Study on Chinese College Teachers' Professional Beliefs and Ways to Improve Their Professional Beliefs

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Received:	*Modern information technology has challenged teachers' professional beliefs and there is a shortage of studying on college teachers'*
6 April 2023	*professional beliefs in China. This study tries to bridge the gap. It collects data about Chinese college teachers' professional beliefs with*
Final Revision:	*the methods of questionnaire surveys and individual interviews. Based on 682 valid questionnaires, the study finds that Chinese college*
19 May 2023	*teachers' professional beliefs are positive in general. Their research capabilities and their sense of research achievements are lower than*
Available online:	*their teaching abilities and their sense of teaching achievements. In addition, they expect to improve their information technology*
20 June 2023	*capabilities eagerly. Given research findings, this study proposes strategies to reconstruct the teachers' professional beliefs, such as offering training and further education opportunities for college teachers, improving their research capabilities, intensifying the reform of colleges to establish a classified evaluation system, and providing information technology training for college teachers.*
	Keywords: *College teacher; Professional beliefs; Reconstruction; Strategy.*

INTRODUCTION

Modern information technology has brought great benefits to education. Teachers can grasp various teaching resources easily, which brings convenience for them to lesson preparation (Jobirovich, 2021). Teachers can participate in various research without leaving home, which brings convenience for them to integrate into academic groups, such as attending academic conferences (Singh, 2021), discussing academic questions with other scholars (Jeon & Lee, 2022), and participating in research teams (Castro, 2019). Students can get benefits from modern information technology as well. Their learning activities are no longer limited by time and space. They can easily access first-class teaching resources. On the other hand, the rapid development of information technology has brought new challenges to college teachers. The

shortage of information technology causes some college teachers out of touch with the times, even resulting in some difficulties for them to complete their teaching tasks (Almaiah et al., 2020). Teachers' professional authority is constantly being challenged. Teachers are no longer academic authorities in front of students. They are no longer important sources for students to obtain professional knowledge (He et al., 2021). Internet resources have replaced them and become the most important source for students to obtain professional knowledge. To make matters worse, the disorderly dissemination of unhealthy resources on the Internet will accelerate the corruption of some teachers with unsteady professional beliefs. It is an urgent task for education authorities to pay more attention to teachers' professional beliefs and help them reshape their professional beliefs to meet the requirements of the information age.

LITERATURE REVIEW

The systematic research on professional beliefs in modern society began in the late 1970s and early 1980s. Nisbett and Ross (1980) discussed the concept and connotation of professional belief for the first time. Ball and Goodson (1985) introduced the research content of professional belief into the field of teacher research; they did not use the term teacher professional belief, but the concepts they discussed such as teacher identity and teacher professional attitude belonged to the core category of teacher professional belief. Pajares (1992) outlined the framework of teachers' professional beliefs and gave a clear concept of teachers' professional beliefs. Although scholars see teachers' professional belief from different aspects, almost all of them believes that teachers' professional beliefs are some stable views, cognitions, emotions, and evaluations about courses, students, learning activities, and social roles of schools, which teachers hold and firmly believe in their work (Liu et al., 2019; Tam, 2015; Wang et al., 2023). Teachers' professional belief is different from teachers' professional attitude, as the former indicates specific viewpoints on what is true while the latter indicates both positive and negative viewpoints (Borg, 2018). Since then, the research on teachers' professional beliefs has embarked at a rapid speed, and several influential results have come out one after another, such as studies on the relationships between teachers' professional beliefs and their teaching approaches (Morris, 2019), or between teachers' professional beliefs and their self-efficacy (Gagnier et al., 2022), and the strategies to improve teachers' professional beliefs (Lee, 2019; Zonoubi et al., 2017).

China has a long history of education, but the research on teachers' professional beliefs started a little later. The first achievement on teachers' professional beliefs in China was

published by Li ([1988](#)), but at that time this article did not receive enough attention from the academic community. Eight years later, the second achievement in teachers' professional beliefs in China was completed by Zhang and Fan ([1996](#)). Since the end of the last century, researches on teachers' professional beliefs in China have gradually gained the attention of academic circles, and the number of related achievements has shown an overall upward trend. The most essential issues of teachers' professional beliefs include the training of professional beliefs (Pei & Yang, [2019](#); Xu, [2015](#)) and the relationship between professional beliefs and their efficacy (Ke et al., [2019](#); Long et al., [2021](#)). After analyzing previous studies on teachers' professional beliefs in China, we can find that the research on teachers' professional beliefs has been recognized by the academic community but still with some shortages, especially the lack of in-depth research on college teacher groups. Because of this, this study will explore Chinese college teachers' professional beliefs and analyze strategies to optimize the professional beliefs of college teachers.

