part includes three elements of teaching management, with a total of 31 questions. The third part includes three elements of teaching quality, a total of 30 questions. The fourth part is the three components of academic achievement, a total of 25 questions. The specific sources of the questionnaire are as follows. The questionnaire on "University Teaching Management based on student Satisfaction" compiled by Guo (2017) was modified. The questionnaire consists of 3 subscales with 31 questions. The sub-scales of the questionnaire include teaching daily management, teaching support management and teaching evaluation management. The questionnaire on teaching quality compiled by Mellado-Moreno was modified. It consists of three subscales and 30 items in total. The subscales include teaching, assessment and learning. A questionnaire on college students' academic achievement compiled by Cao (2018) was modified. It consists of 3 subscales with a total of 25 items. The subscales include ontological achievement, extended achievement and developmental achievement. After determining the questionnaire information, the researcher randomly selected 30 college students for reliability and validity testing. After the 30 questionnaires were collected, the researcher sent the questionnaires and tally sheet to a data analyst for reliability and validity testing. Specific results are as follow:

Table 1

Reliability of Pilot Test Result

Indicators	Cronbach Alpha	Remarks
Daily teaching management	0.953	Excellent
Teaching support management	0.948	Excellent
Teaching evaluation management	0.923	Excellent
Instruction	0.915	Excellent
Assessment	0.950	Excellent
Learning	0.933	Excellent
Ontological academic achievement	0.956	Excellent
Extended academic achievement	0.941	Excellent
Developmental academic achievement	0.924	Excellent

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

The reliability coefficient is an important index for measuring a test or a scale, and the coefficient value is between 0 and 1. There are many kinds of reliability coefficients, and the one with a higher rating rate is the α reliability coefficient. Most scholars believe that when the α reliability coefficient is greater than 0.9, it indicates that the result is excellent. As shown in Table 1, the test results of all dimensions are above 0.9. The highest achievement was ontological academic achievement (0.956), followed by daily teaching management (0.953), and assessment (0.950) ranked third. Therefore, this questionnaire has a good reliability. After completing the pilot test and obtaining the consent of the adviser, the researchers began to distribute questionnaires to 405 respondents to collect larger data for analysis.

Procedure - After obtaining the approval of the tutor, the researcher translated all the questions, presented them in both Chinese and English, and explained the purpose of the survey for students to understand. He then contacted the publicity department of the school who reviewed the contents of the questionnaire. After the audit was completed, the questionnaire was imported into the questionnaire star for distribution. The researcher exported the collected data in Excel format through the Questionnaire Star platform, and used SPSS software for reliability test and data analysis.

Data Analysis - After the data collection was completed, the data analyst used the SPSS 28 statistical analysis tool for processing. According to the research results, the researcher used difference analysis, correlation analysis and other methods to explain and test the attributes of each variable and the correlation between the three variables. The focus of the analysis was to determine the extent to which participants disagreed with or agreed with from the questionnaire data, to determine the status quo of participants' academic achievement and the relationship between the three variables.

Ethical Considerations - The survey was conducted with the consent of the participants and their schools. For ethical reasons, the questionnaire does not ask for the names of the participants and under no circumstances will their information be disclosed. In addition, the purpose of the study was fully explained at the beginning of the questionnaire, and the results were used only for academic purposes.

3. Results and Discussion

Table 2

Summary Table on Teaching Management

Indicators	Weighted Mean	Verbal Interpretation	Rank
1.Daily Teaching Management	2.78	Agree	2
2.Teaching Support Management	2.77	Agree	3
3.Teaching Evaluation Management	2.8	Agree	1
Composite Mean	2.78	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 exhibits the assessment of the respondents on teaching management. The overall composite 2.78 means that they agreed in general. Teaching evaluation management ranked first, with a composite average of 2.8. Daily teaching management, teaching support management ranked second and third, with weighted means of 2.78 and 2.77, respectively. In general, there is still a room for improvement, because some students still hold negative or strongly negative attitudes towards the teaching management of schools. Focusing on daily teaching management, first of all, Chinese universities need to focus on improving the efficiency of online course selection. Colleges and universities can improve the efficiency of course selection by upgrading the server, optimizing the network course selection system, extending the course selection time and implementing staggered course selection.

Secondly, Chinese universities need to strengthen the construction of textbook management system. Teaching materials management is directly related to whether the teaching work can be orderly, efficient and high-quality. Therefore, creating a set of efficient and reasonable textbook management system is an important cornerstone for a university to move forward to a higher level (Zheng,2020). Chinese universities should comprehensively build an information-based linkage platform for textbook management and set up a professional textbook management team to ensure the scientific, accurate and transparent management process.

In view of the teaching guarantee management, it is important to strengthen the construction of teaching management personnel and improve the management level of study rooms. In the context of the new era of high-quality development and connotative construction of higher education, it is significant to build a full-time and professional teaching and management team with exquisite professional ability and vigorous professional accomplishment to further improve the quality of talent training and the level of running a school in local universities. Therefore, universities need to focus on professional qualification, professional direction, professional spirit and professional ethics, and strengthen the full-time and professional construction of teaching management team (Bao et al., 2023).

