An Empirical Analysis on the Utility of Teachers' Identity in Higher Vocational Colleges

SU Xiaosheng

Doctor of Management

Supervisors:
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Declaration

I declare that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university and that to the best of my knowledge it does not contain any material previously published or written by another person except where due reference is made in the text.

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作者申明

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Abstract

China's higher vocational education aims to cultivate application-oriented and skilled talents, and undertakes the important mission of promoting economic development and improving national competitiveness. Currently, there are a lot of studies on the teachers' personal identity in higher vocational colleges. This study involved teachers from 12 higher vocational colleges in different areas, four in the east, four in the central and four in the west of China. 608 valid questionnaires were selected as research samples according to the method of regional sampling. Among all samples, there were 271 male employees (44.6% of the sample), 337 female employees (55.4 % of the sample), 337 teachers work in Chinese high level vocational colleges (55.4 % of the sample), 271 teachers work in general vocational colleges (44.6 % of the sample). By using descriptive statistics, structural equation modeling, confirmatory factor analysis and other quantitative methods, we find that there is a significant positive correlation between job satisfaction and vocational college teachers' identity, and a significant negative correlation between turnover intention vocational college teachers' job burnout. Work values, work overload and role ambiguity mediate the relationship between teachers' consequences and teachers' identity, and supervised support significantly moderates the relationship between teachers' identity and its consequences. This thesis expands the antecedent variables of JD-R model. Teachers' identity affects work values, role ambiguity and work overload which means work resources and demands will be affected by teachers' identity. Meanwhile, this thesis enriches the theory of teachers' identity, discusses the mediating effect of work values, work overload and role ambiguity and moderating effect of supervised support and presents the situation of teachers' identity in higher vocational colleges in China. It provides a basis for improving the level of teachers' identity, improving teachers' job satisfaction and reducing teachers' turnover intention, so as to promote the professional development of teachers in higher vocational colleges and improve their professional quality.

Keywords: Teachers' identity; job satisfaction; job burnout; turnover intention
JEL: O15, D23

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Resumo

O ensino profissional superior na China tem como objetivo desenvolver talentos tecnicamente qualificados com a importante missão de promover o desenvolvimento económico e aumentar a competitividade interna do país. Durante os últimos anos têm surgido um número crescente de estudos relacionados com a identidade dos professores nas Instituições de Ensino Superior Profissionalizante. No presente estudo, de acordo com um método de amostragem estratificado por zonas geográficas, um total de 608 questionários válidos de professores de quatro Instituições de Ensino Superior Profissionalizante foram recolhidos. Estas amostras abrangem todo o território nacional, incluindo as regiões leste, centro e oeste do país. Entre eles, o quadro de trabalhadores do sexo masculino contava com 271 pessoas, representando 44,6% da amostra. A amostra de participantes do sexo feminino contabilizava 337 pessoas, representando 55,4% da amostra; 337 pessoas trabalhavam em Instituições de Ensino Superior Profissionalizante nacionais de elevado nível, representando um total de 55,4% da amostra. De referir que 271 trabalhavam em Instituições de Ensino Superior Profissionalizante comuns, representando os restantes 44,6% da amostra. Com recurso a métodos quantitativos como modelos de equações estruturais, estatística descritiva e análises fatoriais, foi possível evidenciar que: i) existe uma correlação positiva e significativa entre a identidade dos professores nas Instituições de Ensino Superior Profissionalizante e a satisfação no trabalho e ii) uma correlação negativa e significativa entre a exaustão emocional e a intenção de abandono voluntário. Os valores do trabalho, sobrecarga de trabalho e ambiguidade de papéis medeiam a relação entre a identidade do professor e algumas consequências do trabalho. O apoio percebido dos superiores hierárquicos modera significativamente a relação entre a identidade do professor e as consequências do trabalho desenvolvido. O presente estudo contribui para aumentar a compreensão de variáveis antecedentes do modelo JD-R no sentido de perceber de que forma a identidade do professor afeta os valores do trabalho, a ambiguidade de papéis e a sobrecarga de trabalho. No fundo, procura-se perceber até que ponto os recursos e as exigências associadas ao trabalho são influenciados pela identidade do professor. A teoria da identidade encontra um contributo relevante ao estender o seu campo de estudo para os domínios da educação. É também enriquecida pela discussão em torno de aspetos como o papel mediador do valor do trabalho,

da sobrecarga de trabalho e da ambiguidade do papel, assim como do papel moderador do suporte dos supervisores. O estudo discute o estado atual da identidade dos professores em Instituições de Ensino Superior Profissionalizante na China e oferece um conjunto de orientações para melhorar o nível de auto-estima dos professores. Procura, igualmente, promover uma maior satisfação no trabalho e diminuir as taxas de rotatividade dos professores, a fim de suportar o crescimento profissional dos professores em Instituições de Ensino Superior Profissionalizante e, consecutivamente, aumentar a qualidade do ensino.

Palavras-chave: Identidade do professor; satisfação no trabalho; exaustão; intenção de abandono

JEL: O15, D23

摘要

中国高等职业教育旨在培养应用型和技能型人才，担负着促进经济发展和提高国家竞争力的重要使命，近年来，对高职院校教师身份认同的研究也越来越多。本研究在全国范围内按照分区抽样的方法从东部、中部、西部各四所高职院校教师中共抽取608份有效问卷。其中，男性员工271人，占样本的44.6%。女性员工337人，占样本的55.4%；有337人在国家高水平高职院校工作，占样本的55.4%；271人在普通高职院校工作，占样本的44.6%。使用描述性统计、结构方程模型、验证性因子分析等定量方法，我们发现：高职院校教师的身份认同与其工作满意度呈非常显著的正相关，与其职业倦怠和离职意向之间存在非常显著的负相关。工作价值观、工作超负荷和角色模糊在教师身份认同与其后果变量之间起中介作用，上级支持显著调节教师身份认同与其后果变量之间的关系。本研究拓展了JD-R模型的前因变量，教师的身份认同会影响工作价值、角色模糊和工作超载，即工作资源和工作需求会受到教师身份认同的影响。丰富了教师身份认同理论，讨论了工作价值，工作过载和角色模糊的中介作用以及领导支持的调节作用；刻画了我国高职院校教师身份认同现状，为提高教师身份认同水平、提高教师工作满意度、减少教师流失提供了依据，从而促进高职院校教师专业发展，提高教师专业素质。

关键词：教师身份认同；工作满意度；职业倦怠；离职意向
JEL: O15, D23

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Chapter 1: Introduction

1.1 The origin of research

As an important part and special type of higher education in China, higher vocational education has been developed and reformed in this decade. The Ministry of Education has made several government meetings to implement increasing changes for the good and development of higher vocational education. The conference suggested that with the practical exploration of the construction of exemplary higher vocational colleges and the accumulation of experience in developed countries, it is necessary to continuously examine the significant issues in the construction and reform of higher vocational education with Chinese characteristics (Zhou, 2010).

Higher vocational education plays a pivotal role in training the future high-quality workforce and promoting technological progress and development. Higher vocational colleges are the main avenues for training high-level and skilled professional talent. The main tasks should be the following:

- Teach and cultivate students' necessary knowledge, techniques and skills in enterprises and careers,
- Develop necessary abilities for careers and successful undertakings, such as abilities in problem-solving, teamwork, information search and utilisation, and abilities to balance family and professional responsibilities,
- Foster traditional academic skills, and
- Achieve general, diversified educational objectives.

The advance from primary to higher education is an inevitable choice for the rapid development of society and economy, both from the view of the development of vocational colleges in Western developed countries and from the perspective of the development of China's society and economy. In China, the term 'higher vocational and technical education' is generally employed to emphasise the professional characteristics of technology and more precisely define the scope of higher vocational education activities (Guo, 2008). Three types of vocational education are found at different levels internationally. 'Vocational education' trains front-line skilled workers. 'Technical education' trains technicians and the training of

engineers is labelled 'engineering education' (Guo, 2008).

China's current higher vocational education is benchmarked against Western technical education, which mainly trains people for vocational jobs from technicians to the engineering level (C. M. Ren, 2008). 'Higher vocational and technical education', or simply 'higher vocational education', is an advanced stage in vocational education encompassing the following.

Higher vocational education can be classified as a form of higher education, as evidenced by its social activity nature and the physical and mental development goals it seeks to achieve for its students. Additionally, its educational attributes are clearly evident. Ordinary higher education focuses on students' quality education, emphasising imparting knowledge, training thinking and improving ability, as well as developing in the direction of academics, research and engineering.

However, Higher vocational education has different characteristics, which are mainly reflected in the coming here-after. First, it has an occupational orientation. Oriented to market demand and employment needs is the training goal of higher vocational education. Second, higher vocational education is practice-based, focusing on the cultivation of students' practical working competence. The process of education and teaching emphasises practical training and experience, through which students can get the power to adjust to a useful regular work position. The aim is to cultivate practical intelligence in all types of technologies that satisfy requirements at the professional level. Compared to general education, higher vocational colleges focus not only on theoretical education but also on practical skills and working abilities, such as *Technische Hochschulen* in Germany. Higher vocational education is mainly to cultivate skilled talents, while ordinary higher education is mainly to cultivate academic talents.

Currently, China's higher vocational education is experiencing a rapid growth, with the number of enrolments, graduates and students in schools being comparable to that of general undergraduate higher education, accounting for half of the country's higher education. In 2010, to promote the development and orientation of higher vocational education, the Chinese government gave out several documents. As a result, China will eventually form an educational system with both higher vocational education and general higher education running in parallel.

1.1.1 The new development of China's higher vocational education

A significant milestone in the development of vocational education in China occurred in 2010. The government enacted a series of scientific plans for the development of vocational education in China before 2020, including the development of the system's construction, enrolment, teacher training, management level and quality of personnel training. Afterwards, the State Council and the Ministry of Education implemented the system of various plans one by one. The system arrangement of vocational education makes it clear that vocational and general education systems exist in parallel. The result is an interconnected multi-educational system that builds a diversified overpass for learners. Subsequently, vocational education has deserved its fame. For society and students, vocational colleges are no longer a gathering place for poor students, nor are they the default choice for college entrance examination failures. Instead, vocational education is a significant choice for learners according to their own interests and conditions, which is conducive to their growth and success.

In 2010, the Chinese government proposed the *Outline of Long-term Education Reform and Development Plan (2010–2020)* with the aim of vigorously developing vocational education and forming a modern system that could adapt to changes in economic development pattern and the need for industrial restructuring. This overall plan for vocational education reflect the idea of lifelong learning. It aimed to realise the coordinated development in contemporary vocational education between secondary education and higher education by 2020. To achieve this, the government carefully perform their duty to develop vocational education, and put an emphasis on promoting the quality of higher vocational education. The government also mobilise industries and enterprises to accelerate the development of rural-oriented vocational education and make it more attractive.

In 2011, *the Ministry of Finance and the Ministry of Education on the Implementation of the Professional College Teacher Quality Improvement Plan* pointed out that the plan to improve the quality of teachers in vocational colleges should be implemented from 2011 to 2015. The main types of training supported by the central government included provincial training and a practice plan for young teachers in enterprises. At the same time, the plan has also been authorised to support vocational colleges to set up part-time teacher positions; optimise the structure of the teaching staff; support the construction of key bases for vocational education teachers; and develop professional standards, programs, courses and teaching materials for vocational education teachers.

In 2013, the Ministry of Education released the *Guiding Opinions on Actively Promoting*

the Reform of Higher Vocational Education Examination and the Enrolment System, which proposed a reform to gradually separate the Examination Enrolment System of Higher Vocational Education from that of ordinary schools. This reform aimed to explore evaluation methods that combined 'knowledge and skills', as well as offering students various forms of enrolment for higher vocational education. As a result, a system of examination and enrolment for higher vocational education with Chinese characteristics has been developed gradually. The reforms are dominated by provincial governments who lead managerial planning to provide independent choices for students, multi-enrolment in schools and effective social supervision.

In 2014, the Chinese government released a plan, named *Planning for the Construction of the Modern Vocational Education System*, to create a modern vocational education system with Chinese characteristics that would be at a world-class level by 2020. This timeline and task book outlined the concept of lifelong education to meet the demand of China's society and economy development:

- Meet the needs of development,
- Deeply integrate production with education,
- Connect secondary vocational and higher vocational education,
- Communicate vocational education with general education to
   – Establish a pathway for personnel training,
   – Form a rational educational structure, and
   – Promote the basic establishment of a modern education system and the basic realisation of educational modernisation.

At that time, the contemporary Chinese vocational education system will be essentially founded and the framework will be preliminarily established.

In 2015, *the Guidance of the Ministry of Education, National Development and Reform Commission and Ministry of Finance on Guiding Some Local Universities to Transform into Application-Oriented Universities* promoted and guided the transformation of several general undergraduate universities into application-oriented undergraduate institutions. In the national vocational and technical education system, applied undergraduate programs are classified as the technical education and undergraduate level of vocational, and this scheme has further established the importance of higher vocational and technical education in China.

At present, higher vocational education has entered a new stage of development because social development requirements, national development strategy, and industrial and enterprise

development have all entered a new phase. Student group development in higher vocational colleges also has some new features. All these reforms require higher vocational colleges to seize the opportunity and comply with the needs of social development.

First, the current economic environment, characterized by an 'Internet Plus' knowledge-based economy, has been further impacted by a new wave of scientific and industrial transformation and technological revolution, as well as a restructuring of the international industrial division structure. As a result, it is increasingly important for countries to cultivate high-level professional and technical talent in higher vocational colleges to ensure successful economic development and construction.

Second, China has formulated the action program *Made in China 2025* for the first decade as a manufacturing power. The guideline reported that after decades of rapid development, the manufacturing sector in China leads the world. A complete and independent manufacturing system has been established, which that is a vital foundation of China's economic and social development and a leading force promoting world economic development. The growth of the manufacturing industry has need of a greatly sized number of professional and technical personnel. The action program proposed that China should expedite rate of motion up the training of skilled professionals, expert and special to some science or trade body of working persons, managerial and administrative personnel and others, all of whom are urgently needed. Higher vocational colleges undoubtedly play a key part in the strategy of strengthening the country.

Third, the growth of Chinese enterprises placed new requirements for talent cultivation in higher vocational schools. Firms face the challenges of transformation and upgrading, digitisation and intelligent development. Therefore, Chinese enterprises must adhere to the principles of innovation-driven, green, quality-first development as well as structural optimisation. Consequently, businesses are in desperate need of skilled professionals, business managers, and graduates of higher vocational schools.

Fourth, the development of higher vocational education in China has entered a new phase. *The Construction Plan of the Modern Vocational Education System (2014–2020)* proposes the creation of a dual system in vocational higher education and university education at the undergraduate level. Under the plan, some undergraduate universities are encouraged to transform and cultivate technical talent focused on applications. Moreover, the plan encourages relevant colleges and universities to train application-oriented graduate students so that higher vocational education can form a running system parallel to academic education at the same level, surpassing the junior college level of most vocational colleges. Therefore,

the development of higher vocational colleges has made breakthroughs for running schools not only regarding the level of education but also in the overall scale and strength. At present, the development of China's higher vocational colleges is entering a new stage of content-based construction derived from an expansion of scale. The so-called content-based development is intended to maximize the benefits of personnel training within the same scope as school-running resources while simultaneously improving management level and quality.

1.1.2 The current development of higher vocational colleges' teachers

Aiming at cultivating practical and technical talent, China's higher vocational education has undertaken the crucial mission of implementing the *Made in China 2025* programme. In recent years, China has attached increasing importance to higher vocational education regardless of preferential policies and financial support. Starting from the top-level design, the government distinguishes higher vocational education from general higher academic education in terms of nature and education methods, while promoting the integration of higher vocational education and higher academic education in the education system. Higher vocational education in China has significantly advanced as a result of national policy support. At present, the scale of graduates from higher vocational education is not significantly different from that of undergraduate education, which reflects the good development of higher vocational education, and promotes the public awareness of vocational education. Thus, higher vocational education has kept pace with general academic undergraduate education. However, there are still some distances between higher vocational colleges and general undergraduate education regarding faculty strength and talent training level. Particularly regarding teacher development, instructors in higher vocational education still need significant improvement in professional development.

To fully understand the characteristics of teachers themselves in higher education institutions, it is essential to grasp the basic information of teachers. As the social and economic levels continue to rise, the higher education system in China has reached normality, and one of the most important aspects of China's higher education reform and innovation is actively developing higher vocational education. By contrasting the number of students and teachers in higher vocational education with general undergraduate education, it is obvious that there is unquestionably a teacher shortage in higher vocational education and teachers are shouldering a heavy teaching task. Since its establishment in the 1980s, thanks to economic development, the number of Chinese students enrolled in vocational higher education.

According to the Ministry of Education, the number of graduates of higher vocational colleges exceeded that of undergraduate schools in 2012, and the enrolment is essentially the same as that of undergraduate students. The professional directory of higher vocational education (speciality) and general higher education (2015) shows that there are 19 major categories and 745 majors in China, which greatly exceeds the undergraduate level of 13 major categories and 519 majors.

By 2015, the number of vocational and technical colleges had exceeded that of undergraduate schools significantly, with the enrolment scale and the number of students nearly equalling those of enrolled undergraduates. However, due to historical and scale reasons, the number of faculty and teachers is less than half of the undergraduate schools.

The latest statistics from the Ministry of Education show 1,388 higher vocational colleges in China in 2017, with more than 480,000 full-time educators responsible for the teaching tasks of over 13.32 million students (Table 1.1). These statistics suggest that professional teachers on a small scale are in charge of teaching, practical guidance and student consultation. Based on the requirements of the Ministry of Education's *Evaluation Program for the Level of Talent Training in Higher Vocational Colleges (trial version)*, a teacher-student amount ratio equaling to 1:18 is considered as standard and 1:16 is considered as excellent. The above statistics indicate that the average ratio of full-time teachers to students in higher vocational schools is about 28:1, which greatly outnumbers the national standard on that ratio. The shortage of teachers in vocational colleges overloads most professional teachers. As a result, teachers at higher vocational colleges experience high levels of pressure with low self-identity, job burnout, and satisfaction.

Table 1.1 Several basic information of all types of schools in 2017

		Undergraduate	Junior college
All types of schools	Number of schools	1243	1388
	Number of teaching and administrative staff	1772342	669521
	Number of full-time teachers	1150467	482070
General undergraduates and junior college	Number of graduates	3841839	3516448
	Number of new students	4107534	3507359
	Number of students in schools and colleges	16486320	11049549
All types of private education	Number of graduates	921506	710076
	Number of new students	1016329	737371
	Number of students in schools and colleges	4016810	2267744

Source: Ministry of Education (2017)

Volkmann and Anderson (1998) believed that a teacher's sense of effectiveness,

satisfaction and commitment are all factors affecting their teachers' personal identity. Their research shows that teacher satisfaction in higher professional colleges is not that important. There is clear evidence of teacher burnout in higher vocational colleges. Most relevant domestic and foreign research starts from the factors of job burnout, studying such as organisational, personal, social and professional roots. Ju (2010) investigated the connection among job burnout and demands, lack of job resources and professional self-identity through a questionnaire survey of 97 college psychologists.

The results show that the job requirements of college psychological counsellors are significantly positively correlated with a diminution from a sense of job burnout, emotional exhaustion, and dehumanisation, as well as a lack of work resources (Ju, 2010). Moreover, Ju discovered a significant negative correlation between self-identity, dehumanization, a diminished sense of accomplishment and emotional exhaustion as well as job burnout. Multiple stepwise regression analysis showed that job requirements, lack of work resources and professional self-identity were important predictors of job burnout for college psychological counsellors (Ju, 2010).

D. Z. Xu and Zhu (2013) selected 593 teachers from nine different higher vocational colleges in Tianjin as the research objects, using the Oldenburg Burnout Inventory (OLBI) scale compiled by Demerouti et al. (2001), which is based on job demands–resources (JD-R) theory. The findings reveal that the percentage of teachers in vocational colleges who experienced job burnout is high. Specifically, those who experienced a moderate level of burnout are predominant. Meanwhile, the research explored that school type, gender and years of working are not the factors that affect teachers' job burnout in vocational college (D. Z. Xu & Zhu, 2013). However, educational background, professional title, marital status and the level of income have an impact on teacher burnout in vocational colleges. Normally, teachers who are married and with a bachelor's degree, professional title and children feel that the job requirements are high. The characteristics of experiencing job burnout are physical, emotional and cognitive fatigue.

Few theses start with the JD-R model to study the influential factors of the personal identity of teachers in higher vocational colleges, and further study the utility of identity. Therefore, this thesis has high theoretical and practical significance.

1.2 Research significance

1.2.1 Theoretical significance

Demerouti et al. (2001) proposed JD-R model from the perspectives of job resources and job demands, they explained how job burnout started. When employees face job demands, they instinctively resist that and are forced to spend more energy at work, leading to job burnout (Schaufeli & Bakker, 2004). When individual's work resources are very insufficient, their job requirements can strongly predict emotional burnout. If they need to face more job requirements, the rich work resources can prevent job burnout to the greatest extent (Bakker et al., 2003). Bakker et al. (2003) also found that job demands affect the time and frequency of employees' turnover due to job burnout, in the meantime, job resources can increase employees' organizational commitment, thereby reducing the possibility of turnover. According to Bakker et al. (2004), job demands decreased employees' performance level through fatigue, but job resources buffer job burnout. Workload and work-family conflict do not lead to high levels of job burnout when employees have abundant job resources (Bakker et al., 2005). This thesis examines the impact of job demands and job resources on outcome variables, such as burnout, intention to leave and job satisfaction, using teachers in higher vocational colleges as the research subject. At the same time, this thesis will expand the antecedent variables of job resources and job demands, job resources and job demands may be affected by the important variable of teachers' personal identity, which can greatly enrich the JD-R theory.

The research results of teachers' personal identity and teachers' turnover intention, job burnout and job satisfaction are relatively consistent. Gaziel (1995) surveyed 400 Israeli primary school teachers who were on a sabbatical and participated in professional development projects improved their identity recognition and reduced their job burnout, turnover intention. The research by Tillema and Kremer-Hayon (2002) on the special group of Arab principal teachers in Israel further supported Gaziel's (1995) research. They found that burnout was negatively correlated with teachers' personal identity, that is, the stronger the identity recognition owned by the principal, the less burnout would be experienced. In addition, a teacher's self-efficacy, motivation, commitment, and job satisfaction can be significantly impacted by their personal identity (Day et al., 2006). This thesis chooses teachers in higher vocational colleges to verify that teachers' personal identity directly has a direct impact on intention to leave, burnout and job satisfaction, as well as to broaden the field

of teachers' personal identity.

From the depth of the research content, scholars have only proved the specific relationship between teachers' personal identity and other variables, but have not analyzed the influence mechanism between these variables and teachers' personal identity. This thesis will explore the mechanism of teachers' personal identity affecting outcome variables: whether work values, role ambiguity and work overload play a mediating role between teachers' personal identity and outcome variables, which will open the black box of teachers' personal identity affecting outcome variables and improve the theory of teachers' identity.

Moreover, this thesis enriches the theory of teachers' personal identity in higher vocational colleges. At present, such research is relatively scarce in China. Therefore, investigating, understanding, analysing and summarising teachers' personal identity in higher vocational colleges contributes to the development of theory. To a certain extent, this thesis can help fill a gap of research in the subject and elucidate a conceptual framework and knowledge base to understand and analyze teachers' personal identity in higher vocational colleges.

1.2.2 Practical significance

Systematic research on teachers' personal identity in higher vocational colleges not only solves the theoretical problems of teachers' study and education but also serves educational practice. The following aspects primarily reflect the practical significance.

First, understanding is developed regarding the status of teachers' personal identity in vocational colleges in China. This information serves as a foundation for enhancing teachers' personal identity, enhancing their job satisfaction and reducing teacher turnover. Teachers' strong personal identity will discourage them from leaving a position, and their positive self-awareness of personal identity can overcome their feeling against with poor working conditions (Moore & Hofman, 1988). Through a large-scale and large-sample survey, we can know the differences in the identity level of teachers in China's higher vocational colleges. Results can discriminate between individual and school background variables to find targeted measures to provide a basis and method of guidance to improve teachers' personal identity with various characteristics. Job satisfaction will thereby be enhanced, decreasing their turnover intention and reducing teacher turnover.

Second, The expert development of teachers in higher vocational colleges is enhanced by research which encourages the growth of teachers and the development of their personal

identity (Sachs, 2005). This is due to the fact that a strong personal identity is essential for judging the professionalism of teachers and distinguishing them from other workers. Consequently, research into teachers' personal identity is crucial to their professional development (Palmer, 1997).

Finally, this thesis helps teachers in higher vocational colleges to better confront the reforms and changes in education. Personal identity is not only the core of personal development but also serves as a key indicator for assessing career adaptation (J. Huang, 2010). In a changing policy and curriculum, the main obstacle for teachers is the questioning of their personal mind and physical qualities, which has need of teachers to discover new ways to get through knowledge of and discussion about work.

1.3 The connotation of the concept about teachers' personal identity

1.3.1 Personal identity

In previous research, scholars have defined the connotation of personal identity from various angles, which fall primarily into two categories: the perspective of the mechanism characteristics of personal identity and the functional perspective of personal identity.

From the perspective of mechanism characteristics, for example, S. H. Zhang et al. (2012) postulates that the formation of personal identity is not only a solitary undertaking, but also a result of social interaction and involvement in a variety of social and cultural circles. C. L. Zhang (2012) states that identity means seeing oneself as the desired object and exhibiting attitudes and behaviours similar to those of the object, also known as self-centeredness. It is a psychological mechanism that introjects the object. According to Kang (2012), identity, or self-centeredness, is the process of imitating or inwardly projecting oneself by taking people who are close or respected as role models.

From a functional perspective, as noted by Maclure (1993), personal identity should not be looked upon as a fixed thing, but can be used as an argument for people to explain, judge, and clarify their relationship with others and the world. Lin and Feng (2013) believed that personal identity is the process of socialisation in which an individual learns to imitate the overall personality of another person comprehensively and persistently. In addition, personal identity is a defensive mechanism that refers to the behaviour of selectively imitating certain traits of others due to certain motives, such as imitating certain behaviours of the object of one's admiration or envy. Sun (2010) posited that identity is a concept employed in

psychology to illustrate the process of personality integration, i.e. how the interplay between personality, society and culture upholds the integrity and coherence of personality. Personal identity is the internal power that preserves the relationship between personality, society and culture, thus sustaining the inner strength in the unity and consistency of personality. Additionally, subjectivity and a sense of belonging are represented by this idea.

From the above viewpoints, personal identity can be understood as identifying a certain object, which can be oneself or another object, such as social roles or other people, characteristics or objects that one appreciates or accepts.

1.3.2 Teachers' personal identity

Various explanations describe the concept of teachers' personal identity. Some explanations rely on teachers' professional identity, while others use teachers' personal identity. Most definitions of the concept of teachers' personal identity are descriptions of a certain aspect of their personal identity, yet few clear definitions of concepts or connotations have been offered. This researcher combined all the various viewpoints, resulting in the following understanding of the explanation of teachers' personal identity.

First, the content of teachers' personal identity mainly involves education or the teachers' profession, while its object often refers to teachers themselves. Most researchers agree that teachers' personal identity embodies the concept of perception, belief and commitment, meaning and role. Some researchers have stressed both aspects of the content and object of teachers' personal identity, such as Turner (2020). Other scholars have highlighted only one aspect, such as Bergmark (2020), who emphasize teachers themselves, while Admiraal et al. (2021) stresses all aspects of the teaching profession. Anspal et al. (2019) conduct a two-year follow-up study for the development of teachers' identity in different types of teacher education programs. The relationship between teachers' attitudes and the learning process was the focus of the analysis of the teachers' development as teachers. According to subsequent research, whether or not a tense can be strengthened depends on how a student teacher identifies a disposable resource, and it affects the organization of reflection support in teacher education.

Second, teachers' individual identities are dynamic rather than constant. This idea is consistent with the view that the development of teachers can be considered to be a process of lifelong learning. Day (2018) believes that many countries have been affected by a series of external reforms during the last two decades. Broader reports suggest that these reforms have

produced the change in bureaucracy, the range of work and strength, the changes in professional and professional qualities of external supervision and teacher's work, thereby challenging existing professional identities to meet the agenda of the achievement.

In addition, Skinner et al. (2021) believes that teacher's commitment is influenced by the management of bureaucrats' changes, such as the setting of performance goals, the increase in work volume, the strengthening of the censure system, and the change of the curriculum. This adversely affects their occupational identity, and it has negative effects on well-being and mental health. Traditionally, the spirit in the school environment can be said to be created by the employee's vocational motives: the promise to achieve social benefits through the development, support and improvement of the student. This promise encourages teachers to overcome the challenges of the workplace and helps them respond to stress. This thesis investigates how the management principle is related to the acceptance, the occupational identity, the confidence and stress, and the loss of ability to be affected by depression.