METHOD

This study is an empirical one, which is approved by the Committee of Ethics and Integrity in Research with Humans at Tianjin Chengjian University. It collects data on college teachers' professional beliefs through questionnaire surveys and individual interviews. The study aims to reveal Chinese college teachers' professional beliefs and explore the strategies for reshaping the professional beliefs of college teachers in the information age.

Survey tools

Referring to Pajares' ([1992](#)) definition of teachers' professional beliefs combined with the Higher Education Law of the People's Republic of China and other Chinese national documents on the rights and obligations of higher education teachers, the study designs a questionnaire entitled Questionnaire on Professional Beliefs of College Teachers (hereinafter referred to as "Questionnaire"). The questionnaire consists of five parts and 69 questions. The first part is about demographic information, including 11 questions, such as the teacher's name, gender, age, teaching experience, education background, major, and contact information. The second part contains 8 questions, examining college teachers' viewpoints on professional goals. The third part contains 17 questions, examining college teachers' practical identification. The fourth part contains 22 questions, examining college teachers' emotional identification with their jobs. The fifth part contains 11 questions, examining college teachers' viewpoints and

abilities in teaching technology. The options of the Questionnaire are in the form of a five-level Likert scale, including "strongly agree" (A), "agree" (B), "neither agree nor disagree" (C), "disagree" (D), and "completely disagree" (E). After the questionnaire is designed, it is tested twice in a small area and is revised. The test results show that the reliability level of the questionnaire is 0.86 and the validity level is 0.78. The reliability and validity of the questionnaire are high enough to be used as a tool to test Chinese college teachers' professional beliefs.

The interview method in this study is used as another method to collect data. When the research team encounters representative cases or unusual cases in the process of sorting out the questionnaires, the team numbers conducts individual interviews with the respondents to explore the deep stories hidden behind the data provided by the questionnaire. Throughout the research process, the research team interviews 37 college teachers.

Research subjects

The study chooses research subjects from 18 colleges in China, which cover the world's first-class universities, the national first-class university, the provincial first-class universities, non-first-class universities, and vocational colleges. The research team sends out 783 questionnaires in the selected universities and receives 721 completed questionnaires, 682 of which are valid. Among the 682 respondents who completed valid questionnaires, 343 are female and 339 are male; 213 hold Ph.D. degrees, 457 Master's degrees, and 12 Bachelor degrees; 102 are Full Professors, 214 Associate Professors, 334 Assistant Professors, and 32 other titles; 183 are with teaching experience of fewer than 5 years, 274 of 6 to 10 years, and 225 of more than 10 years.

Research process

After the research team obtains the questionnaire completed by college teachers, the team numbers evaluate whether the questionnaires are valuable. Those with incomplete information or those with the same options in a sequence of 5 questions are deemed as unqualified questionnaires. After eliminating unqualified questionnaires, the research team values the options of A to E into 5 to 1, respectively. After completing the assignment, the research team enters the data into a computer. With the help of the data statistics software SPSS 25.0, the research team analyzes Chinese college teachers' professional beliefs.

RESULT: CHINESE COLLEGE TEACHER'S PROFESSIONAL BELIEFS

Teachers' professional belief includes many aspects. This study divides teachers' professional beliefs into four aspects referring to Pajares (1992), which are the identification of professional goals, the identification of professional practice, the identification of professional emotion, and information technology capability and attitude. The study analyzes college teachers' professional beliefs from the aforementioned four aspects.

College teachers' identification of professional goal

Since ancient times, teachers' most important duty has been recognized by traditional Chinese culture as inheriting moral values, teaching knowledge, and solving learners' doubts. In modern society with the rapid development of science and technology, college teachers' duty has expanded to the areas of scientific research as well. At the same time, Chinese college teachers shoulder the important task of inheriting traditional culture and shaping new socialist culture. Studying college teachers' identification of professional goals will reveal their attitudes toward their duties.