The improvement of the management level of study room needs the help of information technology. According to the survey analysis found that in some special time nodes such as exam week, many students need to go through a lot of twists and turns to find a suitable seat for self-study. In the study room, there are still some phenomena such as occupying seats and holding seats, which seriously wastes the seat resources of the study room

and also brings great trouble to the management of the study room. Therefore, whether from the perspective of students or study room management, it is imperative to carry out information management of study room resources in colleges and universities. Chinese colleges and universities can independently develop or introduce a seat selection system based on mobile terminal for university study rooms, so that university users can complete real-time inquiry, reservation, seat change and other functions in the self-study room through the app of mobile intelligent terminals. Study room management personnel can also facilitate universities to use the app to achieve the management of study rooms.

In the aspect of teaching evaluation management, the emphasis is to perfect the teaching method and content. Teaching method and teaching content are important factors that affect students' innovation consciousness. Therefore, it is necessary to strengthen the innovation of teaching methods and contents under the background of subject integration. In order to achieve the integration of disciplines, we must first consider the needs of the learning subjects, namely students, and deconstruct professional courses according to this. To carry out discipline construction in the new era, the best way is to make use of discipline characteristics to carry out knowledge innovation; on this basis, promote a new teaching mode through online and offline mixed teaching, practice-oriented, problem-oriented, and stimulate students' innovative thinking (Cao et al., 2022).

Table 3

Summary Table on Teaching Quality

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. Instruction	2.83	Agree	2
2. Assessment	2.81	Agree	3
3. Learning	2.85	Agree	1
Composite Mean	2.83	Agree	

Table 3 exhibits the assessment of the respondents on teaching quality. The composite mean 2.83 means that they agreed in general. The top item was learning, with a combined average of 2.85. The comprehensive average values of teaching and evaluation were 2.83 and 2.81 points respectively. In general, the quality of teaching in Chinese universities is good, but it still needs to be improved. Because some students still hold negative or strongly negative attitudes towards the teaching quality of schools. In particular, the design of teaching methods and teaching contents, the assessment of curriculum diversity, the degree of students' participation in assessment, the scientific and comprehensiveness of final exam design, students' comprehensive practice and innovation ability, and students' ability to search and apply more extensive resources (mainly online resources) all need to be targeted.

First is strengthening the difference evaluation. In the past, the evaluation system emphasized integration and ignored individuation. The difference evaluation reflects this kind of difference, which not only pays attention to the development of students' intelligence, but also pays more attention to the development of students' non-intelligence, the change of students' emotions, the trend of values and the attitude towards learning and life. In order to achieve this, we must ensure the individuation of the evaluation, carefully analyze the differences of each student, understand the reality of students, and take more natural and real evaluation methods when choosing evaluation methods, which is more real, more effective and easier to carry out (Luo et al., 2015). Therefore, supported by the theory of multiple intelligences, we should respect students' individual differences and use differential evaluation methods to evaluate students objectively, scientifically and reasonably. The details include the following three aspects.

The evaluation subjects include students themselves, teachers, parents of students, relevant departments of the Ministry of Education, people in society, and so on. Among them, students themselves and teachers are the core of the evaluation subjects, and students are the key in this core. Encouraging students to conduct self-evaluation and mutual evaluation is conducive to students' correct understanding of themselves and clear concerns about themselves and others. Gain happiness in the difference evaluation and promote the growth of students.

In terms of evaluation value orientation and criteria, the mastery of knowledge and skills is no longer the focus

of differentiation evaluation, but pays more attention to students' ability, emotion, attitude and other aspects. Such evaluation is not limited to the investigation of students' learning ability, but carries out all-round evaluation on students from all levels.

In terms of evaluation methods and means, the original static evaluation should be changed to dynamic evaluation, and a variety of evaluation methods should be combined, including oral examination, written examination, video, audio recording, archives, etc. In the evaluation process, teachers should use more encouraging language to let students consciously participate in the evaluation and show their personal abilities in the evaluation. It also reflects the diversity of different prices.

The second is to improve students' comprehensive practice and innovation ability. With the rapid development of science, technology and market economy, as well as the rapid increase in the number of college graduates, social demand upgrading, which requires not only rich professional theoretical knowledge, but also strong practical ability and innovative spirit. Employers pay more and more attention to the practical and innovative ability of college graduates, requiring graduates to quickly adapt to the corresponding jobs. Therefore, it is imperative to cultivate the practice and innovation ability of college students. The specific measures are as follow: First, to improve teaching methods. The teaching method for cultivating practical ability and innovation ability is no longer simply cramming teaching in the classroom, but various teaching methods such as simulation experiment, professional practice, project practical training and market participation should be adopted to enable students to master relevant skills. Through flipped classroom mode, students can demonstrate competition projects and entrepreneurial projects, and teachers can comment and guide them, so as to enhance students' innovation ability.

