

## **A STUDY ON THE PROFESSIONAL COMPETENCE AT Q COLLEGE TEACHERS IN JINAN, SHANDONG PROVINCE, CHINA**

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**Abstract:** This study aims to investigate the professional competence level of teachers at Q College in Jinan, Shandong Province. The total number of teachers in this college was 976, 270 valid questionnaires were distributed and collected. Then, descriptive statistics, independent samples t-test, and one-way ANOVA were applied to analyze the data. The results showed that: The overall level of professional competence of teachers at Q College in Jinan, Shandong Province was at a high level. There was no significant difference in teachers' professional competence compared with gender in the College. In terms of professional titles, teachers with associate professor titles and above were significantly higher than those with assistant professors and lecturers. In terms of educational background, teachers with doctor's degree are significantly higher than those with bachelor's degree and master's degree. In terms of teaching age, teachers with more than 12 years of teaching are significantly higher than teachers with 5 years of teaching and below, teachers with 9-11 years of teaching are significantly higher than teachers with 5 years of teaching and below, and teachers with 6-8 years of teaching are significantly higher than teachers with 5 years of teaching and below. Finally, the study discussed and recommended the college to improve professional training and development opportunities, strengthen the construction of teacher ethics, encourage teachers to give play to their respective advantages, stimulate teachers' initiative, promote cooperation between teachers, provide interpersonal training, and set clear career goals.

**Keywords:** College Teachers, Professional Competence, Q College in Jinan, Shandong Province

### **Introduction**

With the rapid development of society and the deep integration of various subject areas, the discussion and research on teachers' professional competence has been receiving more and more attention. Teachers are the leaders of education and teaching practice, and their competence and quality are crucial to the growth of students and the development of higher education. As the frontline workers

of higher education in China, the group of highly educated teachers is under great pressure in the actual teaching and daily administrative work. They need to possess various abilities and qualities, including professional knowledge, teaching skills, management skills, interpersonal skills, leadership skills and decision-making skills. At the same time, they need to continuously learn and update their knowledge to adapt to the ever-changing teaching and learning environments and students' needs (Shi, 2022).

In recent years, the overall professional competence of teachers in China has been improved. Taking Shandong as an example, the competent education department has carried out many preservice or in-service training for teachers, aiming at improving teachers' professional ability and educational philosophy. The local government has been improving the evaluation system of teachers' professional competence to help teachers understand their professional competence objectively. After the relevant departments paid attention to the cultivation of teachers' competency, the salary, working environment, career development opportunities, social recognition and other issues have been improved. However, the problem of teachers' competence is still facing challenges, which is mainly reflected in the low job satisfaction and excessive occupational pressure of some teachers due to insufficient ability.

In fact, teachers' professional competence plays a very important role in their career. Teachers' professional competence level is not only related to the smooth development and implementation of daily research work, but also directly affects the improvement of the quality of education and the realization of long-term development of universities. Enhancing teachers' professional competence level can help teachers better adapt to the needs of education reform and development, improve teaching quality, and research ability, and then promote the long-term development of universities. At the same time, paying attention to teachers' psychological needs and changes, and understanding teachers' career development and personal growth needs can help colleges and universities better manage and motivate teachers, reduce the tendency of talent loss, and improve the organizational performance and overall competitiveness of colleges and universities. Therefore, colleges and universities and related departments should strengthen the cultivation and enhancement of teachers' professional competence to promote the stability and sustainable development of the teaching force in colleges and universities and provide strong support for the long-term development of colleges and universities (Huang & Huang, 2020). Therefore, it is necessary to conduct research on teachers' professional competence in this research field to provide theoretical references for teachers' own career development and school promotion and selection.

To sum up, this study focused on the current situation of college teachers' professional competence, and investigates the current situation of teachers' professional competence of Q College in Jinan City, Shandong Province, China with a maturity scale, so as to cultivate more operable good strategies for the construction of college talent echelon, help colleges break through the talent training platform period, and provide colleges and universities with teachers with excellent skills and

psychology.

### **Research Objectives**

(1) To identify the demographic background information of the teachers at Q College in Jinan, Shandong Province, including their gender, professional title, education background, teaching experience and other aspects.

(2) To assess the current situation of the teachers' professional competence level at Q College in Jinan, Shandong Province.

(3) To analyze the difference in the professional competence level of teachers at Q College in Jinan, Shandong Province, with different demographic background factors, namely, gender, professional title, education background, and years of teaching.