Table 1. College teachers' identification of professional goal (%)

	Strongly Agree	Agree	Neither Agree or Nor Disagree	Disagree	Completely Disagree
G1	46.5	53.5	0	0	0
G2	48.7	51.3	0	0	0
G3	49.6	49.0	0.9	0.4	0.1
G4	34.6	55.1	4.7	3.4	2.2
G5	34.6	34.8	14.4	12.2	4.1
G6	54.5	28.0	8.2	4.7	4.5
G7	60.4	23.6	6.3	5.3	4.4
G8	33.7	41.9	13.0	6.6	4.7

Notes:

G1: It is an important task for college teachers to carry out moral education for students and cultivate students' passion for the country.

G2: It is an important task for college teachers to impart professional knowledge to students and help students improve their professional abilities.

G3: It is an important task for college teachers to popularize Chinese culture.

G4: It is an important task for college teachers to contribute to social construction with their professional knowledge.

G5: College teachers undertake teaching tasks and research tasks.

G6: It is college teachers' mission of promoting students' individual development.

G7: It is an important task for college teachers to continuously update their professional knowledge.

G8: It is an important task for college teachers to continuously update their pedagogical knowledge.

The survey results show that all the respondents strongly agree or agree with the opinion that "it is an important task for college teachers to impart professional knowledge to students and help students improve their professional abilities" and the opinion that "it is an important task for college teachers to carry out moral education for students and cultivate students' passion for the country". 98.6% of the respondents strongly agree or agree that "it is an important task for college teachers to popularize Chinese culture". 89.7% of the respondents strongly agree or agree that "it is an important task for college teachers to contribute to social construction with their professional knowledge". 69.4% of the respondents strongly agree or agree that "college teachers undertake teaching tasks and research tasks". Based on respondents' demographic information the study finds that different opinions on this point of view are related to the level of colleges that the respondents work at, as well as the respondents' educational background and majors. The higher the respondents' academic qualifications are, the more they agree with the point of view. Teachers of engineering or medicine agree with the point of view more than teachers of literature or science. 82.5% of the respondents strongly agree or agree that "it is college teachers' mission of promoting students' individual development". 84.0% of the respondents strongly agree or agree that "it is an important task for college teachers to continuously update their professional knowledge". 75.6% of the respondents strongly agree or agree that "it is an important task for college teachers to continuously update their pedagogical knowledge".

Based on the above data, it can be concluded that the majority of college teachers in China have identification of professional goals, and they agree with their social responsibilities.

College teachers' identification of professional practice

College teachers should not only have positive career goals but also transform these goals into actions. According to Chinese education policies, a qualified college teacher should complete teaching practice (TP), research practice (RP), self-improvement practice (SIP), teacher-student relationship practice (TSRP), and colleague relationship practice (CRP) successfully. The survey results reveal college teachers' identification of professional practice.

Table 2. College teachers' identification of professional practice (%)

		Strongly Agree	Agree	Neither Agree or Nor Disagree	Disagree	Completely Disagree
TP	P1	46.5	53.5	0	0	0
	P11	53.5	44.4	1.0	0.6	0.4
	P2	35.0	46.3	8.2	6.2	4.3
	P3	30.8	42.1	13.0	9.8	4.3
	P4	32.3	34.2	21.3	10.6	1.8
RP	P12	40.0	26.8	19.4	8.2	5.6
	P13	28.7	36.8	21.0	6.7	6.7
	P14	27.3	33.0	24.2	8.2	7.3
SIP	P5	43.7	31.1	15.4	4.7	5.1
	P9	45.7	29.8	16.4	6.3	1.8
	P10	51.0	46.3	1.6	0.9	0.1
TSRP	P6	53.1	29.3	8.4	6.6	2.6
	P8	31.1	39.6	14.4	11.1	3.8
	P7	34.6	33.6	18.9	7.8	5.1
CRP	P15	47.8	30.2	12.6	6.2	3.2
	P16	56.7	28.2	7.6	5.0	2.5
	P17	32.3	29.2	21.3	12.2	5.1

Notes:

P1: I take teaching tasks actively.

P2: I design teaching according to the characteristics of my students.

P3: I adjust my teaching according to students' requirements.

P4: I encourage my students to participate in classroom activities.