1.4 Research design

1.4.1 Research purposes

This thesis aims to adopt a well-examined teachers' identity scale and describe the current status of teachers' identity and its differences in higher vocational education institutions in China. Previous studies have shown that personal factors like gender, teaching experience, subject matter, and more influence teachers' identities (Ketelaar et al., 2014). Examining the characteristics of those factors and other aspects of teachers' identities in China's higher vocational colleges can help explain the current state and trends in teachers' identities. Moreover, effective measures to promote various groups of teachers' self-identity can be explored. The motivation behind this exploration is to examine the association between instructors' personality, work burnout, work fulfilment and turnover aim, considering the JD-R model. Additionally, it examines the mediating function of work values, role ambiguity and work overload, and additionally the supervised support as a moderator in the in the connection between job burnout, turnover intention, job satisfaction and teachers' identity. Furthermore, this thesis seeks to construct a preliminary model of the influence effect of teachers' identity. The ultimate goal is to provide a groundwork for improving the identity level of teachers in higher vocational education institutions in China, thereby enhancing their professional growth and improving the effectiveness of teacher preparation.

1.4.2 Research object

Approximately 2,000 teachers from eastern, central and western higher vocational colleges in China were selected as the research sample according to a zonal sampling method.

1.4.3 Research ideas

As a positive attitude related to their profession, teachers' personal identity is an integrated system with a synchronic structure that can be revealed through analysis of teachers' typical professional psychology and behaviours. The structure has specified characteristics and a certain relationship with other aspects of teacher psychology. The fundamental idea of this research is to deeply analyse the connotation and structural dimension of the concept of teachers' personal identity from the theoretical level. On this basis, the effects of teachers' identity on its consequence variables were explored, including turnover intention, job satisfaction, and job burnout. Moreover, the mediating role of ambiguity, work overload and work values and the moderating effect of supervised support were investigated to construct a preliminary integrated simulation of the outcomes of teachers' identity. Figure 1.1 depicts the study's workflow.
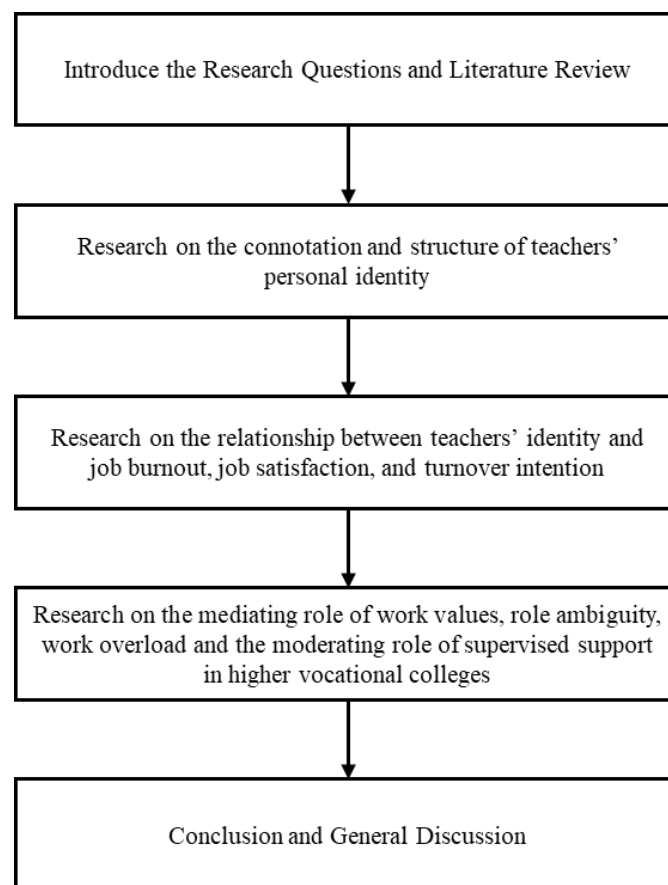
Figure 1.1 The research plan of teachers' personal identity in higher vocational colleges

1.4.4 Research methods

1.4.4.1 Document analysis

The foundation of this study is collecting, collating and analysing relevant domestic and foreign literature while simultaneously analysing Chinese higher vocational colleges' pertinent teacher policies.

1.4.4.2 Questionnaire survey

Based on a sample of teachers from higher vocational colleges selected throughout China, the survey measures and analyses the current personal identity level of professional teachers and the variations among different groups.

1.4.4.3 Empirical research

Using psychological measurement as well as variance, correlation and regression analyses, this research examines the present situation and differences in teachers' identity, revealing the association between teachers' identity and its consequent variables, namely job burnout, turnover intention and job satisfaction. It is also the intermediary role of work values, role ambiguity and work overload as well as the moderating effect of superior support.

1.4.5 Research content

The research concept will be regarded as the basis of the thesis framework, and the dissertation will consist of six chapters. Each chapter has the following major content:

Chapter 1 introduces the thesis, explaining the research history and analysing the significance. Relevant concepts are defined such as 'personal identity' and 'teachers' personal identity'. The purposes, objects, ideas, methods and content of the research are outlined.

Chapter 2 reviews the literature. Based on the topics of personal identity and teachers' personal identity, the thesis conducts a literature review and looks back on relevant studies achievements at home and abroad. Through the literature review, the main content and ideas of existing studies are summarised. The study's restrictions are analysed, and last, the study's research direction and questions are formulated on this basis.

Chapter 3 introduces the research hypotheses and models established in this thesis. Based on the literature analysis, this paper combines the characteristics of Chinese higher vocational college teachers, and analyses in detail the possible influence patterns and influence mechanisms of higher vocational college teachers' identity on job satisfaction, job burnout

and turnover intention. A total of 15 research hypotheses are proposed. In this thesis, linear regression, mediating and moderating models are established respectively.

Chapter 4 elaborates the research design of this thesis. This thesis designs the corresponding questionnaire and survey method based on the relevant mature scales and the characteristics of teachers in Chinese higher vocational colleges. Subsequently, this thesis conducts preliminary descriptive analysis and reliability and validity test on the samples, laying the groundwork for subsequent modelling analysis.

Chapter 5 discusses the results of data analysis and hypothesis testing. This thesis first establishes a linear regression relationship between teachers' identity and job satisfaction, job burnout and turnover intention. Then, it explores the mediating effects of work values, role ambiguity and work overload, as well as the moderating effect of supervised support. The survey results are reported using relevant scales. Amos and SPSS software are used to statistically analyse its linear regression, mediating effects and moderating effects.

Chapter 6 offers conclusions, suggestions and reflections on the research. In addition, the chapter summarises and reflects the research achievements of the thesis.

Chapter 2: Literature Review

2.1 JD-R model

2.1.1 Job demand-control model

The 1970s witnessed a distinctly decelerated period of growth in the Western economy, a pervasive sense of job burnout, and lowered efficiency and effectiveness of organisational productivity in firms, which negatively affected society overall. To solve this challenge, researchers in organisational behaviour set out to find reasons and breakthroughs in job design and job characteristics. Karasek (1979) offered an influential conceptual framework of working pressure, that is, the job demand-control model, JD-C. He noted that earlier research on working pressure ignored the status of work decisions and suggested that job demand and job control should be considered. 'Job demand' relates to the origin of working pressure, while 'job control' is the decision latitude of employees within the scope of authority. The real yardstick of working pressure should be interactive products of high demand and low control. However, compared with lower demand and lower control, higher demand and higher control will be beneficial to personal development and creation.

The JD-C model, however, contains many shortcomings in its later development. Karasek (1979) has admitted that he never considered the influence of social relations on organisations and teams. Therefore, based on the JDC model, Johnson and Hall (1988) added a dimension of social endorse that can be measured by the relationship between employees and their colleagues with the adjustment of a related model structure. This model structure is the job demand-control-social support model (JDCS). Social support has been proven to be more effective for relieving working pressure than social control.

2.1.2 Job demands-resources model

Researchers found that the JDCS model can refine the overall relationships of variables, but the complete model is inflexible without full explanations (L. Wu et al., 2010). In response, Demerouti et al. (2001) derived a job demands-resources model (JD-R) that can reflect various working conditions. Its core assumption is that all factors causing burnout can be split

into two categories: job resources and job demands. 'Job demands,' according to Demerouti, are derived from the social, material, organizational demands of a job or psychological. Individuals must continuously spend physical or psychological resources to ensure performance quality is unaffected, encompassing factors such as interpersonal conflicts, work safety and workload. 'Job resources' are psychological, social, or organisational resources. These resources reduce the cost of job demands, help achieve job objectives, and learning and development, stimulate personal growth. Resources involve job control, social support, feedback, and more (Bakker & de Vries, 2021; Demerouti et al., 2001).

In follow-up research, some scholars have indicated that the match of job demands and job resources can produce a regulatory effect in predicting job-related results (Peeters & De Roeck, 2001). Referencing the steady regulation of medicine, De Jonge and Dormann (2003) suggested a job-induced stress compensation model (DISC). The DISC model considers job demands, resources and related results to be multidimensional, including cognitive, emotional and physical resources. Cognitive demands require the brain to process information, and emotional demands refer to the emotion to show organisational expectations that require significant effort in human interaction. Physical demands require manual labour.

The DISC model states that high job demands harm occupational health and well-being, but this effect can be offset by stimulating related job resources. Moreover, the DISC model supports the matching principle, that is, matching the three categories of resources, job demands and results in pairs can buffer the side effects of pressure. Negative emotional effects suffered daily can thereby be weakened by superior emotional support. In addition, when employees cannot obtain the corresponding resource support, in the first instance, they will find weaker matching resources as a substitute.

De Jonge and Dormann (2003) advanced the buffer mechanism of job resources, and have further suggested the triple-match principle (TMP) of pressure sources, resources and results. Job demands have physiological, emotional and cognitive demands. Job resources also have cognitive, physical, and emotional aspects. For example, emotional support has the most significant effect in regulating emotional pressure sources and emotional exhaustion. TMP not only emphasises the match of pressure sources and resources or resources and pressure results but also highlights the match of pressure sources and results. The probability of tripartite matching is shown to be 33.3% in the research.

Jonge et al. (2008) examined nurses as research objects to find relationships among the three principles. Results showed only scattered matching effects: physiological resources regulate the effects of physiological job demands on physiological complaints and emotional

exhaustion, while emotional resources can buffer the process of emotional exhaustion from physiological demands. The findings were, however, limited to the small number of participants without other matching relations. Van den Tooren and De Jonge explained that the principle of tripartite matching is a principle of possibility, not a principle of necessity. In later research, the tripartite matching mechanism depends not only on types of job resources and job demands but also on the relevance of the evaluation of job resources and employees' ability of practical application (Van den Tooren & De Jonge, 2011).

In cross-cutting studies cannot find relationships among demands, resources and pressure in the short term, Van den Tooren and De Jonge (2011) turned to longitudinal research to verify the matching relationship. A 1-year follow-up study of 317 teachers only verified the matching relation between physiological demands and resources, while there was no significant interaction between the cognitive and emotional parts. The authors attributed the reason to the characteristics of participants, that is, new teachers need to improve their ability to select resources and application strategies. Chrisopoulos et al. (2010) confirmed this conclusion through a study of 197 Australian policemen, concluding that the probability of interaction depends on the degree that job demands, resources and pressure match. Among these factors, the probability of a tripartite match is 33.3%, a pair-wise match 22.2%, and zero when there is no match. Specific results have shown that tripartite matching only plays a role in cognitive-related features (Chrisopoulos et al., 2010). Schut et al. (2014) also obtained a similar structure. The probability of tripartite matching is 33.3%, and the effective pair-wise match (demands matching with resources) is 16.7%, while a zero matching situation does not occur. In sum, it has been shown that hypothesis testing of the tripartite matching principle is still in its infancy, and the role of unrelated variables must be further clarified.

2.1.3 Related researches on JD-R model

Scholars who support the JD-R model mostly believe that employees will resist instinctively when they are faced with job demands and consequently forced to invest more resources into the job (Schaufeli & Bakker, 2004). Job demands increase the energy loss of individuals and bring a sense of exhaustion. From the perspective of protecting their own resources, employees are more inclined to reduce performance goals and turn to recession. Bakker and de Vries (2021) revealed that when individuals' job resources are in a state of extreme scarcity, their job demands could strongly predict the level of emotional exhaustion. When employees face more job demands, plentiful job resources can prevent cynicism to a great

extent. Bakker et al. (2004) considered that the JD-R model could be extended to influence individual performance levels. Job demands reduce the level of performance within roles by causing exhaustion, while job resources apply job input to reduce performance outside roles.

The buffering effect of job resources on job burnout has also been confirmed in many studies. If employees have rich job resources, then job demands such as workload, work or family conflicts do not lead to a high level of job burnout (Bakker et al., 2003). For longitudinal research, there are also studies supporting the dual-process hypothesis (Hakanen et al., 2008).

With the deepening of research, the JD-R model also has a better predictive function in forecasting employee behaviour based on the assumption that job demands directly affect absentee time and job resources directly affect the frequency of absence. Bakker and de Vries (2021) suggest that when employees experience greater job stress, they tend to use maladjusted, self-adjusting strategies, such as compliant or self-destructive responses, rather than adaptive self-adjusting strategies like job stress recovery and job production. Consequently, increased work pressure necessitates the importance of stable resources. It follows that employees who want to manage short-term fatigue and eschew long-term burnout effectively can do so with the help of organizational resources, such as through practices in human resources and leadership in health.

Bakker et al. (2022) has argued that work or family conflicts are mainly affected by inconsistent demands. The author assumed that work or family demands are related to work or family conflicts, while resources obtained by employees bring work or family gains. Bakker et al. (2022) divided resources into dominant requirements and cross-border resources according to the variable belonging to a work or family interface situation. A survey of 1,938 employees supported the research hypothesis that job demands, typified by time and pressure, can significantly predict work or family conflicts.

Van Veldhoven et al. (2020) extended the findings of the JD-R model to counterproductive behaviour to illustrate workplace bullying. This paper builds on this model to further explore the moderating role of resource factors in this setting. Following a study of 749 employees, the main effect among the job demands and resources found that is nonsignificant separately, but the interaction was significant. Specifically, the positive effect of job demands on perpetrators' statements about workplace bullying was significant in the high-resource setting, and emotional exhaustion partially mediated this relation. Van Veldhoven et al. (2020) argued that counterproductive' behaviours are a response to job pressure and assumed that hostility and abusive behaviours are the product of the health

damage path in the job resources-demands model.

Based upon workload, role conflicts and communicative needs, job demands are significantly connected to abusive and hostile behaviours. Job resources include job autonomy, social support and promotion prospects. These three types of resources significantly predict job involvement. Meanwhile, positive and negative emotions act as mediators in the process of health damage and resource compensation. Qiu (2016) using the JD-R model as a theoretical backdrop to examine the relationships between the unfair treatment of customers, service destructive behaviour, emotion-rule imbalance, emotional resources and other variables. A questionnaire was completed by 483 front-line service-oriented employees from nine industries and institutions, and the following conclusions were drawn: first, emotion-rule imbalance plays an imperfectly mediated role in the relationship between unfairness perception and service destructive behaviour. Second, emotional support and emotional work control play a negative regulatory role in the relationship between unfairness and service destructive behaviour, and last, the mediating effect of emotion-rule disorder is negatively regulated by emotional support.

Most scholars focus on the impact of job resources and job demands on job burnout and turnover intentions, and further, Baillien et al. (2011) extended the finding of the JD-R model to nonproductive behavior, illustrating the impact on workplace bullying. However, few scholars pay attention to the antecedent variables of job demands and job requirements. Therefore, this research confirms the effects of job demands and requirements on teachers' job burnout, job satisfaction, and turnover intentions, and also explore the antecedent variables of job demands and job requirements, expand and enrich the JD-R theory.

2.2 Teachers' identity

2.2.1 Concept of teachers' identity

In previous studies, the definition of teachers' personal identity has been comprehensively examined. Various studies have different emphases, for instance, some may highlight the tension among sundry aspects of teachers' personal identity, some emphasise the dynamics of teachers' personal identity, and other studies examine how it is formed. The content or object of teachers' personal identity mainly involves the profession and teachers themselves. Some researchers have emphasised these two aspects, such as Kelchtermans (1999). Other scholars have stressed one aspect. For example, Kelchtermans (2000) has emphasised the teachers

themselves. Additional studies have underlined the relationship between the profession and teachers.

Teachers' personal identity is dynamic, not constant or fixed. It can be multiplied or changed based on emergencies, individual factors and various contexts, and must always be under reconstruction and negotiation (Melucci, 1996). From a long-term career development insight, the development of a personal identity can be an assessment of one's identity and can also point the way for one to set long-term personal development goals. And it is consistent with the function of deep personal reflection.

2.2.2 Structure of teachers' identity

Most existing research on teachers' personal identity applies the concept as a whole without much focus on its structure. Among the few scholars investigating the structure of teachers' personal identity, Hofmann and Kremer (1981), Brickson (2000) and Yu (2006) principally developed clearer frameworks. As explained in detail below, this thesis suggests that teachers' personal identity can be modelled as a second-order, one-factor, and first-order, four-factor structure, including professional values, behavioural dispositions, a professional sense of belonging and role values (see Section 3.2.1).

Hofmann and Kremer (1981) maintain that teachers' personal identity includes four sub-identities: centrality, which refers to its importance, significance and interconnection; value, which refers to the value and attraction of teachers' personal identity: solidarity, which shares a common destiny with colleagues; and self-expression, which refers to the willingness of being recognised as professionals (teachers).

Brickson (2000) proposed a three-factor model of teachers' identity formation and establishment, which can be theoretically separated into individual, group, and mutual factors. In this model, cognition, emotion, behaviour, and society are included in each factor. Regarding the individual factors, firstly, in cognition, teachers' identity can perceive the self-concept as a distinct individual and can be distinguished and personalised. Secondly, for emotion, teachers' identity can produce positive emotions even without teams. Thirdly, in behaviour, teachers' identity can be formed based on self-interest and a positive personality. Fourthly, in society, teachers' identity can help them perceive relations between themselves and others and have a depersonalised sense of themselves.

For the collective factors, firstly, cognition represents the perception of the collective self as a collective member. Secondly, regarding emotion, managing emotions offers the greatest

benefits and minimizes harm. Thirdly, for behaviour, being able to rely on self-interest and professional development in a collective is key. Fourthly, in society, frequent and quality communication with others and identification with a common group is critical. Concerning the mutual factors, (1) cognition means perceiving self-esteem and joining in interpersonal communication, as well as having relations with others and interconnected roles. (2) For emotion, having positive self-esteem and trust and being happy with others is key. (3) Concerning behaviour, it is essential to consider the interests of others in an action with a higher quality of behaviour. (4) In society, having frequent and quality interactions with others is vital, as well as a common connection (Brickson, 2000).

Song and Wei (2006) applied theoretical analysis in his research on teachers' personal identity, identifying six factors: *professional awareness*, which refers to teachers' cognition of the nature, function and significance of their profession; *professional emotions* refer to whether teachers like their profession and whether teachers' emotional experience in professional activities is positive or negative; *professional will* refers to teachers' level of willingness to their current profession and the current working environment. It is a deviation from teachers' tendency to mobilise work and teachers' professional tendency; *professional skills* refer to teachers' perceptions of their subject knowledge ability, teaching knowledge ability, educational knowledge ability and other factors; *professional expectations* refer to teachers' expectations of whether they can achieve success in professional activities or develop into outstanding teachers; *professional values* are what kind of 'goals' teachers must achieve – money, status, honour or self-worth.

Based on a literature review and interview results, Yu (2006) identified nine dimensions of personal identity through investigation on the personal identity of young teachers in small cities and high schools in Hunan Province. First, professional competence: the identity of knowledge and skills in their professionals, that is, the judgment of whether the current self-competency is qualified for the profession; second, professional significance: the sense of the significance and value brought by the profession of being a teacher to the individual; third, the recognition of professional characteristics, including teachers' recognition of their professional characteristics; fourth, the identity of leaders; fifth, the identity of colleagues; sixth, the identity of students; seventh, the identity to job rewards; eighth, the identity of the job background; ninth, the judgment of belonging or collective sense of the school.

Moreover, in earlier research, Beijaard (1995) attempted to define teachers' personal identity based on three different categories: the discipline taught by someone, the relation with students and the teacher's role or the concept of a role. Each category can be divided into

14 subcategories. Teachers are asked to elaborate on their current perceptions and prior experience on every subcategory. The findings of this study are fascinating. For example, personal experience and background can lead to changes in the characteristics associated with a teacher's personal identity, however, it is challenging for teachers to concentrate on each sub-category independently. Teachers also struggle to express their perceptions about certain subcategories, which seem to contradict their ability to attribute certain representations of their personal identity to a specific subcategory.

Later, in another research of Beijaard et al. (2004), they held that teachers identified themselves as subject specialists, pedagogical experts or teaching experts to derive their personal identity. Therefore, teachers' personal identity includes three aspects: the identity of subject specialists, pedagogy experts and teaching experts. However, the identity of each teacher accounts for different proportions in these three aspects. Subject specialists refer to build his or her speciality on subject knowledge and skills. Teachers, as specialists in pedagogy, specialize in fostering the formation of knowledge and abilities related to the social, emotional and moral of their students. They are also responsible for the design of instruction, learning planning, testing of students' learning and final assessment.

Summarising existing research, the structure of teachers' personal identity has no relatively unified view so far, so structural research has become a comparatively weak part of studies on teachers' personal identity. Even some research on the structure of teachers' personal identity is actually studies of types of teachers' personal identity (Ketelaar et al., 2014). However, there are few research results on the structure of teachers' personal identity, which are mostly obtained through literature analysis and theoretical conception.

2.2.3 Factors influencing teachers' identity

According to earlier research, teachers' personal identities are affected not only by individual features of the teacher, including gender, age, teaching age and subject area but also by individual biographical factors such as previous student experience, important figures, significant events and personal teaching experience. In addition, teachers' self-identity is also affected by the instructional environment, which includes the classroom environment, school culture and leadership, students, and pedagogical discussions.

2.2.3.1 Individual characteristics

Regarding the factor of gender, Ketelaar et al. (2014) found that compared with female teachers, a relatively large number of male teachers currently perceive themselves as subject

specialists in the research on teachers' identity of subject specialists, pedagogic experts and teaching experts. The majority of female teachers believe they are part of a balanced group (i.e., subject specialists, pedagogic experts and teaching experts account for an equal proportion of teachers' personal identity). Wei (2008) revealed that the percentage of personal identification level of female teachers is higher than that of male teachers. There are notable differences between male and female teachers are observed in their professional knowledge, emotions, skill and expectations; however, there is no variance in their professional will and values when it comes to personal identity.

The research results of Yu (2006) are similar to those of Wei (2008). Yu (2006) also found that the personal identity level of female teachers outperforms male teachers in nine dimensions, and there are dramatic differences in the identity of students and work rewards. Extremely marked differences were found in professional significance, professional characteristics and the identity of colleagues (Yu, 2006). However, no significant differences were seen in professional ability, leadership, identity of work background and the sense of belonging.

Inconsistent findings were reported in the literature regarding age. Jorde-Bloom (1988) discovered that many teachers gradually lose their passion for their work as they get old and become less committed in various ways. After they served their students for many years, they also reflect a decrease in dedication and a perfunctory approach to things for their students. In contrast, Wei (2008) uncovered no significant distinctions in the level of teachers' personal identity at multiple ages. Yu's (2006) research found that teachers of all ages have significant differences in identity regarding leadership, job rewards and work background without distinct differences in other dimensions.

Concerning teaching age, domestic research in China and international findings are also inconsistent. Ketelaar et al. (2014) compared teachers' conceptions of their identity and perceptions at the start of their careers in a study of teachers' personal identity of subject specialists, pedagogy experts and teaching experts. Summarising the research results, 31% of teachers clearly stated that their current perception had not changed compared to previous perceptions. However, about 69% of teachers reported that their perceptions had changed. It is suggested that teachers' current and previous perceptions of their personal identity vary greatly. Specifically, many teachers identify themselves as subject specialists at the beginning of their careers. With the development of their careers, most teachers have experienced a transition from subject specialists to a balanced group, but rarely to teaching experts. Research by Wei (2008) revealed no appreciable differences in the level of personal identity

among teachers of various teaching ages.

Regarding the subject areas, Beijaard et al. (2004) examined teachers' personal identity as subject specialists, pedagogical experts and teaching experts. Results showed an increase in the proportion of teachers in the balanced group (20% in the language group and 100% in the art group) in four subject areas (language, social studies and humanities, science and mathematics, and arts). Compared with teachers in other academic fields, teachers in mathematics and science have changed in their careers from subject specialists to teaching experts and teachers of a balanced group. Teachers who instruct language have been characterised with a balanced group identity from the beginning, whereas teachers in social studies and humanities always insist on being subject specialists throughout their careers.

2.2.3.2 Previous experience factors

Researchers often employ teachers' previous experience of being students as reference for these types of factors. For instance, Knowles's (1973) biographical research on quasi-teachers stated that quasi-teachers and new teachers think their teaching and classroom practices as being shaped partly by their previous experiences. Quasi-teachers and new teachers do not wait to be loaded with skills, attitudes and experience that can be appropriate for their first-year teaching life like empty bottles when they join teacher education programs. They have undergone long-term 'teacher education'. The socialisation of teachers has taken place during the process of observation and internalisation of the specific teaching mode they experienced when they were primary school students who were ready to accept these concepts. Research by Samuel and Stephens (2000) found that the experience of quasi-teachers as students affects the formation of their personal identity. Holt-Reynolds (2000) reported that the experience of being a student in a large class before going to college is the main factor affecting teachers' self-formation. Holt-Reynolds' research emphasises not only the importance of the history of being a student but also that the voice of 'students themselves' will dominate the voice of 'teachers themselves'. New teachers observed the 'observed apprenticeship' of many teaching styles, which seemed to be of utmost importance in the construction of their personal identity, as well as shaping their response to practical situations. Beliefs and perspectives before entering actual teachings are vital in the classroom practice of quasi-teachers and new teachers, and in the way they think of themselves as teachers. Personal experience as a student – positive or negative – seems to have a bearing on how teachers view themselves as teachers.

Individual previous experience factors affecting the teachers' individual identities are also include the influence of previous teachers. Former teachers – who provide them with positive

or negative modes of teaching – are also regarded as significant social factors. In research by Koster et al. (2008) on the effects of positive and negative role models, clear cases of quasi-teachers influenced by former teachers have been provided. These examples demonstrate the impact of past role models on teachers' professional self-image. Most quasi-teachers mentioned teachers they admired, which in some cases have influenced their career choices. Former teachers (or their teaching styles) are regarded as 'frames of reference' for quasi-teachers to determine the meaning of teaching and their own understanding of being teachers (Knowles, 1973).

Prominent people and events are also significant personal biographical factors that affect teachers' personal identity. Former teachers in the above study are one of the most important people who have the greatest influence. Additionally, important people who influence the personal identity of teachers include their parents, relatives and friends, as well as mentors in educating teachers during pre-service learning, supervisors in universities, internship teachers and researchers. Role models formed by these people have considerable significance for the personal identity of teachers. Malm (2004) has pointed out in a study of Montessori teachers that the teachers' individual identities are influenced by important events and situations (the emergence of new courses, appreciation of a way of treating children and the attraction of new ways of working). There are even some important events more personal, such as divorce, which can lead to new and major changes. Huberman (1989) concluded that when teachers' kids in school, their patience to students increases. It has been indicated that experience in private life has profoundly affected teachers' professional lives.

Additionally, teachers' teaching experience also influences their personal identity. Newman (2000) and other scholars have stated that pre-service professional learning, trainee experience, first-time teacher and professional career teaching experience are all important parts for young teachers to build and fulfil their personal identity.

2.2.3.3 Teaching environment factors

Teachers' teaching environment has a profound impact on their personal identity. This type of environment includes the classroom environment, school culture and leadership, and student and educational debates. Concerning the classroom environment, Doyle (1990) has pointed out that teaching is largely structured or contextualised. School culture includes concepts, rules and values that are shared with related participants, who determine the specific strategy of working. The school culture is shaped by team expectations, students, school committee members, colleagues, and based on the curriculum and physical environment (Duffee &

Aikenhead, 1992). Individual teachers' perceptions of their identities may influenced by the cultures of their schools and of teaching. Holt-Reynolds (2000) has argued that schools, as a field of work, are linked to teachers' personal identity by dictating what they want and how they do in cultural plays.