Second, to vigorously promote the integrated model of "teaching, competition and learning" in teaching. In order to break through or innovate a new teaching model under the new situation, the professional teaching system based on "classroom teaching supports professional competition, professional competition leads students' learning after class, and after-class learning promotes classroom teaching" takes students as the theme, and is based on the teaching model of problem solving and discovery, competition and antagonism. Let students learn in practice, students have selective learning according to their own characteristics, and improve the professional ability of comprehensive application of professional knowledge. Students are actively encouraged to participate in various competitions related to their majors at all levels, and professional teachers are provided with careful guidance. Through the competitions, students' learning knowledge is consolidated and their ability to apply what they have learned to practice is improved. At the same time, the learning concept of "teaching - competition - learning" is formed among students through guidance and strong publicity of the college.

Third, to make full use of network teaching resources to improve students' professional practice ability. The talent training model of MOOCs platform based on the background of "Internet +" is built to stimulate students' interest in learning business undergraduate professional knowledge and improve students' professional practice ability. Through the multi-agent interactive teaching mode of "online" and "offline", students can make full use of video resources for independent learning and consolidate classroom knowledge. At the same time, they can also attract non-professional students with interests and hobbies to learn online. By using MOOCs platform, theoretical knowledge and practical operation can be made into videos to stimulate students' learning enthusiasm and make teachers become real tutors. Guide students to master learning methods and learn to think.

Fourth, to reform the current practical curriculum assessment basis and assessment methods. Students' practical ability and innovation ability should no longer be tested through paper final and midterm tests. The assessment of practice should be mainly evaluated by practical results, feedback from cooperative units and economic and social benefits of project implementation, and the innovation ability should be comprehensively evaluated by combining the possibility of project implementation and competition results of students.

Fifth, to strengthen the early training of innovation ability. The innovative ability of students needs to be cultivated in advance. At the same time, the investment of undergraduate scientific research innovation and experimental training education should be increased to support undergraduate students to participate in scientific

research activities and enter the subject, laboratory and team as early as possible. Strengthen the education function of "innovation and entrepreneurship", "promoting learning through competition" and "debating culture", promote the connection between the second classroom and the first classroom, and give play to the role of the second classroom in personnel training.

Sixth, to integrate social practice teaching resources. Professional colleges and universities need to better cooperate with enterprises and make full use of the high-quality resources provided by various enterprises in terms of practical positions, practical teachers and professional cases. In order to better implement the school-enterprise cooperation personnel training program, the school provides sites and teachers, while the enterprise provides funds, experience, resources and practical teachers, etc., using their respective advantages to jointly establish a laboratory, identify the purpose of the laboratory, cultivate compound talents who understand both theory and practical operation, and overcome the limitations of the traditional training mode.

On the basis of the existing teaching mode, according to the actual situation of the enterprise's demand for talents, it adjusts and improves the traditional single teaching mode, and creates models such as two teachers in the same room, fun teaching and observation teaching. The new teaching mode not only improves the learning momentum and efficiency of students, but also makes up for the shortcomings of the traditional teaching mode, which is strong in theory and weak in practice. In order to further strengthen cooperation with enterprises, make full use of the experience and advantages of enterprise talent training, and optimize the mode of talent training, schools should actively seek school-enterprise cooperation practice bases and expand the construction of professional practice bases (Li,2020).

Table 4

Summary Table on Academic Achievement

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. Ontological academic achievement	2.64	Agree	1
2. Extended academic achievement	2.59	Agree	3
3. Developmental academic achievement	2.60	Agree	2
Composite Mean	2.61	Agree	

Table 4 exhibits the assessment of the respondents on academic achievement. The overall mean 2.61 indicates that they agreed in general. The number one item is ontology achievements at 2.64 followed by developmental academic achievement and extended academic achievement, at 2.60 and 2.59, respectively. In general, the academic achievements of undergraduates in Chinese universities are good, but it still needs to be improved because some students still have low academic achievements. In particular, students' academic accomplishment, discipline competition ability, interdisciplinary integration of talents training and other aspects need to be improved. The cultivation of students' academic ability can be improved from the following aspects. First, colleges and universities should show more concern about undergraduates' participation in scientific research, formulate relevant supporting and encouraging policies for teaching and research, and provide students with more diversified forms of scientific research activities.

The second is to improve the awareness of academic ability training and strengthen the concept guidance. Teachers should start from themselves, deeply review themselves, reflect on the neglected cultivation of academic ability in the past teaching, and design some topics according to the textbooks for students to think and research, cultivate their critical thinking ability and problem concept, and guide them to the road of scientific research and exploration. The third is to construct new academic research methods and pay close attention to academic developments. Teachers should focus on the guidance and recommendation of students' academic research methods, and further expand and supplement them after they have mastered the basic academic research methods, so that students' thinking will no longer be rigid and single, but will think rigorously and divergent, and teach them the ability of summary, induction and analysis. The fourth is to establish a new assessment mechanism and create a strong academic exchange atmosphere. It is necessary to get rid of the rigid mode of exam-oriented education and let students deeply understand the important value of academic research. For example, teachers can integrate

writing ability and academic paper writing into the assessment mechanism, so that students can actively and consciously strengthen training in this aspect, so as to improve academic research ability.