P5: I reflect on my teaching after class actively.

P6: I keep a good relationship with my students.

P7: I take care of students and help them solve practical difficulties.

P8: I share my life philosophy with my students.

P9: I enrich my professional knowledge actively.

P10: I actively improve my moral levels.

P11: I actively conduct moral education to students in class and after class.

P12: I am actively engaged in research.

P13: I actively participate in academic conferences.

P14: I actively adjust my research direction according to the needs of society.

P15: I keep a good relationship with my colleagues.

P16: I often discuss with my colleagues the methods of improving teaching effects.

P17: I often discuss with my colleagues the methods of improving research capabilities.

In terms of TP, 88.2% of the respondents strongly agree or agree that "I take teaching tasks actively", which indicates that almost all respondents can fulfill their basic responsibilities. Most of the respondents who choose "disagree" or "completely disagree" with this question are teachers who work at vocational colleges. In the interview a teacher tells the research team that according to her college's policies, she has to teach more than 20 hours per week; in such circumstances, she is unable to undertake teaching tasks actively and always tries to find ways to teach as little as possible. It can be seen that some teachers choose "disagree" or "completely disagree" with this question, which does not mean that these teachers do not love teaching work. It can be deduced that the actual approval degree to this question is higher than that indicated by the survey data. 97.9% of the respondents strongly agree or agree with the opinion that "I actively conduct moral education to students in class and after class". 81.3% of the respondents strongly agree or agree that "I design teaching according to the characteristics of my students". 72.9% of the respondents strongly agree or agree with the opinion that "I adjust my teaching according to students' requirements". 66.5% of the respondents strongly agree or agree that "I encourage my students to participate in classroom activities". The interview results show that those who do not choose the option of "strongly agree" or "agree" to the above two questions are those with teaching experiences of under three years. The investigation data show that Chinese college teachers have identification of teaching practices. Most teachers can actively participate in teaching practice and strive to improve their teaching quality.

In terms of RP, 66.8% of the respondents strongly agree or agree that "I am actively engaged in research". 65.5% of the respondents strongly agree or agree that "I actively participate in academic conferences". 60.3% of the respondents strongly agree or agree that "I actively adjust my research direction according to the needs of society". The above data show that Chinese college teachers' identification of research practice is slightly weaker than that of teaching practice. In the interview, some interviewees from vocational colleges state that college teachers' primary task is teaching, followed by research. Presently their teaching task is very heavy. They, therefore, have to ignore the research task. Their expression can partly explain why the interviewees' identification of research practice is slightly weaker than that of teaching practice.

In terms of SIP, 74.8% of the respondents strongly agree or agree that "I reflect on my teaching after class actively". 75.5% of the respondents strongly agree or agree that "I enrich my professional knowledge actively". 97.3% of the respondents strongly agree or agree that "I

actively improve my moral levels". The above data show that the majority of Chinese college teachers can actively improve their qualities, especially their moral qualities.

In terms of TSRP, 82.4% of the respondents strongly agree or agree that "I keep a good relationship with my students". 70.7% of the respondents strongly agree or agree that "I share my life philosophy with my students". 68.2% of the respondents strongly agree or agree that "I take care of students and help them solve practical difficulties". Referring to respondents' demographic information to analyze the data, the study finds that most of those who choose the options of "strongly agree" or "agree" to the above two questions are teachers with long teaching experience. These teachers spend more time with students and teach small classes (less than 30 students in one class), which increases opportunities for teachers and students to communicate with each other.

In terms of CRP, 78.0% of the respondents strongly agree or agree that "I keep a good relationship with my colleagues". 84.9% of the respondents strongly agree or agree that "I often discuss with my colleagues the methods of improving teaching effects". 61.5% of the respondents strongly agree or agree that "I often discuss with my colleagues the methods of improving research capabilities". The above data show that the majority of Chinese college teachers keep a good relationship with their colleagues and often discuss teaching issues together. An interesting finding in this part is that the number of respondents who self-reported "often discussing with colleagues the methods of improving teaching effects" is more than the number of respondents who self-reported "keep a good relationship with colleagues". In the interview, some respondents report that colleagues keep working relationships rather than personal relationships with each other. Personal relationships are more determined by personal interests and values. Colleagues are not necessarily to be friends with each other.