The findings of Flores and Day (2006) suggest that school culture and leadership have an important effect on teachers' understanding of how to teach, professional learning and development, and personal identity. Specifically, the division and competition, the 'standardisation' and bureaucratic, and the presence of 'vested interests' and hidden standards in schools can have a detrimental effect on new teachers, making them less progressive and innovative. Consequently, positive or negative perceptions of school culture and leadership can either promote or hinder the growth of new teachers.

According to their own descriptions, most teachers tend to adopt an attitude of 'strategic compromise' when entering school culture. When teachers realise how the school works, most declare that they might adopt a 'backward' and more compromising attitude Lacey (1977). Teachers describe the way they begin to obey the rules and values of the workplace even though those rules and values do not match theirs. Conservatism and obedience as characteristics of their personal identity replace their initial enthusiasm. Teachers who teach in supportive, informative and encouraging schools with effective communication and an enthusiastic atmosphere are more prone to show a positive outlook on education.

Students have been identified as one of the most important drivers of the development and transformation of teachers' personal identities. Ashcroft (1999) has earlier noticed the fact that new teachers deciding to continue teaching have good relations with students, and they often regard students as a rich resource for providing support and feedback. Interaction of new teachers and students profoundly affects their teaching perspective, self-confidence and job satisfaction. A study by Ashcroft (1999) has also pointed out that the student characteristics are one of the four major factors influencing the personal identity of teachers in special education (student characteristics, institutional background, and training and certificates they have obtained).

Educational debates are also parts of the teaching environment in the broader sense that have an impact on teachers' personal identity. Beijaard et al. (2004) believe that education theory is one part of the teaching and is an essential part in the formation of personal identity. Sachs (2005) found that two disputes in education policy and practice shape two types of teachers' personal identity. Disputes of managerialism have caused entrepreneurial identity, and disputes of democracy have caused behaviourist identity. In addition, Chappell (2001)

revealed that economic skills development, free education and public services in the Australian Technology and Continuing Education Association influenced the formation of the personal identity of teachers in technology and continuing education.

Summarising previous research, this study found that there are many studies on the influencing factors and relatively rich research results regarding teachers' personal identity. Apart from individual characteristics, individual biographical and teaching environment factors also are considered. Nevertheless, individual characteristics involved are limited to objective variables such as age, gender, teaching age and taught subjects. Research on the influence of teachers' ability, temperament, character, personality, values and other psychological variables on teachers' personal identity has not been conducted. Teaching environment factors involved are limited to theoretical discussions of the classroom environment, school culture, and more. There is not enough empirical research on the effects of the school level, location, organisational atmosphere and relations with colleagues on teachers' personal identity. Therefore, these studies are necessary and will enrich and deepen research on the personal identity of teachers.

2.2.4 Related researches on teachers' identity

Related studies on the personal identity of teachers have found that some studies on relations between teachers' personal identity and teachers' turnover tendency, levels of work burnout, self-efficacy, motivation, commitments and work satisfaction have similar results.

First, personal identity can predict turnover tendency. Kremer and Hofman (1985) developed a questionnaire for 190 educators from primary and junior middle school. They found that the turnover tendency of these teachers depends on background variables, such as factors in personal identity, work satisfaction and self-government. If managers are aware of teachers' needs for more self-government, stronger work satisfaction and more personal identity, teachers' turnover will be mitigated. Moore and Hofman (1988) reported that a stronger personal identity impedes teachers' propensity for turnover in higher education, even though their working group may be seriously criticised.

The pursuit of quality schools is in line with teachers' highly developed personal identity, which can be bolstered by a positive self-perception of their own identity, thus overcoming dissatisfaction with worse working conditions. Gaziel (1995) surveyed 400 Israeli teachers in primary schools who are in periodic resting years, to explore the effect of a sabbatical in reducing teacher burnout and turnover tendency. The study found that a sabbatical and

attending professional development projects strengthened teachers' personal identity with more power, less burnout phenomena and less turnover expectancy. In this research, the personal identity of teachers is the mediating variable between a sabbatical resting year and less burnout phenomena, lower turnover and absenteeism. Teachers' personal identity also has negative correlations with their level of work burnout, absence and turnover tendency. Methods to improve teachers' work conditions will have a beneficial impact on how people perceive of teachers' personal identity.

Regarding the connection between teachers' professional burnout and personal identity, Tillema and Kremer-Hayon (2002) studied a particular group of teachers, namely Arab headmasters in Israel, who were also examined by Gaziel (1995). Studies by Tillema and Kremer-Hayon (2002) discovered a negative correlation between burnout and personal identity, meaning that greater the degree of individual identity a headmaster has, the less burnout they have experienced. This connection between burnout and personal identity is further supported by other studies which have found that individual identity is integral to a teacher's self-efficacy, motivation, commitments and work satisfaction. (Day et al., 2006). Consequently, it can be concluded that personal identity is essential for teachers to perform effectively.

To date, related studies on teachers' personal identity are still in their early stages. Regarding the content of studies, variables in related studies remain limited to some psychological variables of turnover tendency, professional burnout and work satisfaction, and more exposure to working behaviour variables of teachers is needed. In addition, from the depth of the studies, most research has only demonstrated specific relationships among teachers' personal identity and others. However, there has been little research on the correlation between the impact of teachers' personal identity and the variables of interest, and few studies of impact efficiency models reflect the impact of teachers' personal identity.

2.2.5 Research methods of teachers' identity

The qualitative method is the most frequently applied research technique in investigating teachers' identities. In addition, a mix research method was utilized for this research.

A comprehensive analysis of research methods of teachers' personal identity shows that existing studies on teachers' personal identity mainly use the qualitative method, which is characterised by small samples and in-depth research. In the qualitative method, the interview method is the most widely applied and can be further classified. According to different

interviewees, such studies can be divided into interviews with interviewees (Malm, 2004) and interviews with interviewees' students (Santoro, 2003). Based on the number of interviewees, studies can be divided into individual interviews (Jurasaite-O'Keefe, 2005) and group interviews (Bergmark, 2020). Regarding the organisation of the interviews, they can be classified into structured interviews (Proweller & Mitchener, 2004) or semi-structured interviews (Vogt, 2002). Alternatively, interviews can be categorised as formal (Proweller & Mitchener, 2004) or informal (Maclure, 1993). The conduct of interviews can be divided into email exchange and traditional face-to-face interviews or online interviews using modern technologies such as the Internet (Girod & Pardales, 2001).

In the qualitative method, the work analysis method is more commonly used. In addition to the analysis of traditional works such as briefcases, handouts, in-class assignments, homework, annual reports, summaries, magazines, written reflections, student reports, and more, the analysis of special works is also conducted. These special works include first teachers' storylines (Beijaard, 1995). The researched teachers are required to draw storylines for every aspect of teaching. Researchers analyse teachers' personal identity based on their storylines and their explanations.

The second analysis technique uses photos (Vogt, 2002). Researchers observe teachers' classes and take photos of their interactions with their students. A few months later, teachers are interviewed about these photos and asked whether some photos most clearly represent how they view themselves being teachers or not. The third method uses drawings. Teachers are required to describe themselves as teachers and explain its significance in a semi-structured interview (Vogt, 2002). Quasi-teachers are asked to draw a 'teacher' and write about the drawing, reflecting on how they describe 'teachers'. The subjects then share their drawings and discuss their significance. Weber et al. also found that the application of drawings can help quasi-teachers develop their personal identity and critically reflect on the teaching profession. That is, drawings can be used not only as a research method for the personal identity of teachers but also as a strategy to promote teachers' personal identity. The final technique is teachers' analysis of characters in cartoon films. Fisher (1997) believed that the examination of cultural products such as animation and movies could potentially provide teachers with a deep understanding of their sense of personal identity and self-esteem.

In the quantitative research on the subject related to the personal identity of teachers, the questionnaire survey method is widely used. Some are used alone or in combination with qualitative methods such as interviews and group discussions. Other than the questionnaire survey method, Hill and Veale (1995) also used the Repgrid method to measure quasi-

teachers' personal identity during the teaching practice. Repgrid is a computer program where quasi-teachers summarised the 19 elements that comprise the analysis' foundation. They view these elements as their new experience, presenting these factors at the top of the screen, and quasi-teachers rank nine concepts based on each factor. Concepts represent the sensory dimension of quasi-teachers' expectations. Each concept has two aspects forming a contrast. Quasi-teachers can recognise the position that best expresses their personal opinions. Choosing results are recorded in the table as numbers 1 to 5, and each quasi-teacher records it once before and after their practice class. The difference between the two records indicates that the quasi-teacher has changed their personal position, and these changes manifest the impact of experience on their transmutation of thoughts.

2.2.6 Other researches on teachers' identity

In existing studies on the personal identity of teachers, in addition to the aspects mentioned above, works have focused on specific topics of certain teacher groups.

For example, Santoro (2003) studied the changes in adult educators' personal identity in Australia, which are significantly influenced by the trend that adult education is becoming more market-oriented and there is more need for highly targeted vocational qualification education and training. Although the current discussion on adult education is increasingly positioning teachers as trainers of highly targeted curricula, teachers resolutely resist the subjective idea of positioning themselves as trainers and they tend to adhere to their personal identity as teachers in this new training environment.

Ashcroft (1999) studied teachers in alternative education institutions. According to the author, alternative education is prepared for students who are considered not suitable for regular education in regular classrooms for disciplinary reasons or pedagogical (ethical, social, psychological) reasons. In this case, teachers tend to associate their personal identity with the characteristics of their students and their institutional backgrounds rather than their fields of study. Andelora (2005) took teachers working in two-year community colleges as the research object. Generally speaking, community colleges culturally and traditionally emphasise the staff's role of being teachers and belittle their role as scholars. Thus, teachers in two-year colleges feel increasingly alienated from their disciplines.

In Beynon et al. (2004), teachers who immigrated to Canada and were required to take part in the recertification process were studied. The teachers in the study had already acquired certifications issued by non-Canadian authorised institutions. Teachers' education, which is

demanded for successful recertification, including instructional courses and internships, is considered a shameful process for some teachers and is eliminating their personal identity. For other teachers, this recertification is a process of reflecting on their professional beliefs, expanding their professional practice and a chance for them to further confirm their personal identity.

DeCorse and Vogtle (1997) carried out an investigation on the attitudes and perceptions of male teachers who chose to engage in primary education under a social cognitive background where female teaching is prominent. DeCorse and Vogtle found that the regular cause male teachers chose to become primary education teachers is that they believed they could have direct contact with children and parenting. In this regard, they are no different from female teachers.

Capulong (2021) focused on the personal identity crisis faced by some drawing and art teachers. Factors such as working environment and personal identity management are extremely important for testing the personal identity of art teachers as professionals. The way that the art teachers experience and perceive subjectively their teaching methods and art creation practice is formed based on their individual and social psychology, as well as their educational backgrounds and working environment. Mills and Pawson (2012) studied the teachers like acting instructors. According to the research, the performers, or to say the instructors, whose instrument teaching is integrated into their personal identity. Their enthusiasm for learning widely affected their belief that teaching and performing can make them more familiar with their subjects, which helps to explain why teaching is integrated into their personal identity. Bernard (2005) studied musicians as teachers. The two roles may or may not be coordinated. Generally speaking, these teachers who are also active musicians do not play different roles in music performance and music teaching. There may be tension between these two identities. For them, participating in music performances and teaching children how to perform are both the process to fully self-realise their music career. Stone et al. (2002) examined 10 clinical teaching instructors to identify the characteristics that they believed contributed to their teachers' personal identity. This study revealed four themes that may affect the personal identity of teachers: the teachers' potential humanism, the familiarity with the recognition of learning principles, the perception of the merits and demerits of teaching, and self-image as a teacher.

2.3 Job satisfaction

2.3.1 The concept of job satisfaction

Job satisfaction is first introduced in the Hawthorne Experiment (1927–1932) conducted by Mayo and others, which showed that workers' emotions influenced their work behaviour and that psychosocial factors determine job satisfaction and productivity in some aspects. The concept is then pioneered by Hoppock in 1935 in his book *Job Satisfaction*. Since the school of behavioural science was flourishing at that time, the psychological factors of workers were taken seriously, and this concept became popular research in behavioural and management sciences. However, the description of job satisfaction is different due to the different research objects and theoretical frameworks of various scholars, as well as the complexity of job satisfaction. In a sense, the core of job satisfaction is a cognitive evaluation and an emotional attitude, to some extent, representing the workers' feelings of liking or disliking their jobs. The definition of job satisfaction has been summarised by the Taiwanese scholar Z. G. Xu (1977) into three main categories, which encompass the academic definition of job satisfaction.

The traditional description of job satisfaction is a broad interpretation of the concept, which does not consider the various aspects of job satisfaction and the mechanisms that lead to its formation, but rather focuses on the attitude or perception of the job and its related environment, as well as the employee's emotional response to their entire employment role.

The expectation gap is also a crucial factor in determining job satisfaction, as it is the difference between what employees receive and what they desire; with a smaller gap leading to greater satisfaction and a larger gap resulting in less satisfaction.

Finally, the definition of 'reference frame' sees job satisfaction as a consequence of the researcher's perception and subjective interpretation of the characteristics of the job according to the reference frame. Its overall status is influenced by the individual's internal factors and environmental factors like views about different aspects of the job.

This study adopts the definition of reference framework and holds that job satisfaction is an overall view of a person's work and an attitude that is affected by both intrinsic and extrinsic environmental factors. It focuses on the cognitive evaluation elements of job attitude and makes an in-depth study based on this definition.

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2.3.2. Dimension and measurement of job satisfaction

Job satisfaction exists only within the individual and should not be measured directly as an attitude. Methods for indirectly measuring job satisfaction include impression methods, employee observations, interviews, and structured questionnaires. Compared to observation and employee interviews, questionnaires are less valid in terms of obtaining real information, but they are simple, time-saving and easy to administer. Many researchers prefer adopting the method of structured questionnaires to draw conclusions from the scores measured by the scale. However, the measurement of job satisfaction relies heavily on the specific classification of its dimensions, and there are currently two perceptions:

Unidimensional and multidimensional. A unidimensional approach is a single holistic assessment, where individuals are asked to answer a single question without differentiating between dimensions, for example, a question such as 'Taking all factors into account, are you satisfied with your job?' This method of rating overall job satisfaction is simple and economical, but it has certain limitations. This method can only measure overall job satisfaction but cannot diagnose the specific factors and aspects that affect it, nor can it propose corresponding countermeasures and recommendations for the problems that exist.

The multidimensional method is the comprehensive evaluation method of job elements. Through standardised quantitative tables, job satisfaction is divided into different dimensions, allowing employees to score the key factors in each job, and then accumulate scores to produce total job satisfaction points. Although this method is more complex than a single holistic assessment method, it can help managers to find the root cause of problems and obtain more accurate evaluation and diagnosis results. Hirschfeld (2000) point out that the study of multidimensional job satisfaction is more significant for organisational management than unidimensional job satisfaction, so job satisfaction research also focuses on the multidimensional division of job satisfaction. Currently, several popularly used job satisfaction measurement tools also belong to this measurement method.

A close connection is seen between unit- and multidimensional methods. One view is that the weighted sum of satisfaction in all aspects can reflect the overall satisfaction, while another view is that the overall satisfaction is equal to the simple addition of the satisfaction of each part. Rice et al. (1989) discussed overall job satisfaction, the importance of each dimension and the relationship between measuring each dimension of job satisfaction. The findings indicate that overall satisfaction is more likely to be simply additive to the dimensions. In addition, Pinder (2008) suggests that if a person is highly pleased with certain aspects of his or her job, the overall satisfaction of the person would also be at a high level and there would be a causal trend.

In the dimensions of job satisfaction, the two aspects of endogenous and exogenous are relatively common and important division method (Hirschfeld, 2000), which has a non-negligible impact on research covering job satisfaction and related fields. Using Herzberg's perspective to reveal its composition, the so-called endogenous job satisfaction means folk's feelings concerning the nature of the job task itself, including a feeling of achievement, personal growth, recognition, responsibility, the job itself or development. The five job characteristics proposed by Boonzaier's (2001) job characteristics theory are consistent with the nature of endogenous satisfaction factors and belong to the category of endogenous motivators. Exogenous job satisfaction relates to how people perceive various external work situations, including policies and administrative practices, supervisory styles, interpersonal relationships, working conditions, financial rewards, status, and feelings of security. Moorman (1993) believes that endogenous job satisfaction is an emotional-based work attitude, while exogenous job satisfaction is a cognitive-based work attitude.

Regardless of the dimensional classification of job satisfaction, the focus is on seeking the best specific dimensions classification standard, yet there is currently no consensus. For example, Herzberg et al. (1959) summarised 16 studies and found that the ranked order of importance for 14 configurations is safety, promotion opportunities, work interests, superior appreciation, company and management authorities, work content, subjective leadership, wages, social work, working environment, communication, working hours, difficulty and welfare. Pundt et al. (2015) identified five configurations, including the job itself, promotion, salary, supervisor, and workmates. Burke (2022), on the other hand, classified job satisfaction into seven dimensions: salary, benefits, supervisor, co-workers, safety, customers, and growth, according to ERG theory. Therefore, different sample compositions or measurement criteria can lead to different factor results.

Given the differences in dimensionality, job satisfaction is measured in a variety of ways.

At present, there are two different paradigms for measuring job satisfaction in academia, namely the cognitive job satisfaction paradigm and the affective job satisfaction paradigm. Although both measurement paradigms recognize that the essence of job satisfaction is attitude, they have different starting points. The former is more focused on the affective elements of measuring job attitude, while the latter focuses on the cognitive and evaluative elements of measuring job attitude. Moorman (1993) explores the differences in the effects of the two paradigms and find that there were indeed some differences: the proportion of variation in organizational member behavior as stated by the cognitive job satisfaction paradigm was somewhat higher. The job satisfaction scales commonly used in empirical studies are all cognitive in nature, like the Minnesota Satisfaction Scale (MSQ), Job Description Index (JDI), Job Diagnostic Scale (JDS) and Job Satisfaction Survey (JSS).

The Minnesota Satisfaction Scale (MSQ), which was compiled by Weiss et al. (1967), has become one of the most common standardised measurement tools in the academic world. The scale can be separated into a short and a long scale. The long MSQ scale has 100 items and can be used to comprehensively measure the general satisfaction level and also the detailed satisfaction level in 20 different aspects that is creativity, independence, working environment, remuneration, colleague relationship, responsibility, stability, social status. The short MSQ scale includes three sub-scales, which are internal satisfaction, external satisfaction and general satisfaction. Its primary characteristics include the ability to use, the ability to achieve, activity and promotion. MSQ is distinguished by a comprehensive assessment of the integrity and dimensions of job satisfaction degree. Moreover, there are some studies doubting that because in certain conditions, the scale is considered overlong, it is difficult for the studying participants to answer the full scale patiently. The burden of the length and the possible errors of the scale in the measurement are debatable, while the short scale is short in length and the results are relatively more accurate, hence it is generally favoured.

The job description index scale (JDI), which was compiled by Smith et al. (1969), is by far among the most famous satisfaction measurement method for measuring employees' satisfaction levels. The scale divides job satisfaction factors into five dimensions: promotion, job itself, salary, supervisory and work partner. Each dimension has nine or eighteen items, with a total of 72 items. The higher the overall score of the subjects' description of the work reaches, the higher the subjects' satisfaction level with each corresponding aspect of the questionnaire is. The characteristic of JDI is that only the corresponding descriptors are selected for different dimensions and the words would be simple to comprehend, so the

subjects with relatively weak educational backgrounds are also able to answer. However, some researchers believe that, unlike MSQ, accurate diagnosis of all aspects of the job is not quite suitable for solving practical organisational problems. These scholars investigated whether the five aspects of JDI can be further subdivided, such as managers' ability, interpersonal skills, and other factors. Nevertheless, JDI is still recognised by many researchers.

The job diagnosis survey scale (JDS) was compiled by Hackman and Oldham (1975). The scale is measured through six different dimensions: individual growth, salary, safety, society, immediate supervisor and supervision. Each dimension contains 2–3 items and is divided into seven levels from totally dissatisfied to totally satisfied. In addition to measuring employees' general satisfaction level, internal working motivation and special satisfaction, it can also be applied to measure the characteristics of a job and the intensity of personal growth demand.

The job satisfaction survey (JSS), which was conducted by Spector (1997) includes nine different dimensions: remuneration, promotion, additional benefits, supervision, remuneration, performance bonus, colleague relations, working conditions, communication and work characteristics. There are four indicators for each dimension, and the dimension numerical score is calculated by adding the four indicators, while the overall score of job satisfaction is adding all indicators. The degrees of the evaluation of each index are given 1–6 points, representing from 'completely disagree' to 'completely agree'. This scale can be applied to all kinds of research types and organisations.

At present, MSQ and JDI are the most commonly used quantifying scales in general empirical studies. In particular, the existence of the revised Chinese version of these two scales is more conducive for Chinese domestic scholars to carry out indigenous research.

2.3.3 Related researches on job satisfaction

Job satisfaction study can be classified into two types: research on the level and determining variables of job satisfaction; and research on the outcome variables of job satisfaction. As a dependent variable, job satisfaction is primarily an attempt to determine which job-related variables affect job satisfaction, and job satisfaction as an independent variable is an attempt to determine which output effect variables exist for job satisfaction.

Allowing job satisfaction to serve as the dependent variable, as early as 1912, Taylor of the scientific management theory school proposed that high compensation increases satisfaction. The Hawthorne experiment set a new management philosophy as a milestone in

behavioural science: an industrial organisation should obtain a workforce with high productivity and job satisfaction.

Subsequently, studies on job satisfaction centred on the components and influencing factors of job satisfaction. For example, Vroom (1994) argued that seven job constructs exist, including the promotion, organisation itself, job content, immediate supervisor, work environment, treatment, and work partners. Spector and O'Connell (1994) emphasised the role of personality factors and showed that job satisfaction is idiosyncratic and to some extent similar to personal characteristics, that is, the stability of job satisfaction results from the stability of these two traits.

Although research on job satisfaction in China started later, many scholars have discussed the determinants of job satisfaction and employee motivation. For instance, Z. G. Xu (1977) collaborated with colleagues finished a survey on the job satisfaction of employees. The report posted in *Guangming Daily* and received a lot of attention, which was the first job satisfaction survey conducted in China. Later, Yue et al. (1988) revised the Minnesota Satisfaction Scale for the Chinese region. S. J. Zhang and Liao (2007) conducted extensive empirical study of the connection between personal variables (gender and age), job variables (position, rank, and seniority) and organisational variables (public or private) and job satisfaction.

Take job satisfaction as the independent variable. Additionally to examining the influencing factors, some researchers have also explored the impact of job satisfaction on specific employees and the organisation to understand the connection among job satisfaction and physical illness, psychological state, organisational performance, employee productivity and turnover behaviour Q. F. Li et al. (1995). It was revealed that job satisfaction affects life satisfaction and is significantly correlated with each other, with a two-way spillover effect. Regarding the connection among job satisfaction and job performance, the early interpersonal relationship school clearly advocated that high job satisfaction will lead to high job performance. With the rise of cognitive psychology in the 1960s, the relationship between job satisfaction and job performance began to be viewed from the opposite perspective, such as the 'productivity leads to satisfaction model' (Judge et al., 2020), which argues that productivity leads to job satisfaction. Recent research has also emphasized the link between job performance and job satisfaction is in many cases uncertain and that some mediating variables, such as job ambiguity and self-efficacy, play a confounding role. It suggests that attitudes have considerable limitations in predicting behaviour.

Job withdrawal behaviour consists mainly of absenteeism and turnover behaviour.

According to studies, overall job satisfaction is not highly associated with absenteeism, usually below 0.4 (Alshihri et al., 2021), but is strongly linked with job satisfaction sub-dimensions. It was proposed that job satisfaction is negatively associated to turnover rate and that the negative relationship is stronger than the relationship between job satisfaction and absenteeism rate (Tenaw et al., 2021). The antagonistic connection between endogenous job satisfaction and turnover behaviour is more stable and significant than exogenous job satisfaction, but some studies have discovered no significant correlation (Akyurt, 2021), suggesting that there is an association between turnover behaviour and job satisfaction is influenced by several mediating factors, such as job performance, socioeconomic and unemployment status, psychological factors related to withdrawal behaviour, turnover intention, and more.

2.4 Job burnout

2.4.1 The concept of job burnout

Job burnout, also known as job exhaustion or burnout, was first used to describe a range of symptoms that occur after long-term substance abuse, such as emotional exhaustion and loss of motivation. In 1974, Freudenberger, an American clinical psychologist, introduced the term 'job burnout' to explain the physical and psychological exhaustion experienced by those in the helping professions when exposed to excessive work requirements. Primarily used to describe the chronic stress of healthcare workers from a clinical viewpoint, this term has since become a widely accepted term.

Pines and Aronson (1988) conceptualise burnout from a static point of view, characterising it as a condition of emotional, mental exhaustion and physical of physical, mental depletion and emotional because of an individual's exposition to excessive demands on their emotional resources over an extended period. This can be viewed as an emotional state where someone's energy is low, which is demonstrated through physical fatigue, emotional exhaustion and cognitive boredom. In contrast, Dworkin (2001) perceives burnout as a feeling of detachment from a specific job, including feelings of insignificance, powerlessness and normlessness. Bill, on the other hand, views burnout as a state of expectation-regulated, work-related and irritable dysfunction in individuals without psychopathological causes.

Cherniss (1980) defines burnout from a dynamic perspective, suggesting that it is a

process in which negatively affects a person's professional attitude and behaviour, ultimately leading to burnout. However, Etzion et al. (1998) sees burnout as a slow process that develops without the individual being aware of it, and once a particular threshold is reached, the individual suddenly feels depleted and begins to change his or her attitude towards others and work. This destructive experience cannot be associated with any particular stressful time.

At present, the concept of three-dimensional job burnout proposed by Maslach and Jackson (1981) has been widely accepted by scholars and is the most representative one. This concept focuses on the psychosocial perspective of emotional stress at work, which relates to a combination of symptoms including emotional exhaustion, depersonalisation and low individual fulfilment arising from the inability of practitioners in the helping professions to successfully deal with the continuous stress at workplace. Among them, emotional exhaustion is the most obvious symptom and core element of burnout, representing the stress dimension of burnout, as the individual's emotional resources are overtaxed, exhausted and depleted. Depersonalisation is the person's negative, cold and excessive lack of engagement with service users and represents the interpersonal dimension. Low personal fulfilment refers to the person's negative attitude towards the importance of work and competence and represents the self-evaluation dimension. Maslach (2003) has further modified the concept to include three dimensions of burnout: depletion, negative attitudes and low professional efficacy. This concept not only describes the stress component of burnout but also considers the individual's reactions and evaluations of others as well as the self as a result of burnout, thus establishing its dominance in burnout research.

Although the criteria for defining burnout vary among researchers, consensuses can be reached on certain aspects: firstly, burnout is a physical and psychological symptom of excessive exertion and energy depletion, accompanied by adverse behaviour; secondly, burnout must be work-related and occur in the course of the professional sphere; thirdly, the subjects of burnout are normal people without psychopathological disorders; fourthly, burnout is essentially an attitude towards work, focusing on the affective element of the attitude towards work. This study adopts the widely cited Maslach three-dimensional burnout definition, that is, burnout includes depersonalisation, low sense of personal fulfilment and emotional exhaustion.

2.4.2 Measurement of job burnout

Due to the complexity of the concept and dimensions of burnout, its measurement has been

fraught with disagreement. After more than 30 years of development, different researchers have constructed structural scales of job burnout from different perspectives, including Maslach and Jackson's Marks Burnout Inventory (MBI), Pines and Aronson's Burnout Measure (BM), Shirom and Melamed's Shirom Melamed Burnout Measure (S-MBM) and Dmerouti and Ebbinghaus' Oldenburg Burnout Inventory (OLBI).

The Marks Burnout Inventory (MBI), developed by Maslach et al. (1997) based on observations and case studies of the professional helping professions, is the most commonly used metric in job burnout research today. The questionnaire entries are in the form of declarative sentences and subjects are asked to respond on two dimensions based on their feelings and attitudes: frequency and intensity. After repeated trial tests and investigative factor analysis, a three-factor framework with 22 items was finally obtained, that is, depersonalisation (5 items), low personal fulfilment (8 items) and emotional exhaustion (9 items). Due to the high overlap between the two dimensions, the intensity dimension was removed in later studies. Three revisions of the MBI scale: the MBI-ES, the MBI-GS and the MBI-HSS. Some studies have shown that the survey entries for the MBI-HSS and MBI-ES are limited in their application because they are directed to individual service users.