The rigid and cold academic communication atmosphere should be adjusted and transformed. Teachers should combine theory with practice and expand and train students according to the content of textbooks, so that they can fully improve their professional academic ability and research level. For example, teachers can hold some academic exchange conferences on a regular basis, and regularly distribute the latest academic journals to students for their reference and study, so that students can be subtly influenced and influenced in daily study, so that the cultivation of academic ability can be truly implemented (Zhou et al.,2016).

In order to improve the ability of discipline competition, the focus should be carried out from the following aspects. The first is to build a talent training program curriculum system with the characteristics of discipline competition. In order to better cultivate high-quality, innovative and practical talents, schools should incorporate discipline competition into the talent training plan. The second is to establish a scientific and effective discipline competition operation and management mechanism. Schools should, according to the requirements of each discipline competition, combine talent training programs and courses, and form a more perfect discipline competition organization guarantee mechanism. The third is to build an integrated "classroom teaching - scientific research training - discipline competition" new mode of practical teaching. Schools should combine the local development and their own actual situation to build a "classroom teaching, scientific research training and discipline competition" three interlinked innovative ability training mode, that is, based on curriculum teaching, discipline competition as the carrier, scientific research training as the means of practical innovation training mode. The fourth is to improve the discipline competition hardware facilities and incentive policy construction. For example, the construction of practical training bases, the guarantee of activity funds, and the guarantee of guidance teams. Schools should always encourage full-time teachers with strong scientific research ability and rich practical experience in guiding students to form a discipline competition guidance team, which is fully responsible for guiding students' discipline competition activities, including exploring and improving the organizational form of discipline competition, training methods and competition guidance, and constantly refining teaching content and improving teaching quality (Guo et al.,2023).

Table 5

Difference of Responses on Teaching Management When Grouped According to Profile

Sex	λ^2 / U	p-value	Interpretation
Daily Teaching	18893	0.262	Not Significant
Teaching Support	19609	0.611	Not Significant
Teaching Evaluation	20015.5	0.872	Not Significant
Year Level			
Daily Teaching	8.941	0.030	Significant
Teaching Support	5.471	0.140	Not Significant
Teaching Evaluation	4.915	0.178	Not Significant
Major			
Daily Teaching	19632	0.572	Not Significant
Teaching Support	19018.5	0.276	Not Significant
Teaching Evaluation	20272	0.986	Not Significant

Legend: Significant at p-value < 0.05

Table 5 displays the comparison of responses on teaching management when grouped according to profile. It was observed that there was significant difference on daily teaching when grouped according to year level since the obtained p-value of 0.030 was less than the alpha level. This indicates that the responses differ significantly and based on the test conducted, it was found out that junior students have better teaching management as to daily teaching. Students of different grades have significant differences in their views on the overall setting of professional courses, the school's teaching management system, and the fairness and efficiency of online course selection. It has a lot to do with how much they know about the project. In general, senior students have a relatively high degree of understanding of these projects and have a comprehensive and systematic understanding of the daily teaching management of the school. The more comprehensive the student's knowledge of things, the more

opportunities to find problems, and satisfaction is likely to decline.

This result reminds Chinese colleges and universities to show concern about the differences in daily teaching management, especially in the curriculum Settings should reflect the needs and characteristics of different grades, and carry out the "grade, differentiated" talent training model. This model is a bold attempt of college talent training model. Grade classification is the longitudinal classification of different grades, giving students a platform for development; Differentiation refers to the different stage characteristics of college students and the plan to promote talent training step by step. Grade classification is the basic basis of students' gradation and stage characteristics, and differentiation is the implementation process of training for different grades.

At present, many Chinese colleges and universities carry out grade-based teaching and have achieved certain results. Freshmen practice first, theoretical guidance, integration of learning and application, cyclic rise. They may focus on students' professional core competence by letting students practice first, then focus on cultivating development ability, combining theory with practice, focusing on strengthening students' ability to apply what they have learned. Theoretical teaching focuses on the cultivation of students' basic knowledge, while practical teaching focuses on using students' existing basic knowledge to solve practical problems, and focuses on cultivating students' awareness and ability of independent operation, so as to achieve the combination of "learning to use, learning to do, and learning to create". Integrate theoretical teaching into practice, so that students can master the necessary skills of the major in practice. Therefore, while comprehensively promoting curriculum reform, the college should strengthen students' practical ability.