College teachers' identification of professional emotion

College teachers should not only complete various teaching and research tasks but also be willing to complete these tasks with passion. They should gain a sense of accomplishment when they complete their tasks. Only in this way can they hold motivation to engage in teaching and research, and continue to promote various tasks. For this reason, the questionnaire includes some questions to examine college teachers' identification of professional emotion, such as their achievement sense on teaching (AST), achievement sense on research (ASR), achievement sense on social contributions (ASSC), satisfaction sense on working environments (SSWE), and professional belonging sense (PBS).

Table 3. College teachers' identification of professional emotion (%)

		Strongly Agree	Agree	Neither Agree or Nor Disagree	Disagree	Completely Disagree
AST	E9	31.2	54.1	7.9	6.3	0.4
	E10	35.0	52.5	6.6	4.7	1.2
	E15	37.7	44.9	8.2	6.3	2.9
	E3	31.5	38.3	17.2	7.2	5.9
	E7	34.8	34.0	21.3	7.6	2.3
ASR	E4	32.6	30.8	20.1	12.3	4.3
	E8	36.8	26.0	21.8	10.7	4.7
	E11	29.2	37.0	25.8	5.0	3.1
	E16	30.9	27.3	18.3	14.4	9.1
ASSC	E6	51.0	43.8	3.1	1.3	0.7
	E5	32.0	26.1	21.3	14.8	5.9
	E12	37.1	19.5	25.4	13.0	5.0
SSWE	E1	33.9	47.7	9.8	4.8	3.8
	E13	31.7	23.6	22.1	15.0	7.6
	E14	15.0	23.3	26.2	29.8	5.7
	E2	33.9	31.8	19.6	8.2	6.5
	E17	37.1	29.8	14.5	12.8	5.9
PBS	E20	44.9	45.2	4.7	4.4	0.9
	E18	34.6	40.5	13.2	6.2	5.6
	E19	32.4	36.2	15.4	13.5	2.5
	E21	34.9	37.2	12.2	9.1	6.6
	E22	29.0	35.2	17.0	13.0	5.7

Notes:

E1: I am satisfied with my working conditions.

E2: I am satisfied with my salary.

E3: I can gain a sense of accomplishment in my teaching.

E4: I can gain a sense of accomplishment in research.

E5: I can gain a sense of accomplishment in popularizing Chinese traditional culture.

E6: I am satisfied that I can contribute to society with my professional knowledge.

E7: I would feel lost if I gave up teaching.

E8: I would feel lost if I gave up researching.

E9: I feel happy when I see students making progress academically.

E10: I feel happy when I see students making progress morally.

E11: I feel happy when I achieve research achievements.

E12: I feel happy when I can contribute to society with my professional knowledge.

E13: I feel happy when I share my teaching experience with my colleagues.

E14: I feel happy when I share my research experience with my colleagues.

E15: As soon as I begin my teaching, I am full of passion.

E16: I always feel energetic when I am engaged in research.

E17: even if there are other job opportunities, I will not leave my teaching position.

E18: As a college teacher, I feel respected.

E19: As a college teacher, I have a sense of honor.

E20: I care about others' opinions toward college faculty.

E21: I have a sense of belonging in my school.

E22: I feel a sense of belonging in my professional field.

In terms of AST, 85.3% of the respondents strongly agree or agree that "I feel happy when I see students making progress academically". Referring to respondents' demographic information to analyze the data, the study finds that all the respondents who are qualified to supervise postgraduate students choose the option of "strongly agree". 87.5% of the respondents strongly agree or agree that "I feel happy when I see students making progress morally". 82.6% of the respondents strongly agree or agree that "as soon as I begin my teaching, I am full of passion". The above data show that Chinese college teachers expect that their students can benefit from their teaching and they are willing to make efforts for the teaching. 69.8% of the respondents strongly agree or agree that "I can gain a sense of accomplishment in my teaching". 68.8% of the respondents strongly agree or agree that "I would feel lost if I gave up teaching". The above two questions corroborate each other, indicating that Chinese college teachers can gain a sense of accomplishment in their teaching.