Thus, Maslach et al. (2001) developed a third edition of the MBI-GS with a wider range of occupational applications, including three subscales of cynicism (5 items), emotional exhaustion (5 items) and occupational efficacy (6 items). The difference from other versions is that the emotional failure in MBI-GS is general, and the clients at work are no longer used as a source of personal emotional exhaustion; cynicism reflects the individual's cold and alienated attitude towards work rather than just interpersonal relationships, and professional performance includes social and non-social professional achievements made by individuals at work. In the meantime, Y. X. Li (2003) compiled a job burnout questionnaire, CMBI, with 21 items including three factors: depersonalisation, a reduced sense of accomplishment and emotional exhaustion, with good reliability and validity, by referring to relevant studies, through open-ended interviews and questionnaires.

The Burnout Measure (BM) is a 21-item self-burnout diagnostic instrument consisting of three sections: physical, emotional and mental exhaustion. Each section contains seven items, and the degree of burnout is expressed as a total score on the BM scale. The design of the BM questionnaire entry is not aimed at professional groups in a certain field but applies to various social groups, such as those involved in activities such as management, marriage or political conflict. Pines and Keinan (2005) defined and measured burnout only in terms of the exhaustion dimension, hence the scale is also known as a unidimensional scale. However, an

exploratory factor analysis by Enzmann and Kleiber (1989) found that the entirety of the BM scale was not loaded on a single factor, but on three factors, namely exhaustion, low morale and loss of motivation. The findings were reconfirmed in later cross-cultural studies, suggesting that the BM scale did not fit with its unidimensional theoretical conception. To date, Pines and Keinan (2005) has not published a single study on the validation of the factor structure. Although in published research, Weisberg and Sagie's (1999) study on structure supports Pines' original assumptions, studies using BM with depression, anxiety and self-esteem have shown that its discriminant validity is also unsatisfactory. Thus, the validity and reliability of the BM Burnout Scale can be explored and validated in more depth.

The Shirom-Melamed Burnout Measure (S-MBM) was created by Shirom and Melamed (2006) based on the CRO theory. There are three parts to the scale: emotional exhaustion (4 items), physical tiredness (6 items), and cognitive boredom (6 items). The S-MBM is also a unidimensional scale, and the level of burnout is indicated by the total score of the scale. As for the validity and reliability of the scale, Shirom and Melamed (2006) showed that the S-MBM has good structural validity, but other psychometric properties such as reliability, discriminant validity and convergent validity need to be further investigated.

The Oldenburg Burnout Inventory (OLBI) was constructed by Demerouti et al. (2000) to avoid the psychometric limitations of the MBI. OLBI consists of two subscales, exhaustion (7 items) and job detachment (18 items). The OLBI scale refers to work detachment as a turning away from someone's work and adopting negative behaviours and attitudes toward work-related people or events; the depletion dimension also does not directly identify emotional demands as a source of depletion as in the MBI scale, but rather as a result of chronic work stress, that is, a general feeling that broadly includes physical, emotional and cognitive depletion, such as physical exhaustion, overloaded work, desire for body rest, and emptiness. Therefore, the OLBI scale can be used in a variety of work-related stress.

2.4.3 The influencing factors of job burnout

Antecedent variables. Many factors influence burnout, and the literature shows that they can split into two categories: situational factors and individual, of which situational factors mainly include occupational, organisational and social factors (Hobfoll & Freedy, 1993).

First, the individual factors are considered. In real life, individuals do not respond to work environments mechanically as machines. Some of the personal influential factors will affect the outcomes of the interaction between individuals and different environments. Those

individual factors include personality or characteristic, personal attitude, gender, age, educational background and other demographic variables. Regarding demographic variables, many researchers found that factors like gender, level of education, marital status, and age can all impact the degree of job burnout of an individual. It is generally believed that the job burnout of young people is higher than that of middle-aged people, and women are more prone to become emotionally exhausted, while men are prone to dehumanisation. Meanwhile, compared to married people, singles have a higher chance to experience job burnout, while divorced people have a higher chance to experience job burnout than singles. Some scholars believe that the higher the level of education is, the more serious the job burnout will be. However, some studies have the opposite results.

Several studies involving personality traits have shown that patience, self-efficacy, level of self-floating, sources of control, neuroticism and coping styles are all related to burnout. People with stubborn, low self-esteem, externally controlled, Type A personalities (expressed as competitive, time-pressured, hostile, controlling), sensory, and avoidance of passive stress strategies tended to show higher burnout. That is, burnout scores were higher for those with low levels of psychological toughness. Other studies have found that optimism is a powerful predictor of burnout. Costa et al. (2001) examined three characteristics from the Big Five model, agreeableness, neuroticism and extraversion, and concluded that personality traits influence burnout status by affecting perceptions of emotional social support. In addition, individuals' excessive or unrealistic expectations of their jobs may also influence burnout to some extent.

Job occupational characteristics factors. Studies have found that job characteristic variables such as workload, work hours, job feedback, job autonomy and social support are all strongly connected with burnout. In terms of occupational type characteristics, Schutte et al. (2000) found that blue-collar workers experienced more job negligence and low achievement than white-collar workers.

Organisational characteristics factors. These factors include the organisation's reward and punishment system; power structure; organisational support such as leadership, colleagues, employee involvement, organisational change; and values in the organisation (Stalker & Harvey, 2002). Research has shown that a lack of (or poorly set) rewards and punishments in an organisation can cause individual burnout and have a significant influence on all three dimensions of burnout. Concerning its power structure, a hierarchical organisation is characterised by a clear separation of powers and responsibilities and strict regulations. An extreme operation of this structure leads to dehumanisation and isolation of the members of

the organisation.

Social factors. Social factors that influence burnout include the industry environment and social support in the workplace. Studies have shown that stress and burnout can be felt if there is a sudden and significant change in the industry environment, resulting in increased competition or uncertainty about the future. At the same time, numerous research has revealed that social support is one of the most crucial resources related to burnout and that people who have relatives and friends who care about them are less likely to be physically and mentally depleted.

Consequence variables. Burnout not only affects the mental health and physical of individuals but also harms employees' professional values, family life and organisational performance. However, in studies of the consequences of burnout, scholars have focused more on the individual consequences and less on the negative effects of burnout at the organisational level. For instance, Cherniss (1980) showed that burnout experienced early in an individual's career does not necessarily have significant, long-term negative consequences, but that the consequences of burnout experienced later in the career are quite severe. According to the findings of the relevant literature review, the consequences of burnout are summarised as follows:

– *Physical and mental health*. On an individual level, burnout can lead to serious physical problems, often in the form of fatigue, insomnia, headaches, gastrointestinal disorders, hypertension, muscle aches and pains (Kahill, 1988). Tanner's study of burnout in 3,895 workers from 1995 to 1998 found that burnout increased the individual's risk of mental disorders, cardiovascular disease, digestive disease, respiratory disease, and musculoskeletal disease. The emotional exhaustion index was significantly connected to the likelihood of future cardiovascular disease and depersonalisation was significantly associated with digestive disease.

– *Attitude towards work*. Studies found that individuals with high levels of burnout had lower job satisfaction, job commitment and organisational commitment. As the level of burnout increased, individuals' intentions to leave their jobs became more apparent. Lv (2005) discovered that burnout was highly negatively link between job satisfaction and university teachers. Qu (2006) found that organisational commitment was correlated with all dimensions of burnout among manufacturing employees.

– *Interpersonal relationships*. Individuals with high levels of burnout will avoid or reduce their interactions with customers, colleagues and friends and will be impatient. In addition, they experience more conflict between work and other things, especially

with family, that is, the negative effects of burnout can have a spillover effect, inviting negative experiences such as emotional exhaustion into family life and friendships. Studies have shown that burnout caused by chronic stress strains interpersonal relationships with people at work, friends and family.

– *Job performance or behaviour*. People who experience a lot of burnout are more likely have poor performance, as Schwab et al. (1986) showed that teachers' effectiveness in teaching is reduced by burnout, and Maslach et al. (2001) found that burnout among nursing staff seriously affected the quality of their care. Moreover, individuals with high levels of burnout had higher rates of turnover and absenteeism.

2.4.4 Theoretical expansion of job burnout

The foreign theories applied in studies of job burnout mainly include the three-dimensional structure model, development stage model, matching model and contract model, among which the MBI three-dimensional structure model is the most influential and widely used (Maslach & Jackson, 1981). Schaufeli and Greenglass (2001) pointed out that the term job burnout was initially developed for service industries, such as teachers and nurses. To adopt this term for more research in various professional fields, Schaufeli investigated 4,000 priests, maintenance workers, technicians, nurses and professional managers, finding consistency in three dimensions, and confirmed that people working in non-service industries also experience job burnout. However, Shirom (2003) believes that among the three MBI measurements of job burnout, only the exhaustion dimension is determinant, while the other two aspects are incidental. Alienation is a way for an individual to cope with exhaustion caused by job burnout, while the decreasing sense of achievement is the result of emotional exhaustion. This point of view clearly distinguishes job burnout from factors such as coping behaviour and its subsequent results in previous stress assessments, which helps to further clarify the concept of job burnout and reduce substantial confusion with other variables.

According to the theory of development stage model (Cherniss, 1980), job burnout is gradually formed by the internal and external factors of the work environment after a period of interaction with the employee. From the perspective of empirical studies, the three dimensions of MBI can be divided into high or low scores, and it turns out that the possible combinations constitute eight forms or stages. However, there are different opinions on the sequence of these eight forms or stages. One stage theory holds the point that there are two kinds of situations according to the developing stages. One is that depersonalisation is the first

sign of job burnout, continued by a low personal sense of achievement, and finally emotional exhaustion. The other kind of situation is that different factors develop independently at the same time, and finally form eight different models. In addition, the other stage theory believes that emotional exhaustion first occurs, accompanied by the formation of depersonalisation, and then leads to a low personal sense of achievement. Maslach and Jackson (1981) support the second development process. Cherniss (1993) believes that job burnout can be broken down into three stages: work pressure stage, tension stage and defence and response stage. In the stage of work pressure, the demands and needs are symmetrical and imbalanced. After experiencing work pressure, there will be phenomena such as mental tension, physical or mental fatigue and emotional irritability where an action of defence must be taken.

Hobfoll and Freedy (1993) refine the conservation of resources theory (COR), which claims that people must conserve and acquire resources that are believed to be valuable for material, social, and energy resources. If individuals sense the loss of resources, the threat, or the need to meet the demand, or if individuals feel that they are losing themselves or they cannot get the resources which they are purchase, they will get stressed and job burnout would occur. Individuals might act when they experience increasing work needs, loss of work resources, excessive work and insufficient return.

The basis of COR theory is that job resources and job demand can estimate the three aspects of job burnout, which are caused by various psychological perceptions of loss and gain. Generally speaking, compared with gaining, people pay more attention to how to reduce or avoid loss. The results show that job demand may be more prone to cause burnout. Park et al. (2014) used the meta-analysis method to research job burnout, which also confirmed this point. They found that variables relating to job demand have greater potential to result in emotional exhaustion than resource variables, and the correlation between depersonalisation, personal achievement and job demand was not significant, while resources were significantly correlated with these two dimensions.

The Job Demands-Resources (JD-R) model, proposed by Demerouti et al. (2001) and based on COR theory, suggests that two characteristics of professions contribute to job burnout: job resources and job demands. Job demands refer to the elements that necessitate extra effort, leading to psychological cost, while job resources are those characteristics that help reduce job demands, achieving work goals, or foster individual growth. The JD-R model proposes that job burnout is mainly due to the additional effects of job resources and job demands, rather than their interaction. Schaufeli and Bakker (2004) studied 1700 employees in four different industries and found that depersonalisation is connected to job resources,

which supports the JD-R model.

2.5 Turnover intention

2.5.1 The concept of turnover intention and classification

2.5.1.1 The concept of turnover intention

Maertz and Griffeth (2004) stated that 'turnover intention is the next retreat behaviour after an employee has experienced dissatisfaction. Mobley (1977) suggested that turnover intention is the intentional desire to leave an organisation after working in a specific organisation for some time and after a period of deliberation. Turnover intention falls under the category of active separation. He argues that turnover intention follows through several further stages (thoughts of leaving, job search, assessment and comparison of other opportunities) and is the final stage prior to the actual act of exit. B. H. Chen and Li (1998) believe that the so-called propensity to leave refers to employees' attempts to leave their current workplace, which can directly lead to real turnover behaviour. This tendency, according to B. H. Chen and Li (1998), is the psychological state before turnover behaviour.

Although various researchers have offered different definitions and explanations of the term 'turnover', regardless of the descriptive words, all studies have indicated that the propensity to leave is a psychological attitude towards work, focusing on the intentional element of work attitudes. Moreover, all recognise that the propensity to leave is the last stage of the continuum of withdrawal cognition, which best predicts the occurrence of the worker's leaving behaviour but is different from the actual leaving behaviour. Mobley's (1977) theoretical model was the first to suggest that dispositions to leave were an important factor in the transition from job dissatisfaction to actual turnover behaviour, which was significant in that it not only provided a valid predictor of turnover behaviour but also provided the basis for the hypothesis that 'attitudinal dispositions are a prerequisite for behaviour' in psychology and behavioural science.

Podsakoff et al. (2007) propose that there an inverse relationship between certain dysfunctions and inhibitory stress sources, such as decreased organisational commitment and job satisfaction, as well as increased withdrawal behaviour, turnover intentions and turnover. Conversely, they note that the relationship between a challenging stress source is usually inverse, with positive correlations to organisational commitment and job satisfaction, and negative correlations to turnover and turnover intentions. As a result, it was found that the

difference between the challenging pressure source and the disability pressure source and turnover intention were caused by the mediation effect of the job attitude.

2.5.1.2 The classification of turnover intention

According to the different perspectives and purposes of researchers, turnover intention can also be classified into different categorisations. According to the personal will of the employees, S. K. Xu (2007) divided employees' turnover behaviour into voluntary and involuntary turnover. Voluntary turnover is the term for when employees choose to leave made by the employees themselves according to their individual will from their own position, mainly refers to resignation, including voluntary leave because of personal influential factors such as health conditions, retirement, moving to an overseas residence, and more, as well as organisational factors including salary alternation, promotion and other such situations. Involuntary turnover generally tends to indicate that employees had to leave the organisation because of the request of the enterprise, which is not responding to the will of employees themselves, including dismissal, firing and structural layoffs. In general, job turnover such as retirement and death are often classified as involuntary turnover as well.

Generally speaking, voluntary turnover is the flow of personnel concerned by the organisation, and most of the turnover phenomena discussed usually refer to voluntary turnover. Tews et al. (2020) mentioned three main reasons that the studies generally focused on voluntary turnover. First, most turnover phenomena are voluntary. Second, the construction of the theory will be simpler to follow because of the isomorphism of the research object. Last, voluntary and involuntary turnover have different determinants, and those of the former can be more easily controlled by the organisation. However, some scholars have expressed doubts about the application of this classification method in empirical studies. For example, Zimmerman et al. (2019) pointed out that individual's working environment, tool attachment, and sense of obligation had significant negative correlations in job hunting and turnover, and the working environment and tool attachment had the strongest effect. Only a significant negative correlation exists between outside organization and job hunting. Interestingly, the effect on the organization has no significant relationship with job hunting and turnover.

Potential problems might arise from classifying the turnover types based solely and simply on the employees' personal willingness to leave the organisation. Consequently, Dalton and Todor (1979) stated that from the perspective of functionalities of organisations, voluntary job turnover can be subdivided into non-functional and functional turnover

according to three distinguishable criteria. These criteria include first, the employee's performance achievement level; second, the organisation's willingness to continue to hire him or her; and finally, the possibility of replacing the employee with a turnover intention.

'Functional turnover' refers to an employee wanting to leave and the organisation does not show any tendency to keep the worker, in which case the organisation normally has a negative impression of the employee. Such employees' job turnover is hence considered beneficial to the organisation. On the contrary, nonfunctional turnover means that an employee expresses the desire to leave, however, the organisation wants to comfort him or her to detain this employee. Hence, the organisation probably has positive comments on the relevant employee. Such employees' turnover intention is not conducive to the organisation. Overall, nonfunctional voluntary turnover is the main type of turnover an organisation cares about and focuses on, as the leave because of turnover or even the withdrawal of the well-evaluated employees from the labour market is a loss to the organisation, and sometimes to society. To avoid nonfunctional turnover, it is obvious that organisations should strive to make sure that the employees needed by the organisation are willing to stay. Apparently, this classification is more meaningful from the aspect of organisations, but some researchers, such as Campion (1991), expressed a cautious view which mainly points out that it is difficult to realise the actual empirical studies as the technical problems such as accurately measuring and quantifying the organisation's achievements and performance standards mentioned above.

Meanwhile, Abelson (1987) divided turnover into four categories based on the principle that whether this turnover is voluntary or avoidable. According to Abelson, the four types include (1) Avoidable voluntary job turnover after organisational intervention and efforts. The possible reasons for this type of turnover can be dissatisfaction with leadership, low salary and working environment. (2) Voluntary turnover that cannot be avoided even with the intervention of the organisation, including turnover intention raised by employees' pregnancy, immigration, increasing need for childcare and other issues. (3) Turnover brought up and enforced by the organisation or the superiors, such as dismissal, lay off and other methods, and (4). Involuntary turnover is when the organisation is unable to intervene, such as illness, death and other causes. Abelson also pointed out that the characteristics of the employees who decide to stay in their positions and continue to work are similar to those who leave involuntarily but not to those who leave voluntarily. H. Wang et al. (2020)observed that there are some differences between Chinese employees' turnover behaviour patterns and those shown by Western employees. Also, H. Wang classified the turnover into explicit turnover and implicit turnover and indicated that particularly the latter type I can be more commonly

observed in state-owned enterprises and institutions in China.

2.5.2 Measurement of turnover intention

Although different researchers have given different definitions of turnover intention, either definition shows that turnover intention is a psychological attitude towards the job and work, focusing on the elements of intention about work attitude. It is commonly agreed that turnover intention is the last stage of continuous withdrawal cognition, which is also the best prediction of the occurrence of workers' turnover behaviour. However, it is different from actual turnover behaviour. Mobley (1977) first proposed a theoretical model where the employee turnover intention is a critical factor in transitioning from job dissatisfaction to actual turnover behaviour. The great significance of this factor is that it not only provides a factor to effectively predict employees' turnover behaviour but also provides a hypothetical basis for the theory in psychology science and behavioural science, that 'attitude tendency is a prerequisite for actual behaviour'.

Most researchers who have explored turnover intentions have used Mobley et al.'s (1978) Employee Withdrawal Behaviour Model (EWBM) as a measure of turnover intentions, which focuses on four areas: change in employees' perceptions of the company, thoughts of leaving, behaviour towards finding other jobs and assessing and comparing alternative job opportunities. Although Johnston et al. (1987) has proposed a modified version of the scale, it is still roughly the same as Mobley's scale. In other words, the instruments used to measure turnover intention are quite consistent in substance.

2.5.3 Factors influencing turnover intention

Employee turnover behaviour is a complicated activity determined by many factors, which do not occur independently but connect with each other to influence turnover intentions and behaviour. Many scholars have found that intention to leave is an accurate indicator of turnover behaviour, making it a suitable direct antecedent variable. Different researchers have categorised which factors influence employees' turnover intention from different perspectives. Zeffane (1994) suggests that factors influencing turnover intentions include external factors (labour market), individual employee characteristics (e.g., intelligence, ability, interest, age, gender and tenure), organisational factors (e.g., working conditions, salary, involvement and supervision) and reactions to work (e.g., engagement, job expectations and job satisfaction). According to a review of the literature, this study suggests that the following dimensions can

be summarised:

Individual factors. Numerous studies have revealed that gender, education level, age and tenure in the organisation are meaningful predictors of turnover intentions and job satisfaction and that their effects on turnover intentions are mainly indirect. In addition, there are also individual characteristics variables such as personal performance, personal performance, personality traits, career interests, thinking styles and temperament, and these important factors and turnover intention have a complicated relationship.

Organisational factors. The factors related to work are mainly occupational types, work pressure, diversity of work tasks, interpersonal relationships at work, working environment.

Factors related to organisational characteristics include organisational culture, institutional norms, organisational ethics, management style and mechanisms, organisational effectiveness and reputation, leadership style, information and communication style, participation in decision-making, current remuneration, training, promotion opportunities, and more. The organisation's culture and ethical climate imply the organisation's expectations and commitment to its members, and when employees' personal values do not match those of the organisation, they will have the intention to leave.

The ability of a company to provide relearning opportunities and training will also have a important effect on whether an employee stays with the organisation. If an employee does not feel able to further develop their skills and grow, get promoted and realise their self-worth, they may choose to leave. In addition, the level of involvement in the company's or departmental decisions also have a positive impact on job satisfaction, which in turn directly or indirectly influences the employee's turnover intention. Employee turnover can also be predicted by their structural position in the communication network, with individuals on the periphery of the network receiving less information and being more likely to leave their job. Pay and benefits are often a key factor in retention. The perception of pay equity has a greater impact on turnover intentions than the pay an employee receives, with skill-based pay rules increasing employees' willingness to stay with the company. Conversely, if the organisation's salary is paid more based on seniority, employees are more motivated to leave.

Suitability factors between individuals and organisations. One of the main reasons why employees' abilities are not proportional to their performance and their contribution to the organisation is that there is a mismatch between individual characteristics and organisational or environmental characteristics. Employees are always in a position in an organisation and have certain tasks to perform. When there is consistency between the tasks required for a particular position and the individual competencies required for that task, when the

individual's moral values are appropriate to the organisation's moral values, and when the employee's personality matches the type of occupation and the current job requirements, employees will have higher performance, satisfaction and lower intention to leave. Therefore, when recruiting new employees, organisations should pay attention to selecting individuals who are consistent with the values, styles and characteristics of the organisation and placing them in appropriate positions. Pienaar et al. (2007) proposed an integrated model of individual-organisational matching based on a summary of previous research on individual-organisational conceptual matching. It is also suggested in this research that matching is influenced by both individual and organisational characteristics.

External environmental factors. The external environmental factors include the level of socioeconomic development, the labour market situation, the situation in the same industry, the industrial structure, regional differences and other external factors. In addition, other macro factors such as social and cultural structure, employment system, quality of life, transportation and housing also influence the voluntary departure of employees. When the supply of employees in the labour market is short, the job opportunities outside the organisation increase, or the employment environment is helpful, the employee's job satisfaction decreases, which in turn leads to turnover intention. The same is true when the welfare and salary of employees in the enterprise are lower than those in the same industry. Jacobs and Roodt (2007), surveyed 456 salespeople from 66 cities in 25 states. Unemployment in the market was found to positively affect employee job satisfaction and showing an opposite trend to employee turnover. In other words, few people leave voluntarily when unemployment is high and people value the jobs they have because they are harder to find. At the same time, changes in industrial structure can lead to employees in sunrise industries earning relatively high incomes and staying in their jobs, and economically developed and liveable areas are attractive for migration and labour force employment.

Attitudes and other internal psychological process factors. These variables are mainly related to internal self-care processes such as organisational commitment, job satisfaction, psychological contract, sense of equity and sense of fairness, and need for achievement.

Compared with a large amount of research literature on employee turnover in Western countries, the research on employee turnover by scholars in China is still in its infancy. In recent years, the issue of employee turnover has increasingly become a hot topic of research by scholars in the theoretical field and can be divided into two categories according to research methods: qualitative research and quantitative research. Qualitative research mainly introduces the new progress of separation research and reviews the mainstream separation

models, conducts empirical analysis and discussion on the phenomenon of separation and its influencing factors, and puts forward relevant countermeasures and suggestions.

For example, Xie (1999) introduces and reviews several influential models of employee turnover before the 1980s, while Gan et al. (2020) review in detail some representative models of turnover motivation in employee turnover studies after the 1980s. Some scholars have analysed the impact of human capital on the mobility of human resources mainly from a macroeconomic perspective. While others have analysed the causes of high employee turnover in private enterprises from a micro perspective, either by pointing out the hazards of employee turnover or by listing the factors that influence employee turnover and the main practices for retaining good talent. For example, X. Zhang et al. (2020) analysed the characteristics and causes of knowledge-based employee turnover from a theoretical perspective and proposed several countermeasures.

Quantitative studies mainly explore the effects of relevant variables on separations in a certain group of people to further validate and revise existing models or propose new ones. For example, L. Li et al. (2020) researched the relationship between the separation rate and labour market from an economic perspective and proposed a model of internal and external factors of employee separation. Deng et al. (2021) adopted a multivariate analysis method to conclude that there was a negative correlation between turnover intention and teachers' job satisfaction, while age and tenure longitude played a moderating role in the relationship between teachers' job satisfaction and turnover intention.

C. Wang et al. (2020) examined the interaction between the institutional organisation and the employees in the process of employee turnover, and also conducted a longitudinal comparative study on the same group to form a horizontal comparison between the employees from state-owned enterprises and private enterprises. C. Wang et al. (2020) then further established the corresponding analysis model of game theory. X. Zhang et al. (2020) studied the determinants of 752 employees' turnover intention from various types of enterprises located in Shenzhen. Results showed that both the overall job satisfaction level and the score of other determinants of job satisfaction have a significant impact on employees' turnover intention. In addition, Gan et al. (2020) showed that the level of job satisfaction might be an intermediate variable between the variable of population occupational and turnover intention.

Moreover, T. Zhang et al. (2021) improved the model of turnover intention established by X. Zhang et al. (2021). This technique was then applied to the empirical analysis focusing on the process of employees' turnover intention, where 470 technical staff members from IT enterprises in Xi'an were examined. It is concluded from the research mentioned above that,

there are 10 variables such as organisational commitment, job satisfaction, job-seeking behaviours and future opportunity which were identified and used as the main determinants of the turnover intention of the technical employees from the IT enterprises studied. Additionally, T. Zhang et al. (2021) conducted a cross-cultural validity study with a simplified model of the turnover intention. An empirical research by Xiao et al. (2021) demonstrates that the level of job satisfaction of technical staff in IT enterprises is a significant influential factor affecting employees' turnover intention.

X. Zhang et al. (2020) focused on the impact of various personal work attitudes of employees in various enterprises in Xi'an on turnover intention. The results show that the level of satisfaction with the job itself, the sense of satisfaction with promotion opportunities, the pressure of career development, the emotional commitment provided by the enterprises and satisfaction with compensation are important factors affecting employees' turnover intention. According to the results, when comparing the employees working in different types of enterprises, the turnover intention of employees in state-owned enterprises is the highest, followed by private enterprises, and finally, foreign-funded enterprises. Shen et al. (2020) classified the factors influencing turnover intention into three levels: social level, organisational level and individual level.

According to H. Hu et al. (2022), the social level includes the current condition of the labour market and economic factors, and the organisational level includes organisational factors such as organisational change and organisational characteristics, also work factors such as work nature, interpersonal relationships and training. Finally, the individual level includes demographic factors, which contain gender, age, marital status, education, tenure and psychological family factors. X. Zhang et al. (2021) offered a 'push-pull' model of employees' turnover intention. It is believed that there are three main factors affecting employees' turnover intention, which are social factors, organisational factors and personal factors. Among them, organisational factors form a force pulling on the employees who want to leave and personal factors are considered the variables of deciding and conducting employees' personal turnover behaviour.

Ran et al. (2020) synthesised and summarised the influencing factors of the above hypothetical classification of turnover intention, and divided the model of employee turnover intention into intentional factors of turnover intention and mediating factors of turnover intention. To be more specific, intentional factors of turnover intention include individual factors, organisational factors, matching factors between individual and organisation, and external environmental factors, and mediating factors of turnover intention include the payoff

function of the external environment, factors of individual economic support and factors of organisational support.

2.6 Work values

Work values' are also known as 'professional values' in China, and in general, no strict distinction can be made. In Western countries, however, there is a distinction between work values and professional values. Work values generally refer to the values of those who are already in the workforce, whereas professional values refer more to the values of students who are not in the workforce. Despite the distinction, the basic values reflected in them are the same, which is also because values are a stable personality disposition. In terms of the current status of research in China, more attention has been paid to the issue of values (or career choice) in the process of a student's career choice, which is about subjective expectations and judgments of future careers, and therefore tends to use 'professional values'.

This study focuses on the values of teachers after work, the professional behaviour of in-service staff and related factors, so the term 'work values' is used. Huo and Li (2009) believes that work value refers to a belief which is beyond specific situations, and also a guide for an individual to perform and evaluate work-related behaviours and events in different degrees of importance to achieve the desired state. Recently, scholars have paid increasing attention to studying work values. The research mainly involves the structure of work values, the relationship between value measurement and other related concepts, as well as cross-cultural and cross-generational differences. This thesis comprehensively summarises the research progress of work values in recent years and analyses the differences in work values among different genders, industries, generations, countries and regions. Future researchers must focus more on the cross-cultural applicability of work values measurement tools and their changing mechanism.