Sophomores are to study to build production to promote learning, integration of production and teaching, and engineering. In teaching, real projects are used as the carrier, the mode of project-driven teaching and teaching with projects is adopted, the integration of production and education is taken as the theme, the industry is grasped with the left hand and education is grasped with the right hand, and a platform for school-enterprise cooperation is built to achieve the training goal of integration of production and education and co-education of talents. The third industry competition mutual aid, promote innovation with competition, all-round development, and guarantee employment. The school attaches great importance to the important role of competition in talent training, takes competition as the core, and uses various competitions at all levels to improve students' practical ability. In addition, the school also supports and encourages students to actively participate in various kinds of innovation and entrepreneurship competitions and professional skills competitions, cultivate students' practical ability and innovation and entrepreneurship, and achieve the purpose of promoting learning, teaching, reform and innovation through competitions at all levels.

In a word, the essence of this model is based on grades, according to the students' learning degree, learning direction and other stage characteristics to develop different stages of education goals, so leading students to independent learning, is a new model that can significantly improve the quality of talents in ordinary colleges and universities (Liu et al., 2019).

Table 6

Difference of Responses on Teaching Quality When Grouped According to Profile

Sex	F-value	p-value	Interpretation
Instruction	19621	0.617	Not Significant
Assessment	19173.5	0.377	Not Significant
Learning	20039	0.888	Not Significant
Year Level			
Instruction	8.869	0.031	Significant
Assessment	7.188	0.066	Not Significant
Learning	9.861	0.020	Significant
Major			
Instruction	20138	0.894	Not Significant
Assessment	18968.5	0.257	Not Significant
Learning	19533	0.515	Not Significant

Legend: Significant at p-value < 0.05

Table 6 illustrates the comparison of responses on teaching quality when grouped according to profile. It was observed that there was significant difference on instruction and learning when grouped according to year level. This indicates that the responses differ significantly and based on the test conducted, it was found out that junior students have greater assessment than others. There are significant differences between students of different grades in their views on teachers' teaching and their learning outcomes. Relatively speaking, lower grade students have a more positive opinion of the teacher's teaching, and their academic performance is better. This is because younger students are more dependent on their teachers. Relatively speaking, senior students have more comprehensive thinking and independent opinions, and are relatively less dependent on teachers. At the same time, lower grade students have a relatively high enthusiasm for learning and are likely to achieve better learning outcomes.

This result shows that Chinese universities should show concern about stratified teaching, apply different teaching designs, teaching methods and teaching activities for students of different grades, and show concern about improving the learning enthusiasm of senior students. Stratified teaching method is a student-centered teaching method that sets different teaching objectives, teaching contents and teaching methods according to the individual differences of students and carries out teaching at different levels. Its core is to adopt different teaching strategies for different levels of students to achieve differentiated teaching to meet the individual learning needs of students. Stratified teaching method requires teachers to evaluate and classify students first, determine the different levels and differences of students, and then design corresponding teaching programs and teaching methods for students at different levels according to different teaching objectives and teaching contents (Wang, 2023).

Teaching content is the core of stratified teaching method. According to students' different levels and abilities, teaching content is stratified and different teaching content is designed for students at different levels. Teaching method is an important part of stratified teaching method. According to different levels and abilities of students, appropriate teaching methods should be selected to improve teaching effect and stimulate students' learning interest. Teaching evaluation is an important part of stratified teaching method. According to the different level and ability of students, the corresponding evaluation methods and evaluation standards are selected to evaluate the learning effect and comprehensive quality of students. Teaching management is the guarantee and support of stratified teaching method. According to students' different levels and abilities, corresponding teaching management is carried out to ensure teaching quality and teaching effect. In college teaching, we can adopt various teaching management methods, such as personalized management, group management, performance management and so on.

In the basic stage, teachers can use personalized management to provide targeted guidance and help to students, so that each student can be effectively improved. In the improvement stage, teachers can use the way of group management, classification training and competition management of students, improve students' competitive level and competitive ability. In the deepening stage, teachers can use performance management to evaluate and motivate students, encourage students to give play to their strengths and advantages, and maximize their personal value. Meanwhile, the mixed teaching mode of online and offline can be fully used to enhance students' learning enthusiasm. College education has been conducting the exploration of online and offline mixed teaching, which is the direction and hot spot of college teaching reform and development. A college teacher must keep up with the pace of development of The Times and actively build the courses he teaches. However, a course teacher should not reduce blended teaching to a mere form and simply transfer offline courses directly to online live broadcasting. A course should be carefully designed according to the characteristics of the course, so as to promote students to truly learn professional knowledge. It can stimulate students' learning enthusiasm and cultivate students' learning autonomy (Meng et al., 2021).

Table 7 displays the comparison of responses on academic achievement when grouped according to profile. It was observed that there was significant difference on Ontological academic achievement when grouped according to year level since the obtained p-value of 0.007 was less than the alpha level. This indicates that the responses differ significantly and based on the test conducted, it was found out that junior students have better assessment.