### **Literature Review**

#### ***The Concept of Professional Competence***

**Professionalism.** According to Wang & Sun (2014), professional literacy referred to the specialized knowledge and skills that an individual should possess when engaging in a certain occupation. It includes in-depth understanding and mastery of the theories, practices, and tools of the field, as well as the ability to utilize these knowledge and skills in the workplace. At the same time, professionalism is an important foundation for career success, requiring individuals to learn and improve continuously to adapt to changes in the industry and the profession. Nie (2016) stated that professionalism refers to being able to master and apply work-related theoretical knowledge, being able to observe and analyze objectively, mastering and applying work-related practical operations and making correct evaluations.

**Professional Conduct.** Wang (2017) proposed that professional conduct refers to devoting time and energy to work, doing one's duty, being upright and honest, respecting every student, and adhering to one's own code of conduct. In the translation of Socialist Core Values and Contemporary Civil Aviation Spirit, Zhang (2018) proposed that professional ethics refers to the moral and behavioral norms that an individual should follow in his or her professional career. It includes honesty, trustworthiness, fairness, responsibility, and respect for others.

**Active Personality.** Li et al. (2015) suggested that proactive personality refers to passion for work, perseverance in seeking solutions to difficulties, proactive engagement in work, perseverance when encountering difficulties, proactive and effective communication with teachers and students, and proactive seeking of solutions. Furthermore, Wang et al. (2020) suggested that proactive personality refers to the personality traits of an individual who shows initiative, seeks opportunities, and takes action when facing challenges in work and life.

Interpersonal Interaction. According to Fan (2016), interpersonal interaction refers to being good at making effective communication with others, having teamwork spirit, and being willing to help others. Interpersonal interaction refers to the communication and interaction between individuals and others. It includes communication, cooperation, leading and being led. Ying (2020) suggested that interpersonal interaction was the key to building good interpersonal relationships and effective teamwork, and it is critical to individual career development and organizational success. Interpersonal interaction requires good verbal and communication skills, as well as cooperation and leadership skills.

Achievement-Oriented. Achievement orientation refers to the pursuit of a highly efficient work style, setting clear developmental goals for oneself, and enjoying taking on challenges (Chen & Huang, 2022). According to Li (2017), achievement orientation refers to an attitude and behavior of pursuing success and excellence. It is manifested in the positive pursuit of goals, constant challenge to oneself, and perseverance in the face of difficulties. Achievement orientation is an important driving force for personal growth and organizational development, which helps to improve work efficiency, enhance innovation, and promote the continuous progress of individuals and organizations (Chen & Liu, 2013).

#### ***The Measurement of Teachers' Professional Competence***

Based on the iceberg model theory, summarized the competence of expert teachers, including: in terms of teaching ability, expert teachers can more effectively solve problems raised by students and problems in the classroom; In terms of metacognitive ability, expert teachers can flexibly and effectively apply their own teaching knowledge to the classroom, while improving teaching efficiency and students' learning efficiency; In terms of teaching strategies, expert teachers can deal with problems they have not encountered in a more efficient way (Askhadullina et al., 2021).

Xu's (2004) research was also based on the form of "survey - test", summarizing the factors of the teacher competency model is mainly related to the "knowledge, skills, attitudes", and after in-depth analysis of the important factors in the competency model formed were the important factors in the competency model formed after in-depth analysis were professionalism, professional conduct, active personality and development goals, and the practice results were of reference significance. In addition, Wang et al. (2018) took teachers as the research object and concluded that teachers' professional competence was related to teaching process, teacher-student relationship, colleague interaction, professional development, innovation ability, professional conduct, and other aspects of competence.

#### ***Studies Related to Teachers' Professional Competence across Demographic Background Variables***

Zhu (2010) conducted a comprehensive study on the current situation of teachers' competency to meet the teaching or professional needs of different groups of primary school teachers. The research results show that there are significant differences in teaching age, education background and school nature.

The study by Wang & Deng (2023) used a variety of research methods, first summarizing and summarizing the results of previous research through the literature method, then using questionnaire survey method combined with interviews and other forms to collect relevant data indicators of the current situation of teachers' professional competence, and the study found that: the competence of teachers is on the low side, and there is a difference in the location of the school, the title, the education level, and the sex of the teachers. Finally, through the results of the study, strategies are proposed to minimize the differences.

### ***Summary of the Reviewed Literature***

In view of this, this study attempts to start from the group of college teachers, based on practical operations related to the current work of Q College teachers, The purpose was to further evaluate the current situation of teachers' professional competence, and then investigate the differences of college teachers' professional competence in different demographic background variables, and clarify the development characteristics of college teachers' professional competence. On the one hand, it is conducive to improving college teachers' professional competence, on the other hand, it is necessary to recognize their own advantages and disadvantages in professional competence, and effectively improve the overall quality, to strengthen potential development and improve their comprehensive competence, and optimize the construction of talent echelon in the education system.