In terms of ASR, 63.4% of the respondents strongly agree or agree that "I can gain a sense of accomplishment in research". 62.8% of the respondents strongly agree or agree that "I would feel lost if I gave up researching". 66.2% of the respondents strongly agree or agree that "I feel happy when I achieve research achievements". 58.2% of the respondents strongly agree or agree that "I always feel energetic when I am engaged in research". The above data show that Chinese college teachers have a certain achievement sense in research, but slightly lower than their achievement sense in teaching.

In terms of ASSC, 94.8% of the respondents strongly agree or agree that "I am satisfied that I can contribute to society with my professional knowledge". 58.1% of the respondents strongly agree or agree that "I can gain a sense of accomplishment in popularizing Chinese traditional culture". 56.6% of the respondents strongly agree or agree that "I feel happy when I can contribute to society with my professional knowledge". Referring to respondents' demographic information to analyze the data, the study finds that respondents who strongly

agree or agree that "I can gain a sense of accomplishment in popularizing Chinese traditional culture" are teachers in the discipline of humanities or social sciences; and strongly agree or agree that "I feel happy when I can contribute to society with my professional knowledge" are those in the discipline of science, engineering, agriculture or medicine. The differences in discipline a college teacher belongs to determine the different sources of college teachers' accomplishment sense on social contribution.

In terms of SSWE, 81.6% of the respondents strongly agree or agree that "I am satisfied with my working conditions". 55.3% of the respondents strongly agree or agree that "I feel happy when I share my teaching experience with my colleagues". 38.3% of the respondents strongly agree or agree that "I feel happy when I share my research experience with my colleagues". The survey results of the above two questions show that Chinese college teachers get more happiness from teaching than from research, which is similar to the previous survey results on AST and ASR. 65.7% of the respondents strongly agree or agree that "I am satisfied with my salary". 66.9% of the respondents strongly agree or agree that "even if there are other job opportunities, I will not leave my teaching position". Referring to respondents' demographic information to analyze the data, the study finds that different gender causes differences in attitude toward the above two questions. The number of female respondents who choose the option of "strongly agree" or "agree" in the above two questions is significantly more than that of male respondents.

In terms of PBS, 90.1% of the respondents strongly agree or agree that "I care about others' opinions toward college faculty". 75.1% of the respondents strongly agree or agree that "as a college teacher, I feel respected". 68.6% of the respondents strongly agree or agree that "as a college teacher, I have a sense of honor". The above data show that college teachers care about their social position and social evaluation, and can gain a sense of honor and social respect from their position as college teachers. 72.1% of the respondents strongly agree or agree that "I have a sense of belonging in my school". 64.2% of the respondents strongly agree or agree that "I feel a sense of belonging in my professional field" The above data show that Chinese college teachers have both a sense of belonging to their college and a sense of belonging to their professional field.

College teachers' information technology capability and attitude

With the development of society, information technology has been integrated into every corner of society. Educations and teachers are most directly affected by information technology

as well. The information society has put forward new requirements for college teachers. Without modern information technology, college teachers would not engage in teaching and research. It is even believed extremely that with the popularization of MOOCs, traditional education will be replaced by online education, and most teachers will lose their job. The following results reveal Chinese college teachers' capability of information technology (CIT), attitude toward information technology (AIT), and their behavioral tendency to information technology (BTIT).

Table 4. College teachers' information technology capability and attitude (%)

		Strongly Agree	Agree	Neither Agree or Nor Disagree	Disagree	Completely Disagree
CIT	I1	54.8	38.9	3.1	2.6	0.6
	I2	31.4	30.6	20.7	15.7	1.6
AIT	I9	19.6	21.3	8.2	27.6	23.3
	I3	39.3	44.7	7.6	6.3	2.1
	I4	34.0	34.6	22.6	6.2	2.6
	I5	40.8	34.9	12.5	6.2	5.7
	I6	43.0	31.5	10.7	8.2	6.6
BTIT	I9	19.6	21.3	8.2	27.6	23.3
	I3	39.3	44.7	7.6	6.3	2.1
	I4	34.0	34.6	22.6	6.2	2.6
	I5	40.8	34.9	12.5	6.2	5.7

Notes:

I1: I have mastered the information technology required for teaching.

I2: I have mastered the information technology required for research.

I3: Information technology has brought great convenience to my teaching.

I4: Information technology has brought great convenience to my research.

I5: Information technology has put forward higher requirements for my teaching.

I6: Information technology has put forward higher requirements for my research.