Table 7*Difference of Responses on Academic Achievement When Grouped According to Profile*

Sex	F-value	p-value	Interpretation
Ontological academic achievement	19954.5	0.831	Not Significant
Extended academic achievement	20180.5	0.985	Not Significant
Developmental academic achievement	19451	0.518	Not Significant
Year Level			
Ontological academic achievement	12.26	0.007	Significant
Extended academic achievement	5.275	0.153	Not Significant
Developmental academic achievement	5.514	0.138	Not Significant
Major			
Ontological academic achievement	19035.5	0.282	Not Significant
Extended academic achievement	20156.5	0.907	Not Significant
Developmental academic achievement	19819.5	0.685	Not Significant

Legend: Significant at p-value < 0.05

Students of different grades have significant differences in their ontological achievements. Among them, lower grade students are more enthusiastic about learning, willing to interact with teachers, and show more concern about the latest professional knowledge. Through the in-depth interview, it is found that senior students face greater employment pressure, show more concern about the study of employment and entrepreneurship knowledge or skills, and have little enthusiasm for learning basic professional knowledge. This requires schools to set up courses according to the actual needs of students in different grades. For example, junior and senior students should offer more practical courses on innovation and entrepreneurship (Mo, 2023).

In recent years, Chinese colleges and universities have paid attention to the cooperation between industry, university and research to educate students, built a scientific and reasonable teaching system that is in line with the training goals, and focused on cultivating students' practical skills. Focusing on the orientation of application-oriented talent training, we invite local industry experts and relevant enterprise personnel to jointly research and develop talent training programs that meet the orientation of running schools, introduce advanced industry knowledge and cutting-edge technical concepts, and integrate them into professional talent training programs through cooperation, so as to support the construction of professional teaching environment, promote the innovation and reform of practical teaching, and accelerate the sustainable development of the profession. According to the training goal of applied talents, a scientific and reasonable theoretical and practical curriculum system that ADAPTS to the needs of regional economic development should be constructed.

Through in-depth research on the quality composition of high-quality applied professionals and the knowledge points and ability points necessary for quality training, the core curriculum system and teaching content of network and new media major are systematically planned. Forming a stable curriculum system: broad foundation - paying attention to the study of basic theory and basic skills in the first and second grades. Developing strong skills such as professional basic skills, computer application and other basic skills training line for four years. Focusing on innovation by strengthening the training of problem analysis, problem solving and innovation ability in the third and fourth grade professional courses. Emphasizing on practice by paying attention to the combination of local economic and social development in the whole process of four-year teaching, increasing the practical weight of professional courses, and highlighting the positioning and characteristics of professional talent training (Han, 2018).

Table 8 shows the association between teaching management and quality. It was observed that the computed r-values indicates a strong direct correlation and the resulted p-values were less than the alpha level. This shows that there was significant relationship exists and implies that the better the teaching management, the better is the quality of teaching. Teaching management is one of the core links of school management. Its basic task and ultimate goal is to improve the quality of teaching. Teaching management includes teaching ideology management, teaching system management, teaching control management. Ensuring teaching quality is the core of teaching work. Teaching management is to provide better service and guarantee for teaching, teaching management is good, teaching quality will certainly improve (Fang & Yuan, 2019).

Table 8*Relationship Between Teaching Management and Quality*

Daily Teaching	r-value	p-value	Interpretation
Instruction	.675**	0.000	Highly Significant
Assessment	.648**	0.000	Highly Significant
Learning	.647**	0.000	Highly Significant
Teaching Support			
Instruction	.659**	0.000	Highly Significant
Assessment	.629**	0.000	Highly Significant
Learning	.620**	0.000	Highly Significant
Teaching Evaluation			
Instruction	.705**	0.000	Highly Significant
Assessment	.656**	0.000	Highly Significant
Learning	.674**	0.000	Highly Significant

Legend: Significant at p-value < 0.01

The teaching management of Chinese universities is mainly divided into the following parts: Adherence to the teacher attendance system. The teaching and research department organizes teachers to attend random lectures and evaluate lessons in time to effectively improve the quality of classroom teaching; Giving play to the role of teaching supervision. The teaching supervision group of the department was established to attend in-depth teaching lectures from time to time every semester, to promote and observe the outstanding achievements in teaching quality evaluation, and to check the lectures of teachers with problems and put forward suggestions for improvement. Organize various forms of teacher and student reviews from time to time, investigate, analyze and study the teaching situation of the whole department, and put forward suggestions for improving teaching work, so as to comprehensively improve the overall teaching quality.

Adherence to the teaching information staff feedback work system. Each class has a student teaching information officer to timely reflect the problems existing in the construction of teaching style and learning style of teachers and students, so as to ensure a good teaching order and teaching atmosphere. Strengthening the routine inspection of teaching. The teaching office conducts random checks on the teacher's class situation (including the teacher's teaching documents, students' attendance and multimedia classroom hygiene, etc.) and listens to lectures, and deals with the problems found in time, which further promotes the construction of teaching style and learning style. Carrying out regular special teaching inspection. At the beginning and end of each semester, the supervision team, the teaching and research office and the teaching office jointly conduct teaching inspection, which includes teacher's lesson plan, teaching syllabus, teaching plan, teaching progress, listening situation, homework assignment, etc. Strict attendance management seriously do leave, transfer procedures. Organizing student seminars and evaluation activities. Students, teachers' peers and the leading group of teaching quality control evaluate teachers' teaching behavior, attitude, level and effect. In the process of organization and implementation, we should seek truth from facts, ensure the accuracy of information collection and scientific evaluation of teaching data, and strengthen the construction of teachers' ethics and style.