2.6.1 The concept of work values

The study of work values began in the 1920s and 1930s and developed into one of the most popular topics in psychological research in the 1950s and 1960s, and today, interest continues to grow. As society moves into the post-modern and post-industrial era, where diversity and change are the norms, the strong clash of value cultures and the rapid and dramatic changes in the wave of globalisation have resulted in a society where individuals feel they have no one to turn to. Thus, it has led to a continuing interest in the study of values and work values. The

first issue in work values research remains the understanding of them, which, despite decades of research and development, is still difficult to define consistently.

In Western research, on the one hand, work values are the work-related goals that individuals pursue, that is, the intrinsic needs of individuals and the traits or attributes of work that they seek when engaging in activities. On the other hand, Ross (1992) argued that work values are the beliefs about the end state or behaviour that people can achieve from a job. According to Akroyd et al. (2002), work values are the beliefs that individuals are satisfied with the role they play at work.

In China, the study of work values has gradually emerged in recent years, and many research results on work values (called professional values in China) have emerged. Chinese scholars have also suggested their own views on work values. According to H. L. Ren et al. (2019), 'professional values' are value judgments about occupational choices, the meaning of occupational life and the occupational hierarchy, which are mainly expressed in issues such as professional value orientation, principles of occupational choices and expectations of rewards for occupational activities. According to W. S. Huang and Shen (2012), professional values are people's evaluation of the needs of social occupations, and they reflect life values on professional issues.

Lou et al. (2021) proposed that professional values are a relatively stable, generalised and motivating belief system people use to treat their occupations, occupational behaviours and work outcomes according to their own and society's needs. The authors further claim that professional values are the expression of individuals' general values in their occupational life – they not only determine people's tendency to choose their occupations but also determine their work attitudes. Professional values are the beliefs about occupational experience acquired by individuals during a long-term socialisation process (Lou et al., 2021), which is a concept that belongs to the category of personality tendencies.

Past research has been based more on the work values of 'generic' people than on the 'professional' work values of specific people, fields and professions. This study goes deeper into the teacher group and focuses on the teaching profession, making the study more specific. Teachers, as the bearers of educational work, are one of the subjects of educational activity, and their work values should reflect the characteristics of that activity. From the current research on teachers' or teacher trainees' work (professional) values, few have touched on conceptual issues. Even Y. Yang et al.'s (2020) concept of teachers' work values has blurred the subject of values and failed to clarify teachers as the initiators and implementers of teachers' work (professional) values and their behaviours. This also reflects the shortcomings

and inadequacies in understanding the connotations of teachers' work values.

2.6.2 Review on the research of work values

Since work (professional) values are seen as a category of personality, psychology research on occupational psychology-related issues uses more methods of personality measurement, of which questionnaires are the main one. Some of the more representative and widely used questionnaires on occupational values are the Occupational Values Inventory (WVI); the Minnesota Importance Questionnaire (MIQ); and the Gordon Occupational Values Inventory (OVI). In China, there are revisions of the Super Work Values Inventory, a revision of the Edinburgh Occupational Test, and a revision of the Occupational Values Inventory for university students. These work values scales have certain reliability and validity and have been confirmed by some studies. In recent years, people are gradually trying to move away from the single-questionnaire model of work values research, and in China, for example, Lou et al. (2021) has supplemented the questionnaire with projections. In this regard, scholars in Taiwan have made more useful attempts, for example, by reviewing ancient literature in an attempt to collate the cultural roots of the nation, or by using historical and social structure analysis. Using those methods, they could capture more macro-level social outcomes and value variables, all of which are feasible.

Regarding the impact of work values, studies have been conducted on related factors such as job performance, job satisfaction, and turnover intention. For example, Casper and Fishbein (2002) argued that work values affect job attitudes, then directly affect behavioural intentions (job satisfaction, turnover intention) and finally affect actual behavioural performance. That is, work values – work attitudes – behavioural intentions – actual behaviour. Spector (1997) found that headmasters' professional values had a strong influence on the decision to select new teachers, and work values had a significant impact on young people's attitudes and behaviour at work.

In China, studies on teachers' professional values at work are also not very common. Early ones include Yuan et al. (2018) and others who investigated the relationship between teachers' professional values and work motivation; L. L. Zhang and Zhou (2005) who explored the role of teachers' professional values on teachers' development; and A. Q. Wang and Hu (2012) who conducted an empirical analysis of the relationship between teachers' work values and task performance in universities. In contrast, there is flourishing research in Taiwan. Since the 1990s, there have been more than 40 research studies on the topic of

teachers' work values, mainly concerning the effects of teachers' personal background variables on work values and the effects of work values on teachers' related behaviours, such as organisational commitment, career development, job satisfaction and work engagement. W. S. Huang and Shen (2012) explained that the work values of junior high school teachers in Kaohsiung City significantly affect teaching efficiency with work input and showed a complete intermediate effect. According to the findings of the study, the researchers discussed issues related to the human resources management of a junior high school in Kaohsiung and offered suggestions for future studies. Zhao and Zhang (2004) provided evidence of the constructive validity of teachers' work values and made suggestions for practical applications based on a compilation of results on teachers' work values.

2.7 Role ambiguity

2.7.1 The concept of role ambiguity

Recently, role ambiguity has been the focus of much attention. It is defined as the lack of clarity and comprehension of the requirements and objectives of a particular role. For members of an organisation to be successful in their role, they need to be aware of how to acquire it, as well as what the end result should be. This can be difficult to achieve when there is a lack of information about the role or when it cannot be communicated effectively.

In the literature, there are several definitions of role ambiguity: according to Murphy (1994), role ambiguity refers to the uncertainty of job role definition experienced by individuals, including uncertainty of job duties, uncertainty of job goals. According to Pierce et al. (1993), role ambiguity refers to individuals' feelings of incompetent and inability to perform their jobs due to their lack of clear and consistent understanding of their occupational rights, duties, responsibilities. Ma and Zhang (1999) suggest that role ambiguity refers to the uncertainty of the role environment experienced by individuals, such as the relationship between role positionings, other people's expectations of the role, the steps to meet such expectations, the behavioural goals of the role, the evaluation of the role behaviour.

Liu et al. (2000) summarise that the ambiguity of job roles has the following drawbacks: first, it causes waste of human resources to the organisation, leads to recessive brain drain and increases the turnover rate. From recruitment, selection and training to the start of an employee's career, the organisation pays a high price for this cycle. It is undoubtedly a serious waste of talents and funds that the employee's confusion and low work efficiency are caused

by the role ambiguity. Under such circumstances, it is easy for technical personnel to find alternative employment. Second, there would probably be a lack of division of responsibility and authority, and a blurring work objective. In the absence of goal management, employees can not receive timely performance and reward feedback, which inevitably leads to low morale and loss of organisational productivity. Third, it would reduce employees' sense of self-efficacy, loyalty and job satisfaction. Self-efficacy is an individual's sense of competence and confidence in successfully taking on a job or task. Ambiguous job roles prevent individuals from giving full play to their existing talents and only add to negative emotions such as frustration, incompetence and helplessness. It also weakens employees' sense of loyalty to the organisation and lead to reduce job satisfaction. Meanwhile, ambiguous roles can easily lead to role misunderstandings between members and exacerbate interpersonal communication barriers.

2.7.2 Review on the research of role ambiguity

Role conflict and role ambiguity have been identified as important variables in organisational factors that contribute to stress, strain and ultimately burnout. Role conflict is any inconsistent role demands on an employee's abilities, goals, values or beliefs, while role ambiguity occurs when the role bearer lacks the necessary information to perform the role (Guo, 2008). Rizzo et al. (1970) separated role ambiguity from role conflict for the first time, arguing that role ambiguity and role conflict are two independent variables. Moreover, the negative correlation between role ambiguity and job satisfaction, job autonomy, personal development, interpersonal communication and teamwork is significantly higher than that between role conflict and these variables, and the positive correlation between role ambiguity and turnover intention is also significantly higher than that between role conflict and turnover intention; However, the negative correlation of role conflict is more significant in job stress, tolerance of mistakes and adaptability of changes. Graen et al. (1982) also noted that 80% of managers working in universities and public services were still unsure of what their supervisors wanted from them after a month on the job, and that this phenomenon was even becoming widespread.

Most research on job roles has focused on the impact of role ambiguity on organisations and individuals. Scholars have conducted research on role ambiguity in relation to organisational commitment, job satisfaction and job performance. Schwab and Iwanicki (1982) investigated 469 teachers and found that role ambiguity was related to lack of personal

achievement. Chinese scholars Ma and Zhang (1999) investigated the role perceptions and job stress of employees in two large and medium-sized enterprises in China and found that employee role ambiguity had a significant impact on job stress.

Role ambiguity scales have evolved over the past 40 years, and the Role Ambiguity and Role Conflict Scale developed by Rizzo et al. (1970) was one of the first and most widely used scales in this area. Although this Role Ambiguity and Role Conflict Scale is widely used, some scholars continue to suggest that greater attention should be paid to content validity, sensitivity to wording bias, and to the factor structure of this scale. House et al. (1983) criticised role conflict and role ambiguity measures as potentially confusing with stress and comfort, that is to say, he argued that other measures of role conflict are stress phrased (i.e. all questions are positively scored) and the role ambiguity measure uses questions that are comfortably phrased (i.e. all questions are negatively scored). In the development of this role conflict and role ambiguity measure, House et al. (1983) examined the scales of both constructs using a 43-question questionnaire. The questions involving the role ambiguity factor were a mixture of sentences phrased as stress (comfort) and self (other). The questions involving role conflict factors were a mixture of sentences worded in terms of stress induced by other groups. In an international study across 21 countries, Peterson et al. (1995), using a validated factor model, found that measures of role conflict, role confusion and role overload originally used in the United States had low reliability when applied to cross-cultural studies. As a result, the original measures were streamlined using exploratory factor analysis to create cross-national, credible factor structure subscales based on this national context. The streamlined measure included 5 questions on role ambiguity, three questions on role conflict, and 5 questions on role overload. And a validated factor analysis revealed equivalence between the streamlined measure questions and the full set of role stress measure questions originally used in the U.S. Breaugh and Colihan (1994) conducted research specifically on job role ambiguity. They measured three aspects of role ambiguity using nine questions, namely, job method ambiguity, i.e. employees' uncertainty about what methods to use when working uncertainty; work process scheduling ambiguity, i.e. employees' uncertainty about the sequencing of work tasks, time allocation and the order in which a particular task is performed; and performance evaluation ambiguity, i.e. employees' uncertainty about the criteria for measuring and assessing whether work performance is satisfactory.

Synthesizing previous studies on role ambiguity in different countries, we find that so far, empirical studies on role ambiguity have mainly focused on its effects on job stress, job satisfaction, organisational commitment and turnover intention. There is no empirical research

made in China on the role of role ambiguity in mediating the relationship between identity and job satisfaction, burnout and turnover intention so far.

2.8 Work overload

2.8.1 The concept of work overload

The term work overload referred to as 'overwork' in China. Most Chinese scholars define work overload from the perspective of work intensity and working hours. According to Y. J. Wang and Lu (2014), work overload is caused by excessive work, where excessive refers to work hours and intensity that exceed the social average. Scholars other than China are more likely to explain work overload from the perspective of stress and pressure. According to Meng (2013), an overload of work caused by overtime and over-intensity can result in fatigue or a difficult physical condition. Bliese and Castro (2000) think that work overload is actually the interaction between work requirements and psychological stress, which arises from employees' efforts to achieve work requirements, and when employees perceive that actual work requirements exceed their own abilities, this psychological stress will become greater. Brown and Benson (2005) define work overload as the stress that employees have in completing work tasks, including working long hours and being forced to undertake unrealistic work requirements.

In summary, it seems that Chinese and foreign scholars have inconsistent definitions of work overload, but they are only inconsistent in the angle of approach. Foreign scholars explain work overload in terms of the consequences of overloading work, while Chinese scholars define it in terms of the factors that affect overload of work.

2.8.2 Review on the research of work overload

A study from H. Yang (2010) points out that the problem of overwork in China is serious and researches on this phenomenon should be strengthened. The Foxconn jumping incident has further prompted researchers in China to conduct research on employee work overload. Zheng (2012) points out that China must strengthen the implementation of the legal system regarding work overload area and improve the relevant laws and regulations so as to protect the legal rights of workers. Some scholars also explain the phenomenon of work overload that occurs among employees in China from the perspective of the work requirement-resource model, with X. Wang (2016) pointing out that work requirements can significantly contribute to

employees' work stress, while work resources can alleviate employees' work stress. And she finally gives advice from the enterprise level, the organisational level and the government level on how to do a good job of employee suggestions for stress management. In summary, Chinese and international research on work overload has focused on its causes, effects on job stress, job satisfaction and turnover intention. So far, no empirical studies have been conducted in China on the role of work overload in mediating the relationship between identity and job satisfaction, burnout and turnover intentions.

2.9 Supervised support

2.9.1 The concept of supervised support

In 1986, the American social psychologist Eisenberger et al. began to focus on the issue of organisational commitment to employees, and in their study of 71 college and university teachers they found that teachers' absenteeism was significantly related to organisational support, with the magnitude of the relationship depending on their sense of exchange. The relationship between organisational support and absenteeism was negative for teachers with high and medium levels of exchange awareness, while the relationship was not significant for teachers with low levels of exchange awareness. Using social exchange theory, they argue that the commitment between organisations and employees is mutual, rather than unilaterally focusing only on employees' commitment to the organisation, and subsequently they develop the concepts of Organizational Support Theory and Perceived Organizational Support. The sense of organizational support is that after employees strive to make their due contributions to the growth and development of the organization, their perception of how the organization views its contribution and the organization's attention to the remuneration and benefits paid to its contribution, in short, it is a general perception and belief of employees in how the organization views its contribution and cares about its interests. McMillin (2013) supplemented Eisenberger and others' views. He believes that organizational support should include instrumental support (such as information, resources, equipment, and training) in addition to respect and welfare support. If there is a lack of necessary instrumental support, The employee's work schedule and quality may be discounted, which ultimately leads to employees' anger and frustration.

Rhoades and Eisenberger (2002) found through a meta-analysis that supervised support was one of the three important antecedent variables of organisational support. Employees'

perception of organizational support is largely experienced by feeling support from superiors. The evaluation of their work performance and the allocation of their resources are usually through superiors. A. Y. Zhang et al. (2008) further define supervised support as the extent to which employees perceive that their supervisors give them help with their lives, provide training to enhance their abilities and work tasks and the frequency and degree of authenticity of feedback on the job.

From the Leadership-Membership Exchange (LMX) theory, we can see that since time and energy allocation is limited, superiors will classify the members of the organization they value and like as their 'inner circle subordinates' and the other members as their 'outer circle subordinates', and treat these two kinds of people differently and adopt completely different management methods. The 'inner circle' will be given more resources than the 'outer circle' and will have more autonomy in their work. The 'inner circle' will be better able to satisfy their self-esteem needs, have a greater sense of trust and perform better at work.

2.9.2 Review on the research of supervised support

Chinese research on parental support started late and is lacking, but in recent years, Chinese scholars have shown a strong interest in the study of parental support.

A study by Eisenberger et al. (1986) found that employees tend to equate superior behaviour with organizational behaviour. The superior usually acts as an agent of the organization to communicate the organization's goals and culture to the subordinate employees, so its behaviour is regarded as the behaviour of the organization itself by the employees. Rhoades and Eisenberger (2002) used a literature review to examine the previous literature on perceptions of organisational support and concluded that supervisor support was one of the antecedent variables for perceptions of organisational support. Lantz and Laflamme (1996) found through a survey study that an increase in the sense of support from superiors and colleagues was significantly and negatively related to employee burnout, i.e. the more support an organisation's employees received from superiors and colleagues in terms of resources and information, the more their enthusiasm for work would increase, thus reducing the likelihood of burnout. R. Li (2010) conducted a survey and analysis of employees in more than 30 companies in the Pearl River Delta region in China and found that when higher levels of support from superiors were received, employees' attitudes towards the organisation also improved, leading to higher levels of engagement in constructive behaviour.

There are currently two different academic measures on the measurement of supervised

support, which are based on differences in the division of the dimensions of supervised support.

The unidimensional perspective is based on the *Organizational Support Perceptions Questionnaire* (SPOS) developed by Eisenberger et al. (1986) and others to measure support from superiors. For example, Kottke and Sharafinski (1988) used the 16 validity items of the SPOS as the basis for their study, replacing the word 'organisation' with 'superior' in each item and leaving the rest of the wording unchanged. Eisenberger et al. (2002) extracted three items from SPOS, questions 10, 27 and 35, and replaced the 'organization' with 'superior' for adaptation. Florence and Vandenberghe (2003) also took the same three items as Eisenberger et al. (2002).

The multi-dimensional perspective believes that the support felt by employees from superiors is multi-faceted and should be divided into different dimensions for measurement. Karasek (1979) measured support from supervisors in three dimensions: interest concern, instrumental support and tolerance support. Chinese scholars X. Wang and Liao (2006) developed a 23-question scale containing 5 subscales: material support, emotional support, information support, concern for interests and value recognition, which showed good reliability and validity and was more suitable for the actual situation of Chinese enterprises. L. Liu et al. (2011) divided the superior support into task-oriented and relationship-oriented and developed a two-dimensional scale with 19 questions, which also showed high reliability and validity.

As can be seen, research on supervised support is broad in scope, focusing on its antecedent and outcome variables, as well as its mediating and moderating effects. In particular, the outcome variables of supervised support have been the focus of research, such as the effects on job involvement, job performance and job satisfaction. However, there is no empirical study on the mediating role of supervisor support in the relationship between identity and its job satisfaction, burnout and turnover intention in China so far. X. Li and Gao (2011) conducted a questionnaire survey of middle and senior managers in 5 companies in Beijing, Guangzhou and Wuhan, and found that superior support played a moderating role in work-family conflict and job satisfaction, with a negative correlation.

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Chapter 3: Research Hypotheses and Research framework

Some studies have maintained that the personal identity of teachers is a multidimensional structural system (Brickson, 2000), but there is no consensus on what specific dimensions teachers' personal identity contains. This study uses theoretical analysis to construct the structural dimensions of teachers' personal identity.

3.1 Research hypotheses

3.1.1 The relationship between teachers' identity and job satisfaction

Many scholars have fully verified through a large number of empirical studies that there is a noteworthy positive relationship between identity and job satisfaction and that the improvement of identity can enhance job satisfaction. L. Liu et al. (2011) found that there was a statistically significant correlation between professional cognition, emotion, will and value as the constituent dimensions of identity and job satisfaction as a whole and its various dimensions. L. Wu et al. (2010) conducted a study on physical education teachers from 400 primary and secondary schools in Tangshan, Hebei Province, China, through a questionnaire survey to explore the current situation, influencing factors and the relationship between burnout, job satisfaction and identity of physical education teachers. The results showed that: first, identity was highly positively related to job satisfaction; second, identity was negatively related to burnout; third, job satisfaction was negatively related to burnout among physical education teachers from primary and secondary school in Tangshan. Identity and job satisfaction can have an impact on teachers' burnout and can directly predict the latter through the first two. Canrinus et al. (2012) conducted a survey of 2122 nurses in Turkey. The study found a significant positive relationship between nurses' job satisfaction and professional identity. According to the survey, 15.5% of nurses planned to quit their jobs. Nurses who did not have a clear direction in their professional identity development and those who had low job satisfaction had higher intention to leave their jobs.

Summarising research both in Western countries and China, it can be concluded that when individuals have a higher identity, they are subjected to a positive sense of achievement in their attributed occupation and they would define their own occupational role and form an

occupational identity. It leads to a continuous increase in job satisfaction, prompting individuals and organisations to improve together and achieve a win-win situation.

Based on this, the first hypothesis in this thesis is following:

H1: Teachers' identity has a positive effect on job satisfaction.

3.1.2 The relationship between teachers' identity and turnover intention

Many studies have shown that employee turnover is influenced by identity and that there is a negative relationship between the two. By enhancing the employee's identity, the employee's turnover tendency can be effectively reduced. When employees believe that their work creates value and is meaningful to them, they will have a higher sense of identity and will be more engaged and satisfied with their work. Conversely, they will have the desire to leave and will leave their current job when the right opportunity arises.

Wei's (2008) study of primary and secondary school teachers showed that the higher identity they had, the lower the turnover intention would be. Companies can reduce their turnover intention and their turnover rate starting by strengthening employees' identity. Gao and Li (2018) conducted an in-depth study on the interrelationship between identity, social support and turnover intention targeting kindergarten teachers, and the results showed that there was a significant negative relationship between identity and turnover tendency, and social support indirectly influenced turnover intention through identity. Zhao and Zhang (2004) studied nurses in emergency wards and found that because the effort and time they put in exceeded the expected rewards, nurses in emergency wards had lower identity scores and a higher turnover intention than average. Identity could negatively predict the occurrence of propensity to leave. Lin and Feng (2013) explored the relationship between identity and turnover intention regarding physicians as the study subjects. It was concluded that there were four factors that negatively influenced employees' turnover tendency as follows: employees' career commitment, values, motivation and employees' sense of self-determination. T. Zhang et al. (2021) revealed how to communicate between professional identity, job satisfaction, burnout, and GPs' turnover intention. Job satisfaction and burnout affect the turnover intention, and the effect of professional identity on turnover intention can be mediated through job satisfaction and burnout.

Based on this, the following hypothesis is formulated in this thesis:

H2: Teachers' identity has a negative effect on turnover intention.

3.1.3 The relationship between teachers' identity and job burnout

Research on the relationship between identity and burnout has ranged from exploring the relationship at a holistic level to examining identity as an antecedent variable and one dimension of burnout as an outcome variable. Ashforth and Mael (1989) suggested that for those employees with high identity, there was little contradiction between their expressive behaviours and emotional experiences, which indirectly expressed a negative relationship between identity and burnout. Haim and Amdur (2016) showed a significant negative relationship between identity and burnout. Tillema and Kremer-Hayon (2002) showed an apparent negative relationship between identity and burnout in a study by using Arab school headmasters as subjects.

In China, L. Liu et al. (2009) conducted a survey of 524 clinical nurses in Shanghai and found that nurses' identity was significantly and negatively related to burnout. The higher the identity of the nurses was, the lower the level of burnout would be. Cao (2002) further examined the prediction of identity on burnout. The results showed that identity negatively predicted burnout and its dimensions. A study by Zhao and Zhang (2004) produced similar results. They found significant relationships between identity and burnout: role values and sense of belonging had negative and positive predictive effects on knowledge depletion, emotional exhaustion and depersonalisation, respectively. Zhong and Zhou (2012) concluded from a study of college counsellors that identity was negatively related to burnout, and identity was an effective predictor of burnout. In a study on the burnout status of 413 art teachers in higher art colleges in Zhejiang province, Wen et al. (2004) pointed out that there was a significant negative correlation between identity and burnout, i.e., the higher the level of teachers' identity was, the lower the degree of burnout would be. From the above findings, it can be seen that in terms of resource conservation theory, identity can be seen as a personal resource that can enhance employees' initiative and recognition of their work, thus reducing burnout.

Based on this, the following hypothesis is formulated in this thesis:

H3: Teachers' identity has a negative effect on burnout.

3.1.4 The mediating role of work values

Weisberg and Sagie (1999) summed up previous studies and held that, social culture, religion, socio-economic status and organizational membership are the background and antecedent variables of work values. However, most demographic factors, such as age, gender and race,

are not only antecedents, but substitutes for many social factors. That is to say, the influence of gender and race may not be caused by itself, but by many social factors hidden behind superficial factors such as age, gender and race.

The outcome variables of work values mainly include job attitudes such as job satisfaction, organisational commitment and turnover intention, and job behaviours such as business performance, organisational citizenship behaviour, attendance and withdrawal behaviour. Work values determine the significance of people's work, organization, special events and working conditions. People judge their work experience by comparing their work experience with their work values. So work values are the evaluation criteria used by people to analyse and judge their work experience. Aldag and Brief (1975) argued that work values are important in guiding management behaviours such as conflict, communication, organisational performance, goal setting, and control styles. In China, the main studies on work values outcome variables include: X. C. Xu's (2007) doctoral dissertation on teachers' work values and their influential effects; Q. W. Qin et al. (2007) study on the relationship between corporate employees' work values and organisational citizenship behaviour; Pu et al. (2007) study on the current situation and relevance of work values and organizational loyalty of corporate managers. Dajani and Mohamad (2017) proposed a causal model of Islamic work ethics and organizational commitment and that work values play a mediating role in it. The study found a significant correlation between Islamic work ethics, interpersonal relationships, organizational justice, and work values; it also found that organizational justice and work values also have an impact on organizational commitment and act directly on organizational commitment. It is evident from the study that Islamic work ethics, work ethical attitudes, and interpersonal relationships indirectly influence organizational justice, and organizational commitment mediates work values, which can reflect the mediating role of these two variables and their importance of them for organizational analysis. Miao et al. (2022) noted the role of organizational identity in the knowledge of employees' job performance, in which work values play a mediating effect. Combining 483 knowledge employees' questionnaire data, SEM was used to empirically test the validity of the theoretical hypothesis model. The results found that organizational identity positively acts on knowledge of employees' job performance and work values play a partially mediating role in organizational identity and job performance.

Based on this, the following hypothesis is formulated in this thesis:

H4: Teachers' work values mediate the relationship between teachers' identity and job satisfaction.

H5: Teachers' work values mediate the relationship between teachers' identity and turnover intention.

H6: Teachers' work values mediate the relationship between teachers' identity and burnout.

3.1.5 The mediating role of role ambiguity

A role is a set of behaviours that are expected of an individual in a social organization, reflecting one's position in the organization and the corresponding rights, duties and responsibilities. When a person does not know or truly understand the role he or she is playing, or when many people around him or her have completely different expectations and demands for a particular individual's work, the individual may become confused and hesitant, resulting in an embarrassing dilemma that can lead to role ambiguity (Rizzo et al., 1970).

Deluga and Winters (1990) showed that role ambiguity was significantly positively related to job stress and negatively related to job satisfaction and performance. There are also more review articles as opposed to empirical studies. Scholars have analysed the causes of role ambiguity, its manifestations and its effects, and have also proposed ways to address the problem of role ambiguity. For example, Y. Liu et al. (2000) explored the manifestations of role dissonance (including role conflict, role ambiguity and role overload) and proposed corresponding coping strategies. Parker and Kyj (2006) argued that tolerance for role ambiguity, change in role orientation and preoccupation with personality play a mediating role in models of job design.

Madera et al. (2013) derived three influencing factors regarding hotel managers' perceptions of diversity climate: job satisfaction, role conflict and role ambiguity, A survey of 130 hotel and lodging managers found that managers who perceived a positive diversity climate reported low role conflict and low role ambiguity, but high job satisfaction. Role conflict and role ambiguity mediated the effect of perceived diversity climate on job satisfaction. Shin et al. (2020) investigated how managerial job formulation negatively influences managerial turnover intentions by surveying 235 Korean food franchise store managers. The study focused on potential mediators like emotional exhaustion, role ambiguity.

Regression based path models were used to support all research hypotheses. Results indicated that role ambiguity was positively correlated with job crafting, emotional exhaustion was positively associated with role ambiguity, and turnover intention was positively related to

emotional exhaustion. Additionally, a mediation analysis was conducted to control the impact of role overload and role conflict, which revealed that emotional exhaustion and role ambiguity partially mediated the relationship between turnover intention and job crafting of the administrators.

Based on this, the following hypothesis is formulated in this thesis.

H7: Role ambiguity mediates the relationship between teachers' identity and job satisfaction.

H8: Role ambiguity mediates the relationship between teachers' identity and burnout.

H9: Role ambiguity mediates the relationship between teachers' identity and turnover intention.

3.1.6 The mediating role of work overload

Y. Zhang and Rajagopalan (2010) explored the mechanisms at play in work overload from the job requirement-resource model and gave suggestions for employee stress management in terms of job requirements, job control, work environment, personal factors and social support. Scholars have explored the formation mechanism of work overload from the perspective of empirical studies. J. M. Jensen et al. (2013) concluded that the high-performance work system implemented by companies is the source of work overload and leads to a higher tendency of employees to leave their jobs.

Gurbuz et al. (2013) conducted a study on 344 small business employees in Turkey to explore the direct effects of perceptual organization support and home clashes and role overload on work, as well as the mediating role of role overload in the relationship between work and perceptual organizational support and family inconsistency. Their findings indicated that the feeling of support from the organization had a negative correlation with the worker's home-work clash and family conflict, suggesting that role overload serves as a mediator between the support of the perceived organization and the work-home conflict.