### **Methodology**

The questionnaire used in this research is in the form of an electronic questionnaire. There were 976 teachers from Q College in Jinan City, Shandong Province. It was reasonable to select 276 college teachers, according to the sampling standard of Krejcie and Morgan (1970) and the requirements of statistical standardization. Using a convenient sampling method, 276 questionnaires were finally issued, and 270 valid questionnaires were collected and sorted out, with a return rate of 97.83%. The scale instrument used in this study is from the questionnaire of Li's (2009) Competency Model for Teachers in Colleges and Universities and its related researches, based on which the general demographic background variables of the subjects are added, such as the differences in the status of teachers in terms of gender, title, and years of teaching experience, and so on, and other aspects of the basic situation of the survey are investigated in detail. The Professional Competence Scale consists of 34 items, including the refinement of college teachers' competence into: professionalism, professional conduct, active personality, interpersonal interaction, and achievement orientation. This questionnaire has been tested for reliability and validity by scholars and has been used repeatedly in China, so it was used in this study.

## Results

### *Demographic Analysis of Questionnaire Participants*

This research took the university teachers at Q College in Jinan City, Shandong Province as the object of questionnaire survey, and finally collects and sorts out 270 valid questionnaires. The demographic variables of demographic factors investigated mainly included gender, professional title, education background and years of teaching. In the valid questionnaire, there are 157 male teachers, accounting for 58.1%, and 113 female teachers, accounting for 41.9%. Male teachers were slightly more than female teachers. In terms of professional titles, there were 108 teachers with the title of teaching assistant, accounting for 40%, 121 teachers with the title of lecturer, accounting for 44.8%, and 41 teachers with the title of associate professor or above, accounting for 15.2%, which is more consistent with the distribution of professional titles of university teachers. In terms of education background, there were 98 teachers with bachelor's degree, accounting for 36.3%, 119 teachers with master's degree, accounting for 44.1%, and 53 teachers with doctor's degree, accounting for 19.6%, which was more consistent with the distribution of college teachers' education background. In terms of years of teaching, there were 121 teachers with teaching age of 5 years and below, accounting for 44.8%, 83 teachers with teaching age of 6-8 years, accounting for 30.7%, 35 teachers with teaching age of 9-11 years, accounting for 13%, and 31 teachers with teaching age of 12 years and above, accounting for 11.5%, which is more consistent with the distribution of teaching age of university teachers.

### *Descriptive Statistics on the Levels of Teachers' Professional Competence at Q College in Jinan, Shandong Province*

1) According to the descriptive statistical results in Table 1, the overall mean of college teachers' professional competence was high, since the overall Mean was 4.089, and the mean values of the four dimensions of professional quality, professional ethics, active personality, interpersonal interaction, and achievement orientation are 4.172, 4.304, 4.006, 3.877, and 4.086, respectively. Among them, professional ethics is the highest, followed by professional quality, achievement orientation, and active personality, and interpersonal interaction was the lowest. Therefore, the overall level of teachers' professional competence at Q College in Jinan, Shandong Province was at a high level, with the highest professional ethics and the lowest interpersonal interaction.

**Table 1:** The Level of Professional Competence of Teachers at Q College in Jinan

Dimension	N	M	SD	Analysis
Professionalism	270	4.172	0.485	High
Professional Conduct	270	4.304	0.400	High
Active Personality	270	4.006	0.430	High
Interpersonal Interaction	270	3.877	0.665	High
Achievement-Oriented	270	4.086	0.522	High
Overall Professional Competence	270	4.089	0.438	High

### ***Differences Analysis on the Levels of Teachers' Professional Competence***

Regarding teachers' gender, active personality, achievement orientation and interpersonal interaction are established; professionalism, ethics and professional competence are not. All dimensions and career competencies in terms of title were established. In terms of academic qualifications, professionalism, proactive personality, achievement orientation and professional competence are established; professional ethics and interpersonal interactions are not. With regard to teaching experience, professionalism, professional conduct, active personality, interpersonal interaction and professional competence were established and achievement orientation was not established. The overall gender difference of teachers' professional competence. There was a significant difference in the overall professional competence of teachers with associate professor and above titles were significantly higher than those with assistant and lecturer titles. The overall professional competence of teachers in terms of academic qualifications. The overall difference of teachers' professional competence in terms of teaching age.