Standardizing the examination management process. At the end of each semester, according to the requirements of the college, the work tasks of the examination links such as proposition, invigilation, grading, score entry, paper analysis, paper binding, etc., are carefully completed. The teaching and research office, teaching office, and department supervision check the implementation of each link. Monitoring the graduation thesis writing program. According to the regulations on the management of undergraduate graduation thesis (design), scientific and reasonable arrangements have been made for students' graduation thesis from the assignment of instructors, the setting of graduation thesis topics, the filling of proposal reports, the organization of students' proposal, the writing, revision and finalization of graduation thesis, and then the defense of graduation thesis, and each link has been strictly controlled.

Scientific teaching management is the prerequisite and condition for improving teaching quality. The whole process of teaching is inseparable from the management work, and the management work runs through the whole teaching work. The quality of each link of management directly affects the implementation of teaching plan and

the improvement of teaching quality. The lack of scientific teaching management will affect the management of teaching order and interfere with the completion of teaching plan.

This will play a great role in improving teaching quality and testing teaching results. The improvement of teaching quality promotes teaching management to be more scientific, systematic and standardized. Nowadays, teaching management has ushered in higher and newer requirements. It requires the teaching management work to be more scientific, systematic and standardized. It turns out that some old and imperfect management systems and ways can no longer meet the needs of teaching under the new situation (Dong, 2023).

Table 9 shows the association between teaching management and academic achievement. It was observed that the computed r-values indicates a moderate direct correlation and the resulted p-values were less than the alpha level. This shows that there was significant relationship exists and reveals that the better the teaching management, the better is the academic achievement. Teaching management really affects the quality of teaching, and the quality of teaching determines the academic achievement of students. Therefore, whether teaching management is scientific or not, it also directly affects students' academic achievement. Effective teaching management can fully stimulate the enthusiasm of teachers, implement effective teaching, and promote the all-round development of students (Chen, 2023).

Table 9

Relationship Between the Teaching Management and Academic Achievement

Daily Teaching	r-value	p-value	Interpretation
Ontological academic achievement	.554**	0.000	Highly Significant
Extended academic achievement	.546**	0.000	Highly Significant
Developmental academic achievement	.487**	0.000	Highly Significant
Teaching Support			
Ontological academic achievement	.543**	0.000	Highly Significant
Extended academic achievement	.532**	0.000	Highly Significant
Developmental academic achievement	.486**	0.000	Highly Significant
Teaching Evaluation			
Ontological academic achievement	.510**	0.000	Highly Significant
Extended academic achievement	.426**	0.000	Highly Significant
Developmental academic achievement	.384**	0.000	Highly Significant

Legend: Significant at p-value < 0.01

Effective teaching management plays an important role in students' academic achievement. First, effective teaching management can provide an efficient learning environment. When the teaching management is good, college teachers can ensure that the teaching content is suitable for the level of students, and can mobilize the enthusiasm and motivation of students. For example, teachers can use a variety of teaching methods and resources, such as lectures, group discussions, field trips, etc., to stimulate students' interest and deepen their understanding of knowledge. This positive learning environment can foster students' interest in learning and initiative, thereby promoting students' academic performance and academic achievement (Deng, 2024).

Secondly, effective teaching management can provide personalized learning support. Teachers should be able to understand the learning needs and potential of each student and provide personalized guidance and support accordingly. This personalized learning support caters to students' different learning styles and ability levels, thereby helping them reach their full potential and achieve better academic results. This may include providing additional tutoring, after-school question-and-answer sessions, individual coaching, etc. At the same time, teachers can also carry out tests and assessments to different degrees according to students' learning progress and level, so as to carry out targeted teaching adjustment and individual counseling. This personalized learning support helps improve student learning outcomes and academic performance (Liu, 2024).

In addition, effective teaching management can build a good teacher-student relationship. Teachers should be able to establish positive interaction and communication with students and provide good support and guidance. When students feel that teachers pay attention to and respect them, they are more likely to engage in learning. Teachers can motivate students to continue to work hard through positive encouragement, positive feedback and

reasonable evaluation. A good teacher-student relationship helps build students' confidence and self-esteem, thereby enhancing their motivation and academic performance (Li, 2023). Finally, effective teaching management can promote students' autonomous learning ability. Teachers should be able to develop students' learning skills and strategies, so that they can independently control the learning process and solve the problems encountered in learning. Teachers can cultivate students' autonomous learning ability by organizing study groups, carrying out study projects and letting students participate in practice. This ability to learn independently can make students more motivated to learn, better grasp of knowledge, and achieve better results on tests (Zhou,2024).