Shantz et al. (2016) according to the findings of a study conducted on employees working in five-star hotels and first-class holiday villages that the effect of OCB on job performance is positive and significant, work overload has effects on job performance negative and significant, work overload has effects on job performance negative and significant, and on turnover intention and work overload negative and significant. Moreover, work overload had no mediating effect between job performance and OCB, and a partial mediating effect between intention to leave and OCB.

Based on this, the following hypothesis is formulated in this thesis.

H10: Work overload mediates the relationship between teachers' identity and job satisfaction.

H11: Work overload mediates the relationship between teachers' identity and burnout.

H12: Work overload mediates the relationship between teachers' identity and turnover intention.

3.1.7 The moderating role of supervised support

Kottke and Sharafinski (1988) introduced the concept of supervisor support based on Eisenberger's research on organisational support. They argued that supervisor support is similar to organisational support in that employees should remain loyal to their supervisors and strive to complete the tasks given to them by their supervisors, while supervisors should have a corresponding commitment to their employees. There should be a reciprocal relationship between the two, in which the employee's contribution is valued and his or her welfare is taken into account. They define the sense of superior support as 'an overall perception and belief of employees that their superiors value their concerned and contributions about their well-being.' Z. Qin et al. (2010) found through an empirical study that a sense of organisational fairness can go through the mediating effect of superior support to influence employees' organisational identity.

The study conducted by Galletta et al. (2011) investigated the person-environmental adaptation variables of Italian nurses, with a particular focus on the impact of organizational support and supervisor support on the association between turnover intention, job satisfaction, and nurses' nursing adequacy. The research was based on a survey of 1240 nurses from three hospitals, with the results demonstrating that supervisor support and organizational support play a key role in mediating the relationship between care adequacy, job satisfaction, and turnover intention. Additionally, job satisfaction was found to act as a mediator between care adequacy and turnover intention.

Ru Hsu (2011) investigated the moderating effects of internal sources of control (personality variable) and supervisor support (work environment variable) in the relationship between job satisfaction and work-family conflict. The results of the study showed that work-family conflict negatively affects job satisfaction. Perceived internal locus of control, supervisor support and other factors not only contributed directly to job satisfaction, but also had a significant moderating effect between job satisfaction and work-family conflict.

The theory of planned action was employed by Tian et al. (2014) to examine the mediating role of emotional commitment in the association between job insecurity and counterproductive behavior among 366 casino traders and their supervisors in Macao. Results revealed that emotional commitment acted as a mediator between job insecurity and counterproductive behavior, and that supervisor support alleviated this intermediary relationship.

Dysvik and Kuvaas (2013) examined whether scenarios have a shadow line on the relationship between intention to leave and perceived job autonomy by surveying 680 employees from different public service organizations in Norway. The findings showed that perceived supervisor support had a moderating effect on the relationship between perceived job autonomy and intention to leave.

Yuan et al. (2018) studied the curvilinear effects of personality traits (incorporating dutifulness, extraversion and emotional stability) on safety performance. The results of the study showed that human relationships start out positive, but as personality traits change, the relationship with undergoes changeable, showing that the higher the score of personality traits, the more negative the relationship. In addition, through the lens of the purposive theory of work behavior, the authors proposed and found that the team-level supervised support climate moderates the curve effect between personality traits and safety performance, which indicates that the inflection point at which the personality-performance relationship shifts to a negative value is higher in a larger environment with high-level supervised support than in a larger environment without high-level supervised support.

Darvishmotevali (2019) investigated the impact of decentralization on the innovative behavior of employees, as well as the regulatory effect of supervisor support in the process. The applicability of the model was tested by surveying 323 employees from five-star hotels in North Cyprus and using the survey data to evaluate the model with structural equations. The research hypothesis was tested using LISREL 8.54, and it was found that decentralization had a positive effect on employees' innovation behavior. Furthermore, it was determined that supervisor support plays a moderating role in helping employees achieve their organizational innovation goals.

Based on this, the following hypothesis is formulated in this thesis.

H13: Supervised support moderates the relationship between teachers' identity and job satisfaction.

H14: Supervised support moderates the relationship between teachers' identity and burnout.

H15: Supervised support moderates the relationship between teachers' identity and turnover intention.

3.2 Research framework

In order to construct a theoretical framework for the influence of teachers' identity on higher vocational colleges, based on identity theory, this thesis proposes a research model and hypothesis for the impact of teachers' identity on job satisfaction, occupational burnout and turnover intention: teachers' identity affects job satisfaction, occupational burnout and turnover intention. Inspired by the JD-R theory, we further introduce work values, role ambiguity and work overload into the relationship between teachers' identity and the three consequence variables, exploring their mediating effects. In addition, we also investigate the moderating effect of supervised support in the relationship between teachers' identity and three outcome variables. The research model and hypotheses of this thesis are shown in Figure 3.1.
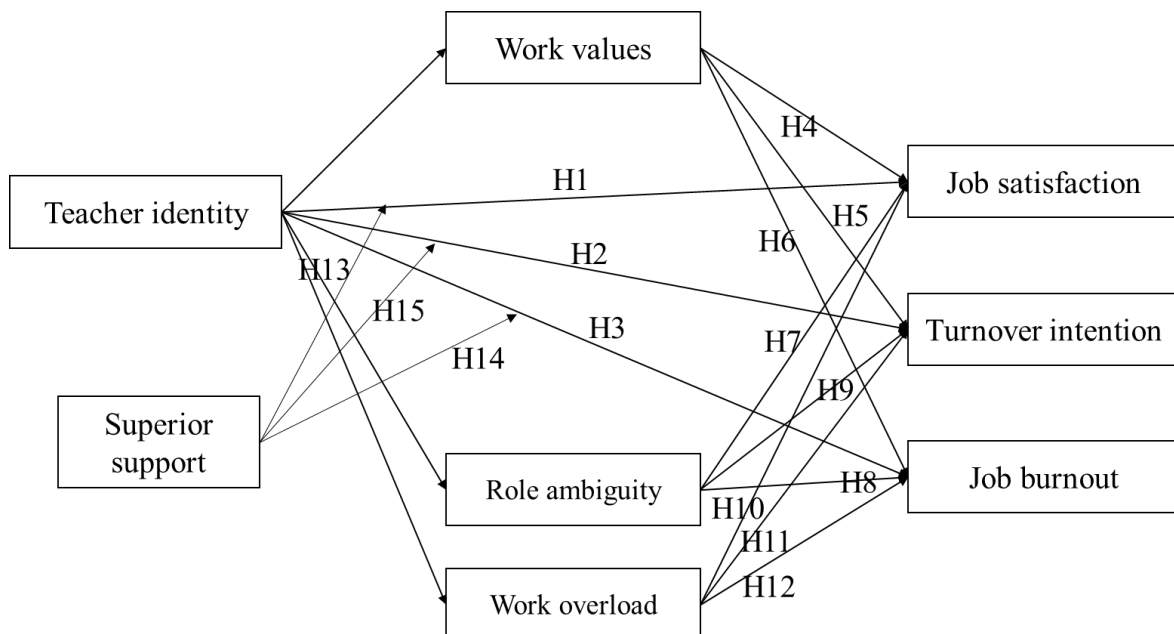
Figure 3.1 The research framework

3.3 The summary of research hypotheses

By conducting logical reasoning on the relationship between the eight key variables involved in this study, including teachers' identity, job satisfaction, job burnout, turnover intention, work values, role ambiguity, work overload and superior support, based on identity theory and JD-R theory, the following hypotheses are proposed in this study, as shown in Table 3.1.

Table 3.1 The summary of research hypotheses

No	Hypotheses
H1	Teachers' identity has a positive effect on job satisfaction.
H2	Teachers' identity has a negative effect on turnover intention.
H3	Teachers' identity has a negative effect on job burnout.
H4	Teachers' work values mediate the relationship between teachers' identity and job satisfaction.
H5	Teachers' work values mediate the relationship between teachers' identity and turnover intention.
H6	Teachers' work values mediate the relationship between teachers' identity and job burnout.
H7	Role ambiguity mediates the relationship between teachers' identity and job satisfaction.
H8	Role ambiguity mediates the relationship between teachers' identity and job burnout.
H9	Role ambiguity mediates the relationship between teachers' identity and turnover intention.
H10	Work overload mediates the relationship between teachers' identity and job satisfaction.
H11	Work overload mediates the relationship between teachers' identity and job burnout.
H12	Work overload mediates the relationship between teachers' identity and turnover intention.
H13	Supervised support moderates the relationship between teachers' identity and job satisfaction.
H14	Supervised support moderates the relationship between teachers' identity and job burnout.
H15	Supervised support moderates the relationship between teachers' identity and turnover intention.

Chapter 4: Data Collection and Data Processing

4.1 Questionnaire design

4.1.1 Teachers' identity

The Teachers' Identity Scale was motivated by Wei (2008). The scale is based on a 5-point Likert scale and consists of 17 questions on four dimensions of role values, professional behavioral dispositions, professional values and sense of belonging to occupation.

4.1.2 Job satisfaction

Job satisfaction is measured by using the *Teacher Job Satisfaction Scale* developed by Feng (1996), which used a 5-point Likert scale involving 5 dimensions of self-actualization, job stress, salary and income, leadership relationship, and colleague relationship. Since the scale was published in 1996, it has been used in related studies many times, and practice proves that the scale is an ideal tool for studying job satisfaction of teachers in the field of higher vocational education.

4.1.3 Job burnout

Burnout is measured by using the Copenhagen Job Burnout Questionnaire developed by Kristensen et al. (2005), which uses a 7-point Likert scale. This thesis uses a job-related burnout dimension sub-scale, which has been tested for reliability and validity and is already accepted by scholars in several countries.

In order to further understand the characteristics of the distribution of collected data on job burnout, this thesis cross-analyzes job burnout with the respondents' gender, professional title and location of college. It can be concluded from the analysis that, first, there are certain differences in the data distribution of job burnout corresponding to different genders. Further findings from the independent-samples T-test demonstrate that, because the p-value corresponding to item Q82 is 0.020 which is smaller than the significance level of 0.05, there are significant statistical differences in whether the different gender groups feel the same degree of tiredness after a workday. The result shows that female groups generally feel more

tired after a workday.

Second, there are certain differences in the data distribution of job burnout corresponding to different professional titles. A further one-way ANOVA test is conducted and it turns out that, the *p*-values corresponding to item Q83 and Q84 are respectively 0.014 and 0.012, both of which are smaller than the significance level of 0.05. This indicates statistically that, teachers with different professional title experience different degrees of job burnout. According to the analysis, compared with full professors and assistant professors, associate professors and lecturers generally feel more exhausted and reluctant when thinking of going to work, and feel more tired during work time.

At last, there are certain differences in the data distribution of job burnout corresponding to the locations of the colleges. According to a further one-way ANOVA test, it is found that, except item Q85, the *p*-values corresponding to the rest of the items are all smaller than 0.05, which indicates that the teachers with different professional titles are statistically different on relevant studying topics. As shown in the analysis, teachers in eastern region are more likely to feel tired at work than those in central region, and those in western region have the lowest level of fatigue.

4.1.4 Turnover intention

The *Teachers' Turnover Intention Scale* was developed by Mobley (1982) and the scale is based on a 5-point Likert scale.

In order to better interpret the characteristics of the data distribution on turnover intention, this thesis conducts a further cross-analysis of teachers' turnover intention with variables such as respondents' gender, professional title and location of college. By analysing the results, it could be summarized that, first, there are certain differences in the data distribution of teachers' turnover intention corresponding to different educational backgrounds. A further one-way ANOVA test shows that, the *p*-values corresponding to item Q91 and Q92 are respectively 0.032 and 0.044, which are both smaller than 0.05. This indicates that there are statistical differences in the turnover intention relevant answers from teachers with different educational backgrounds. According to the collected data, teachers who were below the high school education level are more easily bored with their jobs and more likely to quit within the next six months.

Second, there are certain differences in the data distribution of turnover intention corresponding to different monthly income levels. A further one-way ANOVA test finds that,

the p-values corresponding to all items considered are smaller than 0.05, which indicates that there are statistical differences in teachers' turnover intention relevant answers from different groups of teachers with different monthly income levels. According to the data, the teacher group with a monthly income of 6 thousand to 10 thousand CNY has the strongest intention to stay in the present vocational college and seek long-term career development, while the turnover intention of teachers in other wage levels is relatively low. The group of teachers with a monthly income of over 10 thousand CNY has the strongest intention to leave the current work unit and may choose to leave within the next six months, while the turnover intention of teachers in other wage levels is relatively low.

Third, there are certain differences in the data distribution of teachers' turnover intention corresponding to different locations of colleges. A further one-way ANOVA test shows that, all p-values corresponding to each of the items are smaller than 0.05, which indicates that there are statistical differences in teachers' turnover intention relevant answers from teachers from colleges located in different regions. According to the statistics, the group of teachers in central region has the strongest intention to stay in the present college and pursue long-term career development, followed by the group in western region, and then teachers in eastern region have the lowest intention to stay.

4.1.5 Work values

The Teacher Work Values Scale was developed by Xu (2007). The scale is based on a 5-point scale and consists of 25 questions on seven dimensions: material reward, prestige, career development, interpersonal relationships, organisational management, altruistic commitment and security and stability.

4.1.6 Role ambiguity

The Role Ambiguity Scale was developed by Peterson et al. (1995), and the scale was scored on a 5-point Likert scale. Peterson used exploratory factor analysis to streamline the original measure to create a cross-national, credible factor structure subscale based on the US context. The streamlined measure includes 5 role ambiguous questions. And a validated factor analysis revealed equivalence between the streamlined measure questions and the original measure questions.

This research simulates the settings of the Role Ambiguity Scale developed in the literature mentioned above. In total, 5 sub-questions are raised to investigate respectively the

performances relating to teachers' occupational planning, career goals, consciousness of responsibility and other aspects. According to the data from the questionnaire, the numerical distributions of the respondents to the questions regarding to role ambiguity are similar, which indicates that the 5 questions are in consistency. It is worth mentioning that, option 5 accounts for the largest proportion. Statistically, more than half of the respondents choose option 5. The proportions of option 3 and 4 are close, both of which have around 115 respondents. Each of the other two options have less than 50 respondents, which are the least chosen. Thus it can be concluded that the respondents involved in this research have clear understandings of their roles.

In order to better interpret the characteristics of distribution of the statistics collected about role ambiguity, this research conducts a further cross analysis of the relevant issues of role ambiguity and the variables like respondents' professional titles and their educational backgrounds. According to the analysis results, it could be concluded that, first, there are certain differences in the data distribution of role ambiguity corresponding to different educational backgrounds. A further one-way ANOVA carried out shows that, the p-value corresponding to index Q7 is $0.035 < 0.05$, which verifies that there are statistical differences in the role ambiguity of different educational background groups. According to the data, the groups with higher education backgrounds are less clear about what they need. On the contrary, the groups with relatively lower education backgrounds are clearer about their needs. Second, there are certain differences in the data distribution of role ambiguity corresponding to different professional titles. A further one-way ANOVA carried on this factor shows that, the p-value corresponding to index Q7 is $0.037 < 0.05$, which signifies that there are statistical differences with the effect of different professional titles. According to the data, the groups with lower-grade professional titles are less clear about what they need, while the groups with higher-grade professional titles are clearer about their needs.

4.1.7 Work overload

The Work Overload Scale was developed by Peterson et al. (1995), using the Likert 5-point scale. Peterson streamlined the original measure using exploratory factor analysis based on the US context, and the streamlined measure consisted of 5 questions on work overload.

This research simulates the settings of the *Work Overload Scale* developed in the literature mentioned above. In total, 5 sub-questions are raised to investigate respectively the vocational college teachers' performances relating to the direction of career, work load, job

responsibility, work quality and other aspects

According to the results of the questionnaire, the distributions of the respondents number to the questions about work-overload are similar, which indicates that the 5 questions are in consistency. To be specific, option 4 accounts for the largest proportion. which is chosen by more than half of the respondents. The proportions of option 2, 3 and 5 are close, and the number of people who choose option 1 is the least.

In order to better interpret the characteristics of distribution of the work overload data, this research conducts a further cross analysis of the relevant issues of work overload and the variables including respondents' genders, educational qualifications and the locations of colleges. According to the analysis results, it could be concluded that, first, there are certain differences in the data distribution of work overload corresponding to different genders of the respondents. A further one-way ANOVA carried out shows that, the p-value corresponding to index Q3 is $0.035 < 0.05$, which verifies that different gender groups have significant differences in their perceptions of responsibility. According to the data, compared with the female group, the male group is more likely to have stronger sense of responsibility towards works, and tend to believe that they are given more burdens. Second, there are certain differences in the data distribution of work overload corresponding to different educational backgrounds. A further one-way ANOVA carried out on the educational factor shows that, the p-value corresponding to index Q1 is 0.005, which is smaller than the significance value. This verifies that different gender groups have significant differences in their perceptions of responsibility. This means the groups with different professional titles believe it is necessary to adjust or to moderate their work directions. To be specific, the respondents with higher-grade professional title consider it more essential to moderate their work directions. On the contrary, there is less consideration about this factor for those respondents with lower-grade professional title. Another relevant index Q3, which has a corresponding p-value of $0.020 < 0.05$, illustrates that, different groups with different professional titles have different recognitions about the responsibilities that they are bearing with. To be specific, the teachers with higher professional title believe they are bearing great responsibility and the lower the title is, the less responsibility the teachers perceive. Third, there are certain differences in the data distribution of work overload corresponding to different college locations. A further one-way ANOVA carried out on this factor shows that, the corresponding p-value of all indexes are smaller than 0.05, which indicates that the degrees of work overload varying with college regions have significant differences. The p-value corresponding to index Q1 is 0.005, which is smaller than the significance value. This verifies that different gender groups have significant

differences in their perceptions of responsibility, which means the groups with different professional titles believe it is necessary to adjust or to moderate their work directions. To be specific, the groups of respondents in central region have the strongest demand of adjusting their working directions, followed by the teacher groups in eastern region, then finally the groups in western region.

The teachers in vocational colleges in eastern and central regions believe that their work burden is too heavy, their job responsibility is too much, and their workload is too large, while the groups in western region consider the relevant factors relatively acceptable. Teachers in eastern region believe the most that the extremely large workload leads to low quality of work, then followed by the groups in central region, and at last the teachers in western region.

4.1.8 Supervised support

The Superordinate Support Scale was developed by Oldham et al. (1986) and the scale is based on a 7-point Likert scale.

This research continues to use the model of the *Superordinate Support Scale* developed in the literature mentioned above. In total, 8 sub-questions are raised to investigate respectively the conditions relating to leadership support, including how the leaders solving teachers' doubts and problems, knowing teachers' thoughts, participating in important decision-making and rewarding. According to the results of the questionnaire, the distributions of the respondents number to the questions about supervised support are similar, which indicates that the 5 questions are in consistency. To be specific, option 4, 5 and 6 account for the largest proportions, each of which are chosen by more than 100 respondents. The proportions of option 2, 3 and 7 are close, and the number of people who choose option 1 is the least.

In order to better interpret the characteristics of distribution of the data about supervised support, this thesis conducts a further cross analysis of the relevant factors of supervised support and the variables including respondents' genders, educational qualifications and the locations of colleges.

According to the analysis results, it could be concluded that, first, there are certain differences in the data distribution of supervised support regarding to different genders of the respondents. A further one-way ANOVA carried out shows that, the *p*-value corresponding to index Q36 is $0.037 < 0.05$, which verifies that different gender groups have significant differences in their ways of perceiving the receiving help from the superior. According to the data, compared with the female group, the male group is more likely to be positive and

approval about leaders' point of view.

Second, there are certain differences in the data distribution of supervised support regarding to different professional titles. A further one-way ANOVA carried out shows that, except for the indexes Q40 and Q43, the *p*-value corresponding to all indexes are smaller than 0.05, which signifies that different professional titles have significant influence in supervised support. To be specific, the teaching assistants are more agreeable with having leaders or superiors helping solve work problems and encouraging the staff tolerant new skills, and prefer that the leaders could notice their thoughts and feelings. Also they believe that leaders should participate actively in making important decisions and express their opinions when they disagree with certain decisions. However, the teachers with higher-grade professional title are more in favour of the leaders who refuse to interfere too much.

Third, there are certain differences in the data distribution of supervised support regarding to different regions. A further one-way ANOVA carried out on regional factor shows that, the *p*-value corresponding to the index Q38 equals to 0.032, which is smaller than 0.05. This signifies that teacher groups in different regions shows significantly different attitudes towards leaders who want to be aware of employees' thought and feelings about things at any time. According to the results, the teachers in western region are the most agreeable with this standpoint, while the teachers in eastern region disagree the most. Another relevant index Q42, which has a *p*-value equals to 0.019 < 0.05. This indicates that there is a significant difference in how teacher groups in different regions perceiving the leaders' behaviuors of refusing explain their behaviors. The teachers in western region are the most agreeable with this standpoint, followed by the central region, while the teachers in the eastern region disagree the most. Forth, there are certain differences in the data distribution of supervised support regarding to different levels of colleges. A further one-way ANOVA carried out shows that, the *p*-value corresponding to the index Q39 equals to 0.043, which is smaller than 0.05, which indicates different school levels have significant differences in viewing leadership's encouragement of participation on major decision-making. To explain in detail, the teachers in 'Double-high' vocational colleges agree more that leaders should encourage employees to participate in major decision-making, while the teachers from ordinary colleges agree less.

4.2 Data collection

(1) Target population

As the research objective is to understand the status quo of teachers' identity in China's

vocational colleges, to explore the differences in the identity of teachers in individual and school contextual variables and reveal the characteristics and trends in the development of teachers' identity, the targeted population for this study is vocational colleges' teachers in China.

(2) Sampling elements

The targeted objects in this study are vocational college teachers in China. Teachers with different educational backgrounds, professional titles, and monthly incomes are included in this research. Also, the State Council issued a circular in 2019 detailing the reform plan for China's vocational education. This circular made the establishment of 50 high-level advanced vocational schools with 150 key majors one of the main focuses of China's vocational education construction in recent years. Two groups of vocational college teachers exist in China. Thus, the population that will be investigated in this research can be distinguished from two other levels of school: vocational college teachers working in China's national high-level advanced vocational colleges, and vocational college teachers working in China's ordinary vocational colleges.

(3) Sampling location

The survey questionnaires were spread to target respondents in eastern, central and western provinces and cities in Mainland China. Respondents were teachers from twelve colleges sorted by level of college. Two national high-level advanced vocational colleges and two ordinary vocational colleges were drawn from the eastern, central and western parts of China.

National high-level advanced vocational colleges that were selected from eastern China include Shenzhen Polytechnic and Tianjin Light Industry Vocational Technical College. The ordinary vocational colleges selected from eastern China are Changzhou Vocational Institute of Textile and Garment and Shanghai Vocational College of Agriculture and Forestry. National high-level advanced vocational colleges selected from central China include Wuhan Polytechnic and Hunan Railway Professional Technology College. Ordinary vocational colleges selected from central China are Zhengzhou Technical College and Shangrao Vocational and Technical College. National high-level advanced vocational colleges selected from western China are Chongqing Industry Polytechnic College and Sichuan College of Architectural Technology. Ordinary vocational colleges selected from western China include Career Technical College Guiyang and Beihai Vocational College.

(4) Sampling size

The cluster stratified sampling method was used to select vocational college teachers in

eastern, central and western provinces and cities in China as the target population. 2,000 questionnaires were distributed and 1,052 questionnaires were collected, with a recovery rate of 52.6%; 262 questionnaires with incomplete basic information were removed and 790 data points were obtained; 182 invalid questionnaires were excluded, and 608 valid questionnaires were obtained in the end. The effective rate was 77%.

4.3 The descriptive statistics of samples

4.3.1 Demographic profile of the respondents

(1) Gender: among the 608 samples, there are 271 male employees, accounting for 44.6% of the sample. There are 337 female employees, accounting for 55.4% of the sample.

(2) Educational background: 2 respondents possessed a high school diploma or less, accounting for 3% of the sample; 163 had undergraduate degrees, accounting for 26.8% of the sample; 408 had master's degrees, accounting for 67.1% of the sample; and 35 had PhD degrees, accounting for 5.8% of the sample.

(3) Professional title: There are 107 assistant professors, accounting for 17.6% of the sample; 284 lecturers, accounting for 46.7% of the sample; 187 associate professors, accounting for 30.8% of the sample; and 30 professors, accounting for 4.9% of the sample.

(4) Monthly income (CNY): 6 respondents receive less than 3,000 a month, accounting for 1% of the sample; 209 receive between 3,000 and 6,000, accounting for 34.4% of the sample; 302 receive between 6,000 and 10,000, accounting for 49.7% of the sample; and 6 receive more than 10,000 a month, accounting for 15% of the sample.

(5) Level of School: 337 respondents are working in national high-level advanced vocational colleges, accounting for 55.4% of the sample; 271 are working in ordinary vocational colleges, accounting for 44.6% of the sample.

4.3.2 Cross tabulation analysis of teachers' identity

In the following paragraphs, a cross-tabulation statistical analysis is conducted to examine the influence of sub-dimensional variables such as the school ranking, the level of monthly income and other factors on the principal factor: self-identity. To better explain the results of the analysis, the relevant indexes and formulas are presented and specified.

(1) Cohen's d

Cohen's d is used to quantify *t* to illustrate the standard deviation of two means. It is

defined as:

$$d = \frac{\bar{\mu}_1 - \bar{\mu}_2}{\sigma_{pooled}}, \sigma_{pooled} = \left[\frac{(n_1-1)s_1^2 + (n_2-1)s_2^2}{n_1+n_2}\right]^{1/2} \tag{4.1}$$

$n_{1,2}$, $\bar{\mu}_{1,2}$ and $s_{1,2}$ represent respectively the sample sizes, the mean values and the standard deviations of categories 1 and 2.

Cohen's d has the advantage that it is not affected by the sample size and can objectively reflect the differences caused by the factors. According to Cohen (1977), different statistics of Cohen's d can be interpreted as:

- $0.15 \le d < 0.4$: A small effect, indicating a small deviation;
- $0.4 \le d < 0.75$: A medium effect, indicating a medium deviation;
- $d > 0.75$: A significant effect, indicating a significant deviation.

(2) Index η^2

η^2 is the effective size of the variance analysis whose value directly reflects the deviation caused by different factors. The larger the value is, the more obvious the difference. η^2 is defined as:

$$\eta^2 = \frac{SSA}{SST} \tag{4.2}$$

where SSA signifies the inter-class variance, and SST signifies the total variance. As Cohen (1973) and Z. J. Hu and Dai (2011) illustrated, it is accordingly considered a small effect, a medium effect and a significant effect when $\eta^2 = 0.01$, $\eta^2 = 0.06$ and $\eta^2 = 0.14$.

To examine the basic situation of teachers' identity in China's vocational colleges, this study conducted a statistical analysis of the mean and standard deviation of 608 valid subject data on teachers' identity and its various items. As can be seen, the mean score of the overall scale of teachers' identity in China's vocational colleges is M = 4.201, which is higher than the critical value of 3, indicating that the level of teachers' identity in China's vocational colleges is relatively high. In addition, on the various items of teachers' identity, the mean of all 12 items is greater than 4, which is also at a moderate to a high level. This is in line with the overall development of education in China and the improvement of teachers' social status. In recent years, with the implementation of the strategy of rejuvenating the country through science and education, the establishment of the priority of education and the further implementation of the Teachers' Law, the remuneration of teachers in China has greatly changed, and the social status of teachers has been continuously elevated. Accordingly the extent to which teachers recognise their identity with the teachers' profession is also improving.

4.3.2.1 The influence of school level on teachers' identity

Wei (2008) argues that there are significant differences in school level among township teachers. The level of identity recognition of township primary school teachers is significantly lower than that of township secondary school teachers, which may be because the identity of township teachers is influenced by the social stereotypes of primary, junior high and senior high school teachers. It is generally believed that primary school teachers possess a lower level of knowledge and education than middle and high school teachers, and that middle or high school teachers receive a higher level of social prestige than primary school teachers as well as a higher level of satisfaction in achievement expectations. In a school location such as a township, where the differences are more pronounced than in the city due to the specificity of the social environment (relatively small variety of occupations and relatively less polarisation of the population), the level of identity recognition of a township primary school teacher can be significantly lower than that of a township secondary school teacher.

To investigate the differences in the identity of teachers between national 'Double-High' (the construction scheme of high-level advanced vocational schools and majors with Chinese characteristics) vocational colleges and ordinary vocational colleges. This study conducts a variance analysis on the variability of teachers' identity and its items at the school level. The analysis found that the identity of teachers differed significantly on the main effect of the school level.