I7: I actively apply information technology to my teaching.

I8: I actively apply information technology to my research.

I9: It is more conducive to establishing teachers' social position in an information age.

I10: It is an important responsibility of college teachers to continuously improve their information technologies.

I11: I hope to study and improve my information technology systematically.

In terms of CIT, 93.7% of the respondents strongly agree or agree that "I have mastered the information technology required for teaching". 62.0% of the respondents strongly agree or

agree that "I have mastered the information technology required for research". The above two data show that the majority of respondents have mastered the information technology necessary for teaching and research, but the proportion of the latter is lower than the former. It is an important task in the future to improve Chinese college teachers' capabilities of information technology in research.

In terms of AIT, 40.9% of the respondents strongly agree or agree that "It is more conducive to establishing teachers' social position in an information age", but 50.9% of the respondents completely disagree or disagree with the opinion. This is the only question in the questionnaire that more than half of the respondents choose the option of "disagree" or "completely disagree". In the interview, one interviewee expresses the following opinion to the research team. There are many reports online about teachers' misconduct and even violating students' bodies and minds, which are only a few teachers' behaviors rather than the whole group's actions. Compared with the whole group, the number of college teachers with bad behaviors is extremely small. However, due to the spreading of the Internet, it seems that the overall quality of college teachers has been reduced. From this aspect, it is not conducive to establishing a teacher's social position in an informational age. 84.0% of the respondents strongly agree or agree that "information technology has brought great convenience to my teaching". 68.6% of the respondents strongly agree or agree that "information technology has brought great convenience to my research". In the interview, a college teacher tells the research team that with the help of information technology such as the Internet, one can easily finish research tasks and communicate with other scholars, which improves research efficiency. 75.7% of the respondents strongly agree or agree that "information technology has put forward higher requirements for my teaching". 74.5% of the respondents strongly agree or agree that "information technology has put forward higher requirements for my research". Comparing the above topics, it can be concluded that from college teachers' viewpoint, information technology brings more challenges rather than convenience to teaching and research. It is an urgent task to help college teachers master information technology and meet the challenges in teaching and research.

In terms of BTIT, 78.0% of the respondents strongly agree or agree that "I actively apply information technology to my teaching". 70.9% of the respondents strongly agree or agree that "I actively apply information technology to my research". 94.5% of the respondents strongly agree or agree that "It is an important responsibility of college teachers to continuously improve

their information technologies". 97.8% of the respondents strongly agree or agree that "I hope to study and improve my information technology systematically". The above data show that Chinese college teachers hold positive behavior tendencies toward information technology.

DISCUSSION

The study analyzes Chinese college teachers' professional beliefs from four aspects: identification of professional goals, identification of professional practice, identification of professional emotion, and information technology capability and attitude.

The study finds that Chinese college teachers have an identification of professional goals. The majority of them agree with the responsibilities and missions entrusted by society and recognize that the main responsibilities of college teachers are teaching, researching, inheriting traditional culture, and contributing to society. The aforementioned findings have been reported by some previous studies (Li et al., 2019; Liu et al., 2016). The traditional Chinese culture respects hard work and contribution to society (Gong et al., 2022). Influenced by traditional culture, Chinese college teachers have cultivated an identification of professional goals. They are willing to try their best to finish the required tasks and contribute to society.

In practice, the majority of Chinese college teachers can try their best to finish their job in teaching and research. They are willing to adjust their research direction according to social requirements. A previous study has reported that in Western countries workers put personal interests first place; they are willing to change their jobs if they are not interested in their jobs (Afsar & Umrani, 2020). The study gets different findings from previous studies, which is the result of the different cultures. The study finds that Chinese college teachers know the importance of self-improvement and are willing to improve their moral level, teaching skills, and research skills. They can keep good relationships with students and with colleagues. Traditional Chinese culture highlights a harmonious relationship (Cai et al., 2019; Thomson et al., 2019), not only in the family but also in society. Based on the findings it can be seen that traditional Chinese culture contributes a lot to Chinese college teachers' professional beliefs.