Table 10 illustrates the association between teaching quality and academic achievement. It was observed that the computed r-values indicates a moderate direct correlation and the resulted p-values were less than the alpha level. This shows that there was highly significant relationship exists and reveals that the better is the teaching quality, the better is the academic achievement.

Table 10

Relationship Between the Teaching Quality and Academic Achievement

Instruction	r-value	p-value	Interpretation
Ontological academic achievement	.513**	0.000	Highly Significant
Extended academic achievement	.478**	0.001	Highly Significant
Developmental academic achievement	.435**	0.000	Highly Significant
Assessment			
Ontological academic achievement	.519**	0.000	Highly Significant
Extended academic achievement	.541**	0.000	Highly Significant
Developmental academic achievement	.461**	0.000	Highly Significant
Learning			
Ontological academic achievement	.521**	0.000	Highly Significant
Extended academic achievement	.523**	0.000	Highly Significant
Developmental academic achievement	.444**	0.000	Highly Significant

Legend: Significant at p-value < 0.01

Teaching quality is the core of teaching work in colleges and universities, and students' academic achievement is the most intuitive evaluation of teacher education and teaching activities. Students' academic achievement is an important outcome variable concerned by educational psychology, and its level directly reflects the quality of education and teaching (Tian, 2015). There is a significant correlation between the two. The academic achievements of students at all levels and in various examinations reflect the quality of school teaching. The academic performance of students is one of the important indicators to evaluate the teaching effect of schools. The high academic achievement of the school shows that the quality of the school education is high and has a greater appeal to parents and students.

The influence of excellent teaching quality on students' academic achievement mainly revolves around three aspects: teacher strength, teaching environment and teaching method. First of all, excellent teaching staff is the basis to ensure the quality of education. A team of teachers with rich teaching experience and professional knowledge can provide students with high quality teaching content. They can make students better grasp the knowledge point and improve their learning level. Teachers' teaching ability and teaching method directly affect students' academic achievement. Professional teachers can carry out personalized teaching according to the actual situation of students, so that each student can get their own education resources. Excellent teachers can also stimulate students' enthusiasm for learning, cultivate a good attitude towards learning, help students overcome difficulties in learning and improve their academic performance (Wang, 2024).

Secondly, a good teaching environment provides students with a good atmosphere and conditions for learning. In a quiet, clean, well-equipped classroom, students can pay more attention and participate better in the class. In addition, the school's teaching resources also play an important role in supporting learning. The library, laboratory, music room and other facilities are complete or not, which determines the convenience of students in learning. High-quality teaching environment can provide good learning conditions, stimulate students' interest in learning, and promote their better development (Xiong, 2024). Finally, high-quality teaching methods can stimulate students'

learning interest and potential. A diversified, flexible and applicable teaching method can meet the learning needs of different students, making the teaching more targeted and personalized. For example, the use of interactive teaching methods such as case analysis and group cooperation can increase students' active participation and improve learning results. At the same time, innovative teaching methods can also cultivate students' innovative thinking and problem-solving ability, and provide a broader space for students' development. Therefore, schools should constantly innovate teaching methods and improve teaching quality (Zhang, 2024).

4. Conclusions and Recommendations

Majority of the respondents are female, sophomore, and students majoring in Humanities and Social Sciences. The teaching management in Chinese universities is good but still needs to be improved around the efficiency of online course selection, the construction of both textbook management system and teaching management personnel, the management level of study rooms, and the teaching methods and content. The teaching quality in Chinese universities is good but still needs to be improved in the aspects of curriculum diversity assessment, the scientific and comprehensive design of final examinations, and the students' comprehensive practice and innovation ability. The academic achievements of undergraduates in Chinese universities are good as evidenced by students' strong sense of active learning and a certain ability to think independently, a wide range of interests, willingness to accept challenges, and a strong ability to solve learning difficulties. There is a significant difference on daily teaching management, instruction and learning, and ontological academic achievement when grouped according to year level. There is a significant positive correlation among teaching management, teaching quality and students' academic achievement. A proposed teaching improvement plan was formulated based on the results of the study.

Chinese universities may strengthen the full-time and professional construction of teaching management teams, strengthen the construction of textbook management system, strengthen interdisciplinary integration, enhance the cultivation of students' comprehensive practice, scientific research and innovation ability, and continue to improve the efficiency of online course selection and the management level of study rooms. Teachers may create more innovative teaching methods, teaching content and differentiate curriculum evaluation systems to enhance students' learning enthusiasm and promote students' personalized development. Students may strengthen their awareness on interdisciplinary learning, and actively participate in discipline competitions, academic training and comprehensive practice activities, so as to improve the level of multidisciplinary knowledge and skills, and enhance their comprehensive practice and innovation ability. The proposed teaching improvement plan may be reviewed, implemented and evaluated. Future researchers may investigate further on online teaching, blended teaching, students' online learning performance and other variables and their relationships.

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