According to the results of the analysis, the numerical p-value is 0.008, which is a smaller figure than the critical value of 0.05. This finding indicates that there are significant differences in the identity of teachers at different vocational college levels. In addition, the value of Cohen's d is 0.216, which also shows that there are small differences in teachers' identity at different university levels. More specifically, teachers in Double-High vocational colleges are more self-identified.

The significant difference in the identity of teachers between Double-High vocational colleges and ordinary vocational colleges is possible for the fact that teachers' identity is influenced by social stereotypes. It is generally believed that those Double-High vocational colleges would be more advanced, and they would gain more policy support and better funding (Y. M. Wu, 2019). Teachers working in those vocational colleges would have a relatively higher level of knowledge and education and receive a higher income and social prestige than teachers in ordinary vocational colleges. Thus, they would have a higher satisfaction degree of achievement expectations than teachers in ordinary vocational colleges.

4.3.2.2 The influence of monthly income on teachers' identity

In this research, a single factor analysis of variance (one-way ANOVA) is used to measure the influence of different monthly income levels on teachers' identity, and the monthly income in vocational colleges is categorised into four different levels.

According to the analysis results, the value F reaches 5.480, which is a numerical result that greatly exceeded the significance level of 0.05. This indicates that monthly income does have a differential impact on the identity of teachers. In addition, the result $\eta^2 = 0.026$ is greater than 0.01, which verifies from another perspective that the monthly income indeed has a significant differential impact on teachers' identity. To be more specific, the teachers with a monthly income of 6 thousand to 10 thousand CNY are the most conscious and positive about their identity, followed by those who have a monthly income of more than 10 thousand CNY, then the teachers with a monthly income of less than 3 thousand CNY, and the teachers with a monthly income of 3 thousand to 6 thousand CNY has the least consciousness of their identity.

4.3.3 Multi-dimensional cross tabulation analysis of teachers' identity

In this research, a multi-factors model is designed to study the teachers' identity scale. To further and better interpret the scale presented and to answer the research questions, a further multidimensional cross-tabulation analysis of teachers' identity is considered helpful and hence conducted. In this section, the cross-tabulation analysis aims to show that, how the variables like the level of college, the level of monthly income and the location of the campus influence the targeting of teachers' role values, professional behavioural dispositions and sense of belonging for their occupation. The statistical indicators are consistent with the above.

4.3.3.1 The influence of college level on various dimensions of teachers' identity

To study the influence of different college levels on each dimension of teachers' identity, we use the independent samples *t*-test for analysing, and the results are shown in Table 4.1.

According to the results in Table 4.1, the *p*-value corresponding to the dimension of role values is 0.028, which is less than the critical value of 0.05. This result indicates significant differences in teachers' role values at various levels of vocational colleges. Additionally, Cohen's d results in 0.18, which shows as well that the level of colleges will influence teachers' role values to a certain degree. Specifically speaking, compared with teachers in ordinary vocational colleges, the teachers in Double-High vocational colleges are more

approving of the role values.

Table 4.1 Results of Independent-samples T test on various dimensions of teachers' identity

Logic Parameters	"Double-High" vocational College		Ordinary vocational College		t	p	Cohen's d
	M	SD	M	SD			
Role values	4.236	0.487	4.149	0.476	2.199	0.028	0.18
Professional behaviours dispositions	4.361	0.478	4.269	0.481	2.351	0.019	0.19
Professional values	4.387	0.530	4.280	0.542	2.465	0.014	0.20
Sense of belonging for occupation	4.237	0.505	4.135	0.511	2.462	0.014	0.20

Moreover, the p-value corresponding to the dimension of dispositions of professional behaviours is 0.019, which is less than the critical value of 0.05. This indicates that there are significant differences in teachers' dispositions of professional behaviours at different levels of vocational colleges. Meanwhile, the result of Cohen's d is 0.19, which also shows that the level of colleges can affect teachers' dispositions of professional behaviours to a certain degree. According to the results, compared with teachers in ordinary vocational colleges, the teachers in Double-High vocational colleges are more likely to have positive professional behaviours dispositions.

For the dimension of professional values, the p-value is 0.014, which is less than the critical value of 0.05. This indicates that there are significant differences in teachers' professional values at different levels of vocational colleges. In addition, Cohen's d results in 0.20, which shows that the level of colleges will influence teachers' professional values to a certain degree. Specifically, compared with teachers in ordinary vocational colleges, the teachers in Double-High vocational colleges are more positive about their professional values.

The p-value corresponding to the dimension of teachers' sense of belonging is 0.014, which is less than the critical value of 0.05. This result indicates significant differences in teachers' sense of belonging to their occupation at different levels of vocational colleges. Moreover, the result of Cohen's d is 0.20, which shows that the level of college can affect teachers' sense of belonging to a certain degree. Compared with teachers in ordinary vocational colleges, the teachers in Double-High vocational colleges have a greater sense of belonging.

4.3.3.2 The influence of monthly income on various dimensions of teachers' identity

To measure the influence of various monthly income levels on identity, a single-factor analysis of variance research tool is adopted to study the effects of monthly income levels on

various dimensions. The results are shown in Table 4.2.

Table 4.2 Results of one-way ANOVA test of monthly income level's influence on various dimensions of teachers' identity

Measure	Below 3 thousand (CNY)		From 3 to 6 thousand (CNY)		From 6 to 10 thousand (CNY)		Above 10 thousand (CNY)		F	η^2
	M	SD	M	SD	M	SD	M	SD		
Role values	3.933	0.350	4.137	0.447	4.231	0.502	4.237	0.497	2.366*	0.012
Professional behaviours Dispositions	3.800	0.858	4.245	0.470	4.371	0.463	4.360	0.507	5.474***	0.026
Professional Values	3.750	0.866	4.270	0.545	4.386	0.517	4.382	0.534	4.567***	0.022
Sense of Belonging for occupation	4.111	0.272	4.115	0.539	4.237	0.495	4.223	0.490	2.572*	0.013

* p<0.1, **p<0.05, ***p<0.01

According to the results in Table 4.2, the F-value corresponding to the dimension of role values is 2.366, which exceeds the significance level of 0.1. This indicates that monthly income levels certainly have a differential impact on teachers' values of their role. At the same time, the result of η^2 is greater than 0.01, which also shows that the monthly income level has a significant differential impact on teachers' role values. More specifically, teachers with the monthly income level more than CNY have the greatest satisfaction degree in the role values, followed by teachers with a monthly income level of 6 thousand to 10 thousand CNY. Teachers with a monthly income of 3 thousand to 6 thousand CNY are less satisfied in their role values, and teachers with a monthly income of less than 3 thousand CNY have the least satisfaction degree of role values.

The F-value corresponding to the dimension of professional behaviours dispositions is 5.474, which exceeds the significance level of 0.01. This indicates that monthly income levels certainly have a differential impact on teachers' professional behaviours. At the same time, the result of η^2 is greater than 0.01, which also shows that the monthly income level has a significant differential impact on teachers' professional behaviours tendency. More specifically, teachers with a monthly income level of 6 thousand to 10 thousand CNY have the most positive tendency of professional behaviours, followed by teachers with a monthly income of more than 10 thousand CNY, then the teachers with a monthly income of 3 thousand to 6 thousand CNY, and teachers with a monthly income of less than 3 thousand CNY have the least positive professional behaviours dispositions.

The F-value corresponding to the dimension of professional values is 4.567, which

exceeds the significance level of 0.01. This indicates that monthly income levels certainly have a differential impact on teachers' professional values. At the same time, the result of η^2 is greater than 0.01, which also shows that the monthly income level has significant differential impact on teachers' professional values. More specifically, teachers with a monthly income level of 6 thousand to 10 thousand CNY would show the highest sense of identity towards professional values, followed by teachers with a monthly income of more than 10 thousand CNY, then the teachers with a monthly income of 3 thousand to 6 thousand CNY, and teachers with a monthly income of less than 3 thousand CNY are the least positive about the professional values.

The F-value corresponding to the dimension of teachers' sense of belonging is 2.572, which exceeds the significance level of 0.1. This indicates that monthly income levels certainly have a differential impact on the teachers' sense of belonging. At the same time, the result of η^2 is greater than 0.01, which also shows that the monthly income level has a considerable differential impact on teachers' professional values. More specifically, teachers with a monthly income level of 6 thousand to 10 thousand CNY have the greatest sense of belonging, followed by teachers with a monthly income of more than 10 thousand CNY. Teachers with a monthly income of 3 thousand to 6 thousand CNY have less sense of belonging, and teachers with a monthly income of less than 3 thousand CNY have the least sense of belonging.

4.4 Reliability and validity analysis

4.4.1 Reliability and validity analysis on teachers' identity

4.4.1.1 Reliability analysis

The reliability of the scale mainly adopts homogeneity reliability and split-half reliability. Homogeneity reliability is displayed by an internal consistency coefficient, that is, Cronbach's α value. According to the analysis results, the coefficient of the total scale of the Teachers' Identity Scale is 0.918. Therefore, this scale has good homogeneity reliability.

4.4.1.2. Validity analysis

The validity test is generally divided into content validity and structural validity. As the questionnaire used in this thesis is from a relatively mature scale, previous authors have repeatedly verified its content validity. So the structural validity is tested here. A model with

good fit should have: a low value of χ2, RMSEA and RMS, χ2/df ≤ 5, RMSEA ≤ 0.5. Some people believe RMSEA ≤ 0.8 is also acceptable; the range of variation values of NFI, CFI, IFI, TLI is between 0 and 1, the closer to 1, the better it will be. Among them, when χ2/df ≤ 2, RMSEA ≤ 0.05, and the variation values of NFI, CFI, IFI and TLI are above 0.9. It means the model fits well (Wen et al., 2004).

As a result, this study argues that teachers' identity is a second-order, one-factor, one-order, four-factor structure (professional values, role values, professional sense of belonging, and professional behavioural dispositions). The detailed structure of the identity of teachers is shown in Figure 4. 1.
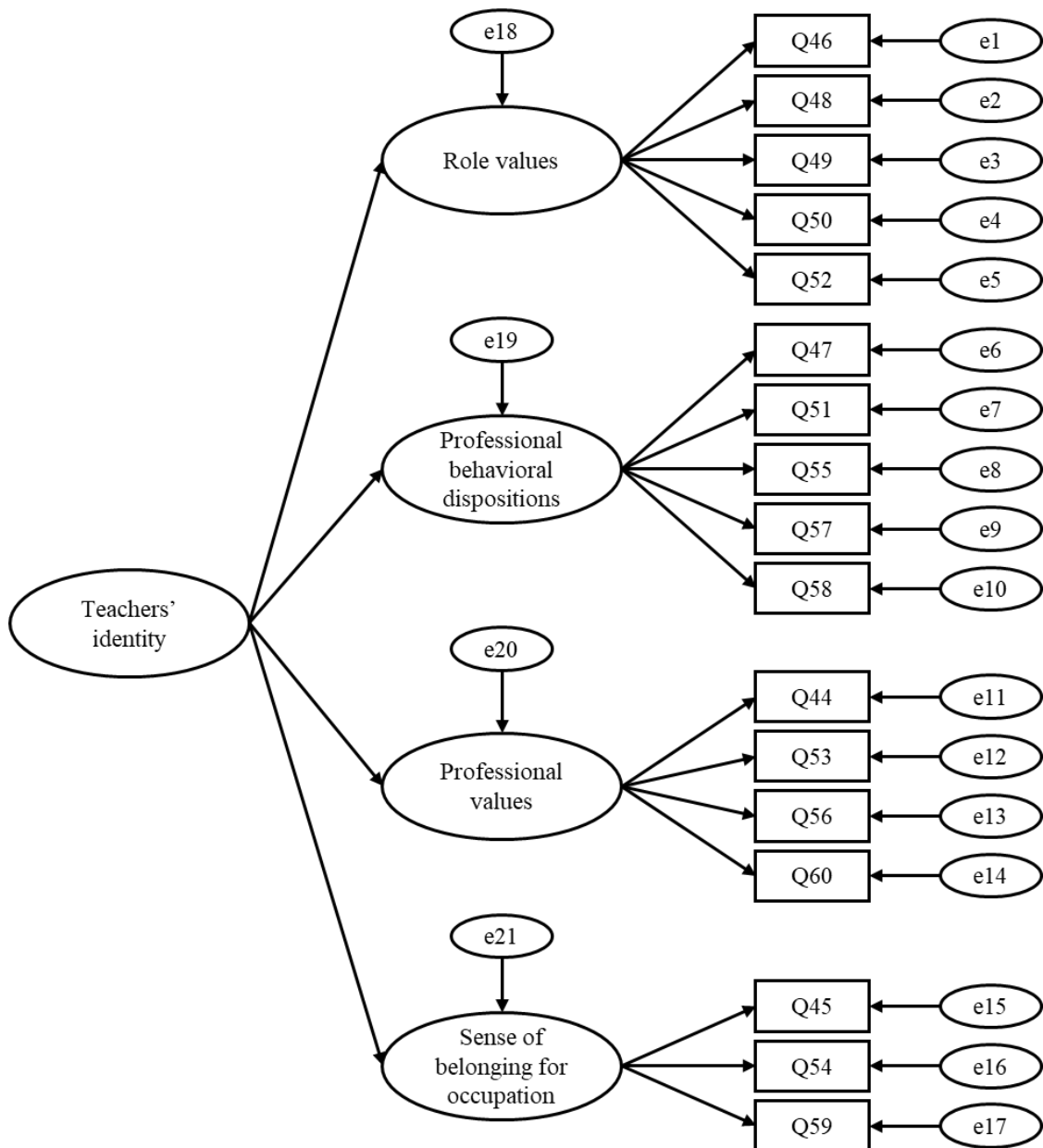
Figure 4. 1 The structure of teachers' identity

According to psychometric theory, there should be a moderate correlation among the

dimensions of the scale; if the correlation is too high, it indicates that there is overlap between the dimensions of the questionnaire and some factors may not be necessary; if the correlation is too low, it indicates that some are measuring something completely unrelated to what the questionnaire is intended to measure overall, which is also called convergent validity. The correlations among the factors of this scale and the correlations among the factors and the overall score are calculated. According to the results, the model index $\chi 2/df$ is $3.409 < 5$, and the value of RMSEA is $0.063 < 0.08$, indicating a good fitness of model (Wen et al., 2004). In addition, other index values (NFI = 0.902, CFI = 0.928, IFI = 0.928 and TLI = 0.915) are above 0.9, all reaching the level of goodness of fit of the model.

4.4.2 Reliability and validity analysis on job satisfaction, job burnout and turnover intention

4.4.2.1 Reliability analysis

Reliability is an important measure of the credibility of a questionnaire. With higher reliability, the questionnaire is more consistently reflective of the issues. The reliability analysis in this thesis uses Cronbach's α values for the corresponding analysis. In general, when the overall Cronbach's α value of all variables is larger than 0.8 and the Cronbach's α value of individual variables is larger than 0.7. It is considered to have high reliability. Therefore, this thesis used reliability analysis in SPSS 24.0 to test the reliability of the scale. The results showed that the Cronbach's α value of teachers' job satisfaction is 0.823, and that of teachers' job burnout is 0.892. The Cronbach's α value for turnover intention is 0.826. The Cronbach's α value of all variables were larger than 0.8, indicating that the questionnaire had a stable level of consistency.

4.4.2.2 Validity analysis

As the questionnaire used in this study is from a relatively mature scale developed in China and abroad, its content validity has been repeatedly verified by previous authors to ensure content validity, so here we test the structural validity.

(1) Teacher's job satisfaction

Based on the discussion before, this thesis argues that teachers' job satisfaction is a second-order, one-factor, one-order, five-factor structure (self-realization, work intensity, wage income, leadership relationship and colleague relationship). The detailed structure of teachers' job satisfaction is shown as Figure 4.2.
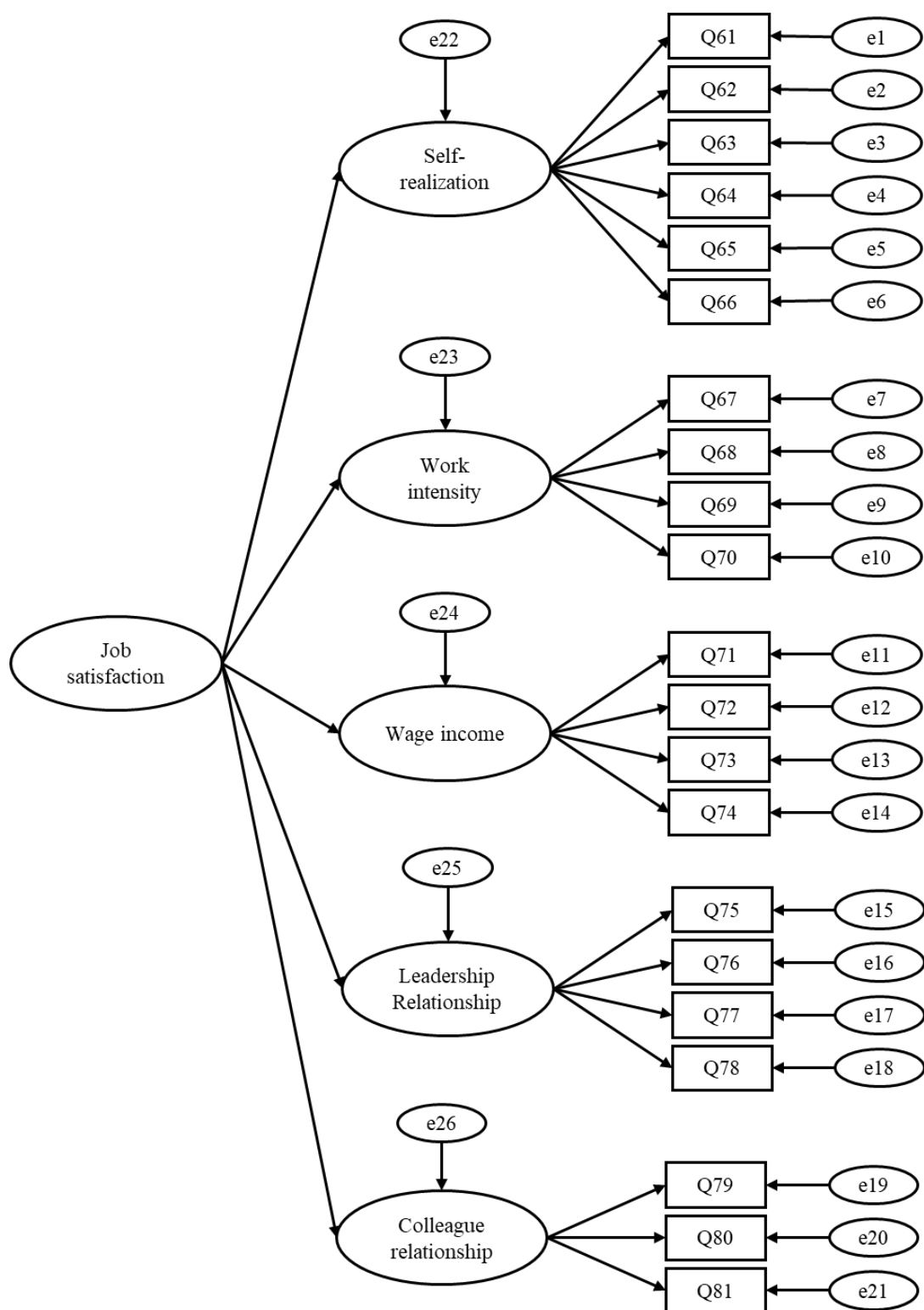
Figure 4.2 The structure of teachers' job satisfaction

According to the analysis, the various indicators of teachers' job satisfaction are in the acceptable range, with good construct validity. Specifically, the model index χ2/df is 4.787 < 5, and the value of RMSEA is 0.079 < 0.08, indicating a good fitness of model. In addition, other index values (NFI = 0.818, CFI = 0.849, IFI = 0.850 and TLI = 0.828) are above 0.8. All values reach the level of the model of goodness of fit.

(2) Teacher's burnout

Based on the discussion before, this thesis argues that teachers' burnout is a one-order and single-factor structure. The detailed structure of teachers' burnout is shown as Figure 4.3.
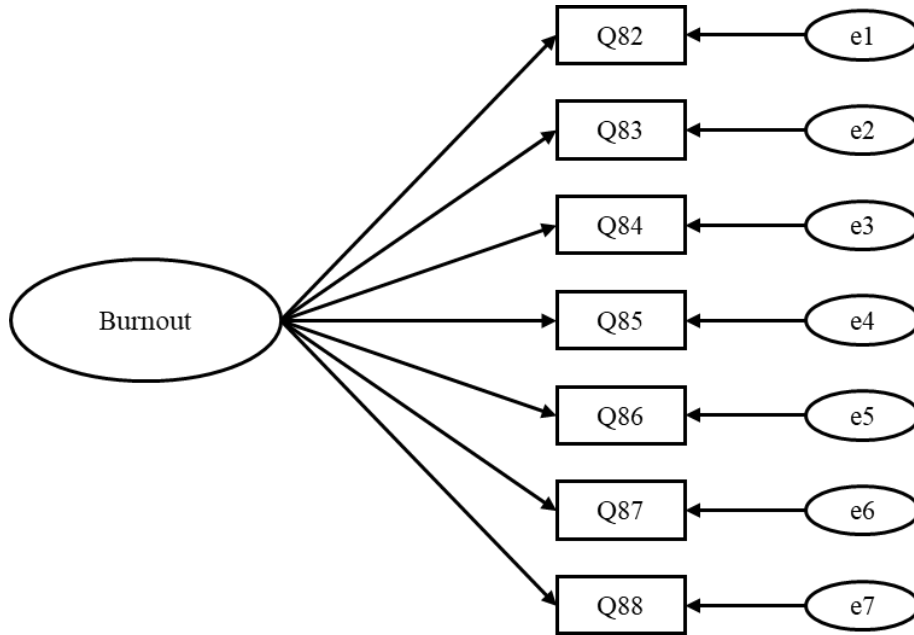
Figure 4.3 Results of the validated factor analysis of teacher's burnout

According to the analysis, the various indicators of teachers' burnout are in the acceptable range, with good construct validity. Specifically, the model index $\chi2/df$ is $4.782 < 5$, and the value of RMSEA is $0.079 < 0.08$, indicating a good fitness of model. In addition, other index values (NFI = 0.952, CFI = 0.962, IFI = 0.962 and TLI = 0.943) are above 0.9. All values reach the level of the model of goodness of fit, which indicates that the scale is reasonably set up and conceived.

(3) Teachers' turnover intention

Based on the discussion before, this thesis argues that teachers' turnover intention is a one-order and single-factor structure. The structure of teachers' turnover intention is shown as Figure 4.4.
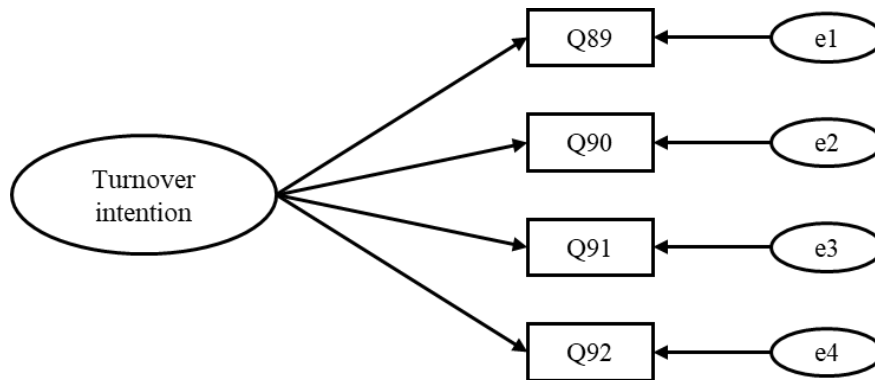
Figure 4.4 The structure of teachers' turnover intention

According to the data analysis, the various indicators of teachers' turnover intention are in the acceptable range, with good construct validity. Specifically, the model index $\chi2/df$ is 2.004 < 5, and the value of RMSEA is 0.041 < 0.08, indicating a good fitness of model. In addition, other index values (NFI = 0.996, CFI = 0.998, IFI = 0.998, TLI = 0.995) are above 0.9. All values reach the level of the model of goodness of fit, which indicates that the scale is reasonably set up and conceived.

4.4.3 Reliability and validity analysis on work values, role ambiguity, work overload and supervised support

4.4.3.1 Reliability analysis

The reliability analysis in this study uses Cronbach's α values for the corresponding analysis. In general, when the overall Cronbach's α value of all variables is larger than 0.8 and the Cronbach's α value of individual variables is larger than 0.7 is considered to have high reliability. Therefore, this thesis used reliability analysis in SPSS 24.0 to test the reliability of the scale. The results showed that the Cronbach's α value of teachers' work values is 0.914. The Cronbach's α value of role ambiguity is 0.863, and that of work overload is 0.907. The Cronbach's α value for supervised support is 0.888. The Cronbach's α value of all variables were larger than 0.8, indicating that the questionnaire had a stable level of consistency.

4.4.3.2 Validity analysis

As the questionnaire used in this study is from a relatively mature scale developed in China and abroad, its content validity has been repeatedly verified by previous authors to ensure content validity, so here we test the structural validity.

(1) Teachers' work values

Based on the discussion before, this thesis argues that teachers' work value is a second-order, one-factor, one-order, seven-factor structure (financial rewards, prestige status, career development, interpersonal relationship, organizational management, altruistic dedication and safety and stability). The detailed structure of teachers' work values is shown as Figure 4.5. According to the analysis, the various indicators of teachers' work values are in the acceptable range, with good construct validity. Specifically, the model index $\chi2/df$ is 4.366 < 5, and the value of RMSEA is 0.074 < 0.08, indicating a good fitness of model. In addition, other index values (NFI = 0.840, CFI = 0.872, IFI = 0.872, TLI=0.856) are above 0.8. All values reach the level of the model of goodness of fit, which indicates that the scale is reasonably set up and conceived.
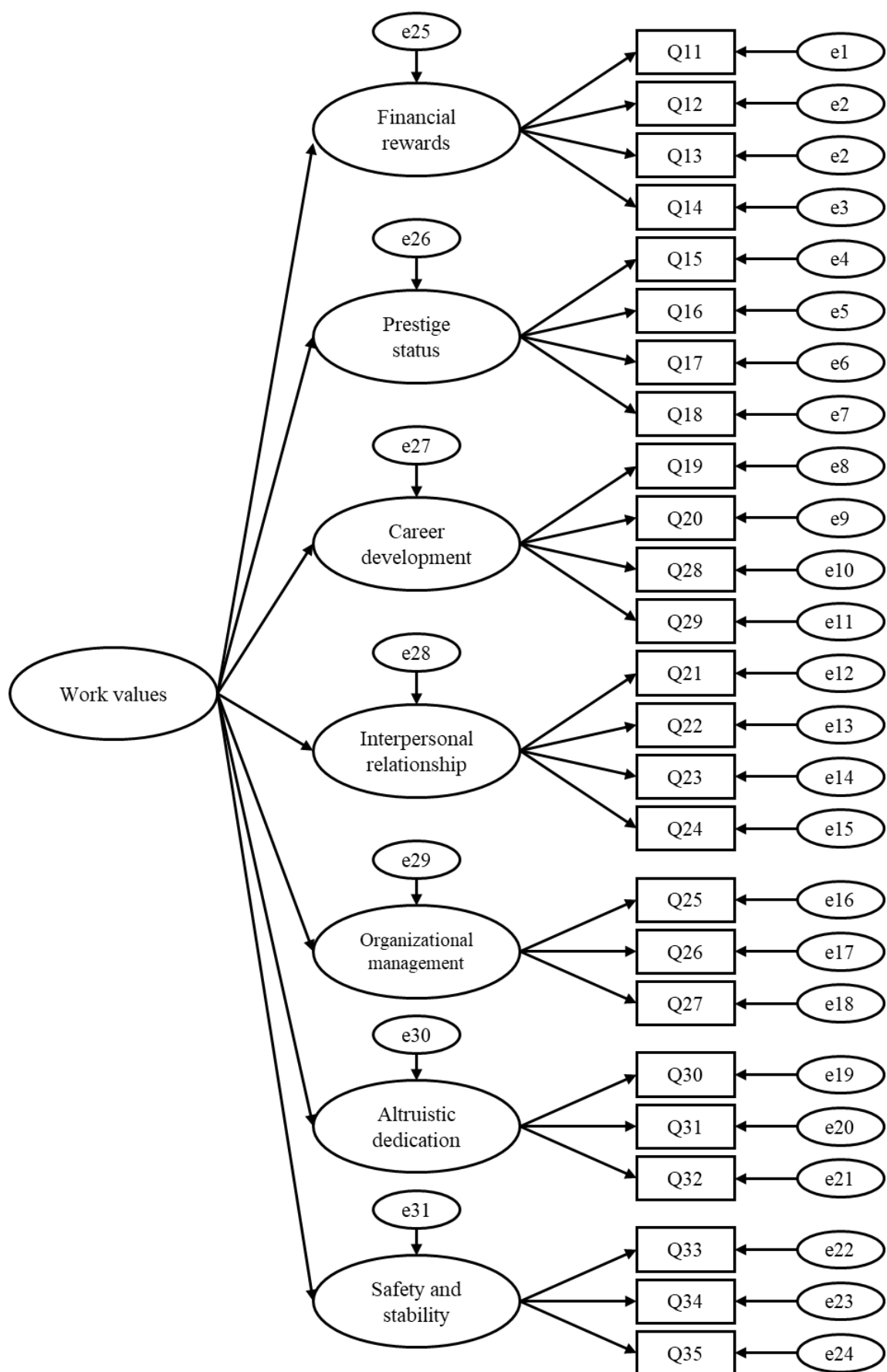
Figure 4.5 Results of the validated factor analysis of teachers' work values

(2) Role ambiguity

Based on the discussion before, this thesis argues that teachers' role ambiguity is a one-order and single-factor structure. The detailed structure of teachers' role ambiguity is shown as Figure 4. 6.
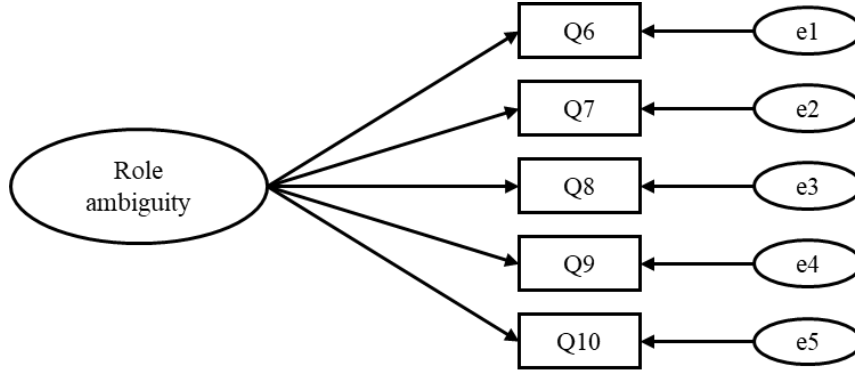

Figure 4. 6 The structure of role ambiguity

According to the analysis, the various categories of teachers' role ambiguity indicators are in the acceptable range category, with good construct validity. Specifically, the model index $\chi2/df$ is 4.203 < 5, and the value of RMSEA is 0.073 < 0.08, indicating a good fitness of model. In addition, other index values (NFI = 0.929, CFI = 0.944, IFI = 0.945 and TLI = 0.889) are almost all above 0.9. All reach the level of the model of goodness of fit.