In terms of professional emotions, most teachers are satisfied with their working environment and can gain a sense of accomplishment in teaching. A previous study has reported that personal accomplishment is beneficial to promoting sustainable working conditions (López-Núñez et al., 2020). Chinese college teachers' sense of accomplishment in teaching will guarantee that Chinese education develops sustainably in the long run. The study finds that most teachers care about others' attitudes and opinions toward teachers and can gain a sense of honor

and social respect from their position as college teachers. College teachers have both a sense of belonging to their college and a sense of belonging to their professional field, which is similar to the findings in a previous study (Zhang et al., 2021).

In terms of modern technology, the majority of Chinese college teachers have mastered the information technology required in their teaching and research, which is similar to the findings in a previous study (Tian & Gong, 2020). Their attitude toward information technology is complicated, admitting that information technology brings convenience to teaching and research, and at the same time believing that modern information technology has brought great challenges to their teaching and research. They are worried that information technology will magnify very few teachers' misdeeds, which will damage the college teachers' social image. Previous studies have reported that some bilingual speakers in China hold a practical attitude toward their bilingual languages (Wang, 2017, 2021). Chinese college teachers' attitude toward information technology is something practical as well. College teachers have positive attitudes toward modern information technology, and they are eager to improve their information technology capabilities. A previous study (Taimalu & Luik, 2019) has reported that beliefs about the value of technology influenced technology integration indirectly. Therefore, it is an urgent task to offer information technology training to college teachers.

The investigation results show that there is room for Chinese college teachers to improve their research capabilities and informatization capabilities. Regarding their shortages, the study delivers the following suggestions, aimed to improve their professional beliefs.

First, it is required to offer college teachers opportunities for training and learning, which will help teachers to improve their research capabilities. Chinese college teachers are different from Chinese middle and high school teachers (Lo, 2019). Their duties include not only teaching and educating students but also engaging in research. Only by constantly exploring and keeping up with the development of science and technology can college teachers do a good job of teaching and educating students. However, in low-level colleges, some teachers have not received systematic research training. Therefore, they are weak at research. Given this, some training opportunities are required to offer to them, which will help them to bridge the gaps in their research.

Second, it is necessary to polish colleges' policies, and reform teacher evaluation rules, which will motivate teachers in their teaching, research, and contributing to society. To encourage college teachers' working enthusiasm colleges should change their "performance

appraisal policy", which defines a teacher's salary by the number of academic papers a teacher published in a period. To be honest, the "performance appraisal policy" can motivate teachers to produce more results, but it has more drawbacks. The policy ignores the differences between teachers' discipline and their development stages. It emphasizes the results but ignores the process. The policy seems like a primeval "jungle rule", without any humanistic care for teachers, which will weaken teachers' working enthusiasm. The national education department has realized the shortcomings of the "performance appraisal policy". The Ministry of Education and the Ministry of Science and Technology (2020) jointly issued a document in February 2020, encouraging colleges to formulate a comprehensive evaluation method and explore a scientific evaluation system, which should evaluate college teacher's contribution qualitatively and quantitatively, and guide the evaluation work to highlight scientific spirit, innovation quality, and contributions to society; the new policy is required to help teachers to return the real scientific study, purify the academic atmosphere, and optimize the academic ecology. Colleges should change their evaluation policies on the national policy, and establish an evaluation system for classified assessment as soon as possible.

Third, colleges are required to help teachers update their information knowledge and provide information knowledge training to college teachers. Information technology is a new technology, which has related to various tasks of college teachers. Some older teachers did not have access to this knowledge when they were students, and most of their information technology knowledge was acquired through self-study or from their peers. This knowledge learned in this way is not systematic. In the field of research, various new technologies emerge in an endless stream, which has caused some teachers unable to keep up with the pace of the information age and even discouraged in front of information technology. The survey data shows that the respondents have a very strong willingness to improve their information technology. Therefore, it is necessary for education departments and colleges to offer more information technology training opportunities and help college teachers master information technology that meets their teaching and research requirements.

CONCLUSION

Professional belief is one of the important factors affecting college teachers' individual development, teaching effect, and students' development. Education departments are required to pay more attention to college teachers' professional beliefs. It should be realized that

teachers' professional beliefs are complex and dynamic, whose internal factors are mutually independent and restrict each other. Facing such a complex system, it is necessary to increase investigation and research efforts and try to reveal the essence of this system. Education departments are required to adopt policies and deepen the reform of some evaluation rules, which will contribute to the optimization of college teachers' professional beliefs.

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