## **Discussion**

### ***The Overall Level of Professional Competence of Teachers in Higher Education***

The overall professional competence of teachers at Q College in Jinan City, Shandong Province is at a high level, among which the mean value of professional ethics is the highest, followed by professional quality, achievement orientation, and active personality, while the mean value of interpersonal interaction is the lowest.

### ***Differences in The Professional Competence of Higher Education Teachers in Different Categories***

At Q College of Jinan, Shandong Province, male teachers are significantly higher than female teachers in terms of active personality and achievement orientation, while female teachers are significantly higher than male teachers in terms of interpersonal interaction. Zhou et al. (2022) also reached a similar conclusion. Also, the profession itself may have expectations about the roles and responsibilities of men and women. Male teachers may be more inclined to actively guide students and move the curriculum forward, thus showing more initiative and achievement orientation. Males may be influenced by social and cultural influences to emphasize competition and achievement more, and thus score higher on the achievement orientation dimension. There is a significant difference in the overall professional competence of teachers at Q College in Jinan City, Shandong Province, with associate professor and above title teachers significantly higher than assistant teachers and lecturer title teachers. The reason may be that teachers with associate professors and above usually have more teaching experience and professional knowledge, which may make them more competent for teaching and scientific research. Zhao (2020) also reached a similar conclusion. They believe that experience and



knowledge reserves may enable them to more effectively impart knowledge, guide graduate students, carry out scientific research projects, etc. In terms of career development, teachers with associate professors and above usually have more opportunities to participate in high-level teaching and research training, which may enable them to improve their teaching and research capabilities. In addition, they may also have more opportunities to participate in academic exchanges, cooperative research and other activities, so as to broaden their horizons and improve their professionalism.

Q College in Jinan City, Shandong Province has a significant difference in the overall professional competence of teachers in terms of academic qualifications. Teachers with high academic qualifications are significantly higher than teachers with low academic qualifications. The reason may be that teachers with doctorate degrees usually undergo more in-depth academic training and research, and they have stronger academic ability and research level. These abilities can help them better guide students and carry out scientific research in teaching, thus improving the quality and effect of teaching. In addition, teachers with doctoral degrees usually have more extensive and in-depth knowledge reserves. They have a deeper understanding of the subject area and can better grasp the frontiers and development trends of the subject. In addition, they may also have higher comprehensive quality, including language ability, thinking ability, communication, and expression ability, which may make them perform better in professional competence.

There was a significant difference in the overall professional competence of teachers at Q College in Jinan City, Shandong Province, with senior teachers significantly higher than junior teachers. Yu & Lv (2021) also reached a similar conclusion, believing that the reason may be that teachers will accumulate more teaching experience, professional knowledge, and skills with the increase of teaching age. Liu & Li (2021) also reached a similar conclusion, believing that these experiences and skills can help better understand students' needs, design teaching content and teaching methods, and improve teaching quality and effect. Teachers with more than 12 years of teaching experience usually have a higher sense of identity and stability for their own careers, may have adapted to teaching work, and formed their own teaching style and philosophy. This stability and professional identity may also lead to more focus on teaching and scientific research, to perform better in professional competence.

## **Conclusions**

1) The overall level of teachers' professional competence of Q College in Jinan City, Shandong Province was at a high level, among which professional ethics was the highest, followed by professional quality, achievement orientation and active personality, and interpersonal interaction was the lowest.

2) The overall gender difference of teachers' professional competence at Q College in Jinan City, Shandong Province is not significant, but male teachers were significantly higher than female teachers in the two dimensions of active personality and achievement orientation, while female teachers



were significantly higher than male teachers in the dimension of interpersonal interaction.

3) There was a significant difference in the overall professional competence of teachers at Q College in Jinan City, Shandong Province. Teachers with associate professor and above titles were significantly higher than those with assistant and lecturer titles. In the dimensions of professional quality, professional ethics and active personality, teachers with associate professor and above titles were significantly higher than those with assistant teaching titles and lecturer titles.

4) Q College in Jinan City, Shandong Province had a significant difference in the overall professional competence of teachers in terms of academic qualifications. Teachers with doctor's degrees were significantly higher than those with bachelor's and master's degrees.

5) The overall difference of teachers' professional competence of Q College in Jinan City, Shandong Province was significant in terms of teaching age. Teachers with more than 12 years of teaching age were significantly higher than teachers with 5 years of teaching age and below, teachers with 9-11 years of teaching age were significantly higher than teachers with 5 years of teaching age and below, and teachers with 6-8 years of teaching age were significantly higher than teachers with 5 years of teaching age and below.

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