(3) Supervised support

Based on the discussion before, this thesis argues that teachers' supervised support is a one-order and single-factor structure. The detailed structure of teachers' supervised support is shown as Figure 4.7.
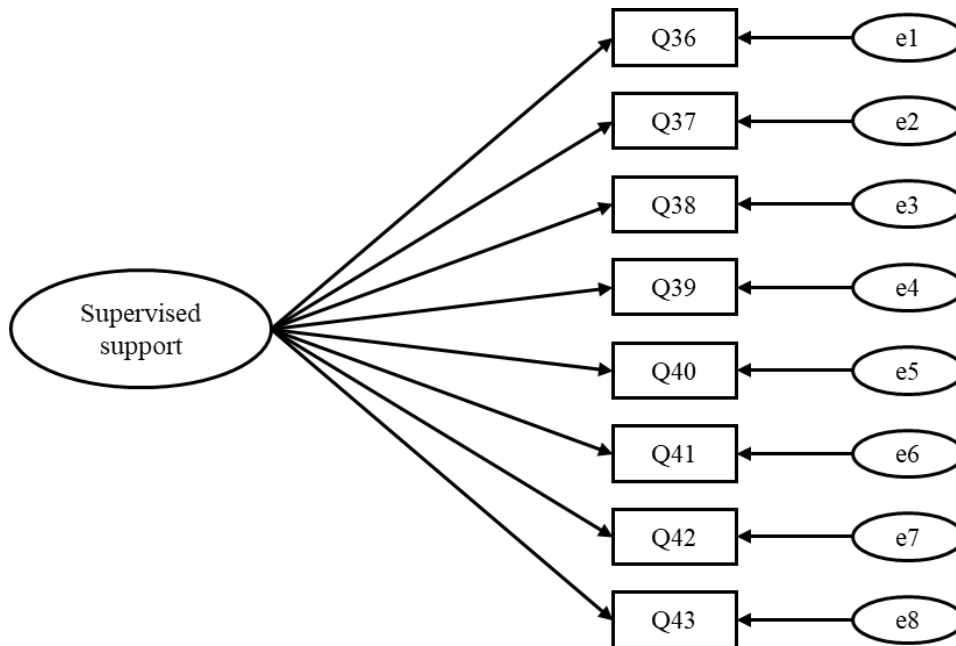
Figure 4.7 The structure of supervised support

According to the analysis, the various categories of teachers' supervised support indicators are in the acceptable range category, with good construct validity. Specifically, the model index $\chi2/df$ is 4.911 < 5, and the value of RMSEA is 0.080, indicating a good fitness of model. In addition, other index values (NFI = 0.961, CFI = 0.968, IFI = 0.968 and TLI = 0.986) are above 0.9. All reach the level of the model of goodness of fit.

(4) Work overload

Based on the discussion before, this thesis argues that teachers' work overload is a one-order and single-factor structure. The detailed structure of teachers' work overload is shown as Figure 4.8.
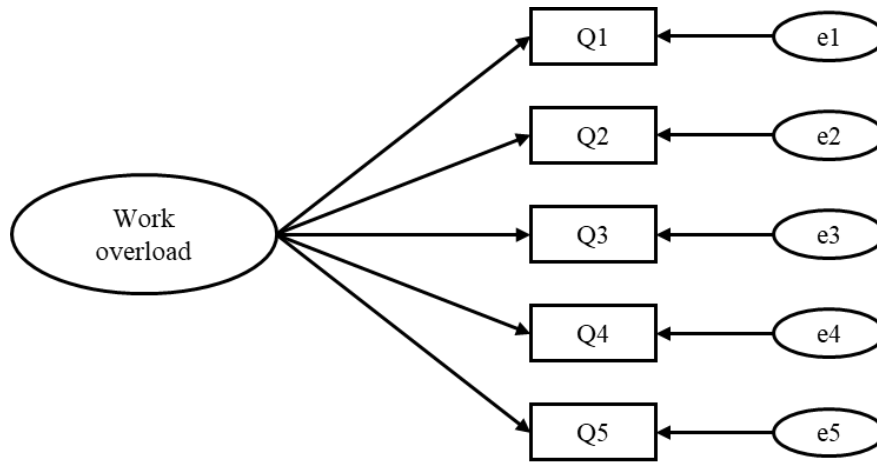
Figure 4.8 The structure of work overload

According to the analysis, the various categories of teachers' work overload indicators are in the acceptable range category, with good construct validity. Specifically, the model index $\chi2/df$ is 4.738 < 5, and the value of RMSEA is 0.078 < 0.08, indicating a good fitness of model. In addition, other index values (NFI = 0.989, CFI = 0.991, IFI = 0.991 and TLI = 0.983) are above 0.9. All reach the level of the model of goodness of fit.

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Chapter 5: Data Analysis and Hypothesis Test

5.1 Test of the multiple linear regression between teachers' identity and outcome variables

5.1.1 Teachers' identity and job satisfaction

Scholars study variables that affect job satisfaction. Agho et al. (1993) model suggests that autonomy, communication, social integration, distributional justice, promotion opportunities, emolument, workload, and family burden are significantly and positively related to job satisfaction. It has also been found that job satisfaction is not only determined by the scenario, but also influenced by traits, with individuals' age, gender, personality and even genetics all playing a role in job satisfaction. Y. Chen and Sun (1994) developed a teacher job satisfaction scale consisting of 40 items in five dimensions, including job nature, physical conditions, salary, further training and promotion, interpersonal relationships and leadership management, based on interviews and tests with primary school teachers in four provinces in Beijing. Feng (1996) used factor analysis and logic to propose five components of teachers' job satisfaction: self-fulfillment, work intensity, salary income, leadership relationship and colleague relationship. M. Zhang and Li (2001) did an empirical study on the determinants of employee satisfaction in enterprises, mainly examining the influence of demographic and occupational variables and satisfaction with each job factor on overall job satisfaction, and compared the findings with those of existing domestic studies, pointing out that job satisfaction includes promotion, compensation, communication management, job nature, welfare, identity, supervisor and colleagues. F. Liu and Zhang (2004) showed that training and development, top management, department, and customer service were the main factors affecting job satisfaction in private enterprises. This thesis uses the *Teacher Job Satisfaction Scale* developed by Feng (1996), which has been found to be very effective in assessing teachers' job satisfaction.

Validation H1: Teachers' identity had a positive effect on job satisfaction. The results of bringing teachers' identity as the independent variable and job satisfaction as the dependent variable into the model are shown in Tables 4.1.

According to the results of the regression analysis, the goodness of fit R-square is 0.231

and the adjusted R-square equals 0.230, hence the fitting result is significant. The regression one-way ANOVA test shows that the significance of index F is 0.000, which is less than 0.05. It can be concluded from the data that teachers' identity has a significant positive impact on job satisfaction.

According to Table 5.1, the significance of the T-test is smaller than 0.05, indicating that teachers' identity has a significant impact on job satisfaction. The coefficient of each independent variable in the equations of regression analysis is a positive value, which indicates that teachers' identity has a significant positive effect on job satisfaction. Hence it is confirmed that hypothesis H1 is true.

Table 5.1 Results of regression analysis

Effect	Estimate	SE	95% CI		p
			LL	UL	
Teachers' identity - job satisfaction	0.481	0.036	0.411	0.551	0.000
Teachers' identity - job burnout	-0.241	0.039	-0.319	-0.164	0.000
Teachers' identity - turnover intention	-0.320	0.038	-0.396	-0.245	0.000

Note. CI = confidence interval; LL = lower limit; UL = upper limit.

5.1.2 Teachers' identity and job burnout

Numerous studies have shown that role conflict and ambiguity are moderately or highly correlated with burnout. Harden's (1999) studied both identified role conflict and role ambiguity as significant predictors of job exhaustion or job stress. Lee and Ashforth (1996) concluded that supervised support significantly reduced individual burnout, particularly in terms of emotional exhaustion and non-humanized, but the effect of colleague support was relatively small and team climate was found to be significantly and negatively related to emotional exhaustion and non-humanized.

The degree of individual involvement in the workplace, such as independence, participation in decision-making, and use of talents, is moderately associated with burnout. Organisational changes such as redundancies, mergers and restructuring can lead to blurred and conflicting roles in the workplace, resulting in burnout, especially when the change brings about job instability. Dworkin and Tobe (2014) also found that school reform and a democratic climate can affect teachers' burnout to a certain extent. Therefore, they suggested that structural changes should be used to combat individual burnout.

Validation H2: Teachers' identity has a negative effect on burnout, and the results of bringing teachers' identity as the independent variable and burnout as the dependent variable

into the model are shown in Table 5.1.

According to the results of the regression analysis, the goodness of fit R-square is 0.058. The adjusted R-square equals 0.057, hence the fitting result is good. The regression one-way ANOVA test shows that the significance of index F is 0.000, which is smaller than 0.05. It can be concluded from the data that teachers' identity has a significant impact on job burnout.

According to Table 5.1, the significance of the T-test is smaller than 0.05, indicating that teachers' identity has a significant impact on job burnout. The coefficient of each independent variable in the equations of regression analysis is a negative figure, which indicates that teachers' identity has a significant negative effect on job satisfaction. Hence it is confirmed that hypothesis H2 is true.

5.1.3 Teachers' identity and turnover intention

In a study of 244 US registered nurses, Lake (1998) found that the older and more tenured the employee, the lower turnover rate in the same organisation. Most believed that the older they were, the fewer alternative job opportunities were available to them, and the longer tenure meant a faster rate of salary advancement and a greater willingness to stay on. Employees who are younger, less experienced, and more highly educated tend to have lower levels of job and career satisfaction and commitment to the organization, which in turn is associated with higher turnover intentions.

Individual ability is also an influencing factor of turnover intention. When an individual is not competent enough to do his or her job, or when an individual with strong abilities cannot be fully utilised in the company to which he or she belongs, the employee is likely to have the turnover Intention. Differences in personality traits, thinking styles and sensitivities of employees make them have different expectations of their jobs and are likely to result in varying degrees of psychological contract violations, leading to lower job satisfaction and organisational commitment, and subsequently to turnover intentions. In general, there is a negative association between individual performance and turnover, but the impact of performance on turnover is also moderated by the likelihood of rewards available to employees. In short, individual factors either directly influence the turnover intention or indirectly influence it through the mediating and moderating effects of other variables.

Schaufeli and Bakker (2004) looked into the reasons why workers left the workforce in correctional institutions and found that employees in this industry felt extremely stressed and exhausted at work, which led to high absenteeism and turnover rates. Due to the very long

working time, the unfavourable working environment, the repetitive, uninspiring and unchallenging working content, employees are likely to have reduced job satisfaction and to leave. In addition, poor interpersonal relationships at work are also an important factor in employees leaving. Role stress has a positive indirect effect on turnover, as employees who experience a high level of role ambiguity and role conflict tend to be dissatisfied with their jobs and the organization and strengthen their turnover intentions.

Job satisfaction and organisational commitment are considered to be two important reasons for employees' turnover intention. Mobley (1977) believed that other variables affect employees' turnover intention mostly through these two job-related attitudes.

M. Zhang and Zhang (2003) used two qualitative research methods: personal interviews and in-depth group interviews. They found that the general reasons for employee turnover could be summarised into three major areas: emolument, management and personal factors, through a field study of 10 IT companies in Xi'an. Y. A. Liu and Wang (2006), based on a large amount of research literature, concluded that the factors affecting employees' turnover intention could be divided into three main categories: individual employees, job-related and organisation-related factors, and the external market environment. However, these views lack data support and research evidence. Deng et al. (2021) used multivariate analysis and concluded that there was a significant negative correlation between job satisfaction and turnover intention. In addition age and tenure play a partial moderating role between job satisfaction and turnover intention. C. Wang et al. (2020) studied the interaction between the organisation and employees in the process of employee turnover. He also longitudinally compared the same group of employees with employees in state-owned and private enterprises to establish a corresponding game analysis model.

Validation H3: Teachers' identity has a negative effect on turnover intention. By putting teachers' identity as the independent variable and turnover intention as the dependent variable brought into the model, the numerical analysis is conducted in SPSS19.

According to the results of the regression analysis, the goodness of fit R-square is 0.102. The adjusted R-square equals 0.101, hence the fitting result is considered moderate. It can be concluded from the data that teachers' identity has a significant impact on teachers' turnover intention.

According to the numerical studies, teachers' identity has a significant impact on turnover intention. The coefficient of each independent variable in the equations of regression analysis is negative, which indicates that teachers' identity has a significant negative effect on teachers' turnover intention. Hence it is confirmed that hypothesis H3 is true.

5.2 Test of the mediating role of work values

Through the collation of literature, the variables involved in this chapter are identity, job satisfaction, turnover intention, burnout and work values. This model mainly studies the impact of teachers' identity on job satisfaction, turnover intention and burnout, and discusses the intermediary role of teachers' work values. The model is illustrated in Figure 5.1.
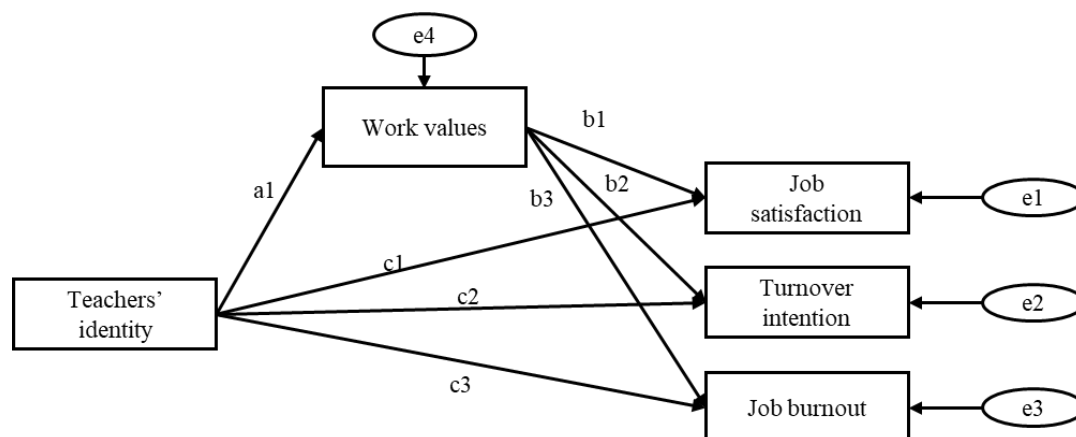
Figure 5.1 Study model diagram

Some studies have argued that work values do not directly influence professional behaviour but only play an intermediate role in promoting it. Work values define the goals and standards of individuals' behaviour but only induce and guide it, which depends on the individual's attitude and the environment where he or she is placed. Weisberg and Sagie (1999) distinguished between two types of variables in his model: one is the moderating variable, or named buffer variable, which is a third variable in addition to the other two variables that can change and influence the relationship between the two variables. The other is the mediating variable, which can partially or even fully explain the causal relationship between the other two variables.

In recent years, work values research has shifted from 'the general' to 'the professional', and researchers have begun to focus on the work values of those working in the field of education. Both pre-service senior teachers and in-service teachers have addressed with regard to the factors influencing teachers' work values, their developmental characteristics, and work performance in relation to work values. However, these studies have also revealed a number of problems, such as direct references to other fields and understandings of teachers' work values, lack of depth in theoretical discussion, lack of relevance in research tools, and lack of clarity in the study of the impact of work values. Overall, there is a lack of systematic research on teachers' work values. At the same time, there are few empirical studies on the mediating role of work values in the relationships between identity and job satisfaction,

burnout and turnover intention.

Validation H4: Teachers' work values mediate the relationship between teachers' identity and job satisfaction.

Validation H5: Teachers' work values mediate the relationship between teachers' identity and turnover intention.

Validation H6: Teachers' work values mediate the relationship between teachers' identity and burnout. The inspection procedure for the intermediary effect is based on the inspection procedures proposed by Wen et al. (2004).

With the PROCESS 2.16.3 structural modeling based on SPSS19, we first give the whole estimating results in Figure 5.2 for the constructed mediating model (Figure 5.1). Then, we make a detailed discussion for the relevant results of the constructed mediating model.
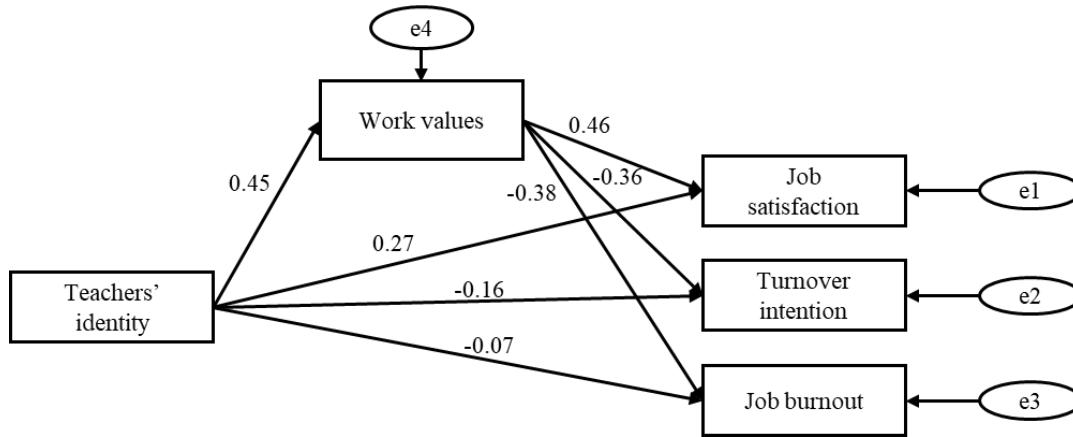
Figure 5.2 Results of the mediating model

(1) Teachers' Identity - Job Satisfaction

According to the inspection model above, the mediating effects between teachers' identity and job satisfaction can be divided into the following parts:

- Define variable **sgIE** corresponding to the indirect effect between teachers' identity and job satisfaction degree, where **sgIE = a1*b1**;

- Define variable **sgDE** corresponding to the direct effect between teachers' identity and job satisfaction degree, where **sgDE = c1**;

- Define variable **sgTE** corresponding to the total effect between teachers' identity and job satisfaction degree, where **sgTE = sgIE + sgDE**.

With the PROCESS 2.16.3 structural modeling based on SPSS19, we can easily obtain the estimated results. The point estimates of the indirect effect **sgIE** and the direct effect **sgDE** are 0.207 and 0.274 respectively, which both achieve the significant level of 0.01. Specifically, on the one hand, the index of indirect effect between teachers' identity and job satisfaction equals to 0.207 within the confidence interval (0.160, 0.258), where 0 is excluded.

This indicates that the indirect effect is significant. On the other hand, the index of direct effect between teachers' identity and job satisfaction equals to 0.274 within the confidence interval (0.205, 0.354), where 0 is excluded. This indicates that the direct effect is apparent. Furthermore, we also consider the work values as the mediating variable in the model of the identity's impact of job satisfaction on all dimensions, as shown in Figure 5.3:
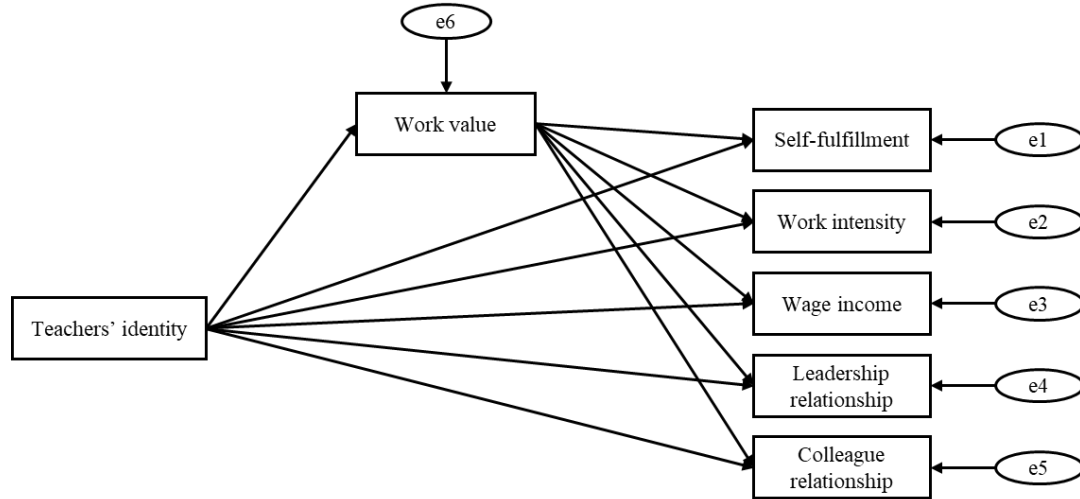
Figure 5.3 The mediating model with respect to five dimensions of job satisfaction

Similarly, through the process 2.16.3 plug-in modeling based on SPSS 19, we can easily obtain the estimated results. Consequently, we have the following analysis conclusions:

i) The indirect effect between identity and self-fulfillment is estimated at 0.086 within the confidence interval (0.053, 0.122), which does not contain zero, and Z = 5.058 > 1.96, indicating a significant indirect effect, i.e. a significant mediating effect. The direct effect between identity and self- fulfillment is 0.661 within the confidence interval (0.603, 0.713), which does not contain zero, and Z = 23.607 > 1.96, indicating a significant direct effect, i.e. a significant direct effect. The total effect is estimated at 0.747 within the confidence interval (0.693, 0.796), which does not contain zero, indicating a significant total effect. Because the direct effect is significant, this model is a partial mediated effects model.

ii) The indirect effect between identity and work intensity is estimated at 0.074 within the confidence interval (0.032, 0.119), which does not contain zero, and Z = 3.363 > 1.96, indicating a significant indirect effect. The direct effect between identity and work intensity is -0.048 within the confidence interval (-0.130, 0.051), which contains zero, and Z = 1.021 < 1.96, indicating that the direct effect is not significant. The total effect is estimated at 0.025 within the confidence interval (-0.060, 0.121), which contains zero, indicating that the total effect is not significant. Because the total effect is not significant, this model is not a mediated effects model.

iii) The indirect effect between identity and wage income is estimated at 0.240 within the confidence interval (0.184, 0.303), which does not contain zero, and Z = 8.000 > 1.96, indicating a significant indirect effect, i.e., a significant mediating effect. The direct effect between identity and wage income is -0.058 within the confidence interval (-0.141, 0.028), which contains zero, and Z = 1.318 < 1.96, indicating that the direct effect is not significant. The total effect is estimated to be 0.182, within the confidence interval (0.099, 0.270), which does not contain zero, indicating that the total effect is significant, i.e., the total effect is conspicuous. Because the direct effect is not significant, this model is a fully mediated effects model.

iv) The indirect effect between identity and leadership relationship is estimated at 0.154 within the confidence interval (0.113, 0.204), which does not contain zero, and Z = 6.696 > 1.96, indicating a significant indirect effect, i.e., a significant mediating effect. The direct effect between identity and leadership relationship is 0.164 within the confidence interval (0.078, 0.252), which does not contain zero, and Z = 3.727 > 1.96, indicating a significant direct effect. The total effect is estimated to be 0.318 within the confidence interval (0.232, 0.404), which does not contain zero, indicating a significant total effect, i.e., a significant total effect. Because the direct effect is significant, this model is a partial mediation effect model.

v) The indirect effect between identity and colleague relationship is estimated at 0.097 within the confidence interval (0.054, 0.148), which does not contain zero, and Z = 4.042 > 1.96, indicating a significant indirect effect, i.e., a significant mediating effect. The direct effect between identity and colleague relationship is 0.134 within the confidence interval (0.038, 0.227), which does not contain zero, and Z = 2.735 > 1.96, indicating a significant direct effect. The total effect is estimated to be 0.231, within the confidence interval (0.146, 0.313), which does not contain zero, indicating a significant total effect, i.e., a significant total effect. Because the direct effect is significant, this model is a partial mediated effects model.

(2) Teachers' Identity - turnover intention

Recalling Figure 5.1, according to the inspection model above, the mediating effects between teachers' identity and teachers' turnover intention can be divided into the following parts:

- Define variable **slIE** corresponding to the indirect effect between teachers' identity and turnover intention, where **slIE = a1*b2**;
- Define variable **slDE** corresponding to the direct effect between teachers' identity and turnover intention, where **slDE = c2**;
- Define variable **slTE** corresponding to the total effect between teachers' identity and

turnover intention, where **slTE = slIE + slDE**.

With the PROCESS 2.16.3 structural modeling based on SPSS19, we can easily obtain the estimated results. The point estimates of the indirect effect **slIE** and the direct effect **slDE** are -0.162 and -0.158 respectively, which both achieve the significant level of 0.01. Specifically, on the one hand, the index of indirect effect between teachers' identity and teachers' turnover intention equals -0.162 within the confidence interval (-0.213, -0.115), where 0 is excluded. This indicates that the indirect effect is significant. On the other hand, the index of direct effect between teachers' identity and their turnover intention equals to -0.158 within the confidence interval (-0.259, -0.052), where 0 is excluded. This indicates that the direct effect is significant.

(3) Teachers' Identity - Job Burnout

According to the inspection model above, the mediating effects between teachers' identity and job burnout can be divided into the following parts:

- Define variable **szIE** corresponding to the indirect effect between teachers' identity and job burnout, where **szIE = a1 * b3**;

- Define variable **szDE** corresponding to the direct effect between teachers' identity and job burnout, where **slDE = c3**;

- Define variable **szTE** corresponding to the total effect between teachers' identity and job burnout, where **szTE = szIE + szDE**.

We can easily obtain the estimated results. The point estimates of the indirect effect **szIE** and the direct effect **szDE** are -0.170 and -0.071 respectively, which both achieve the significant level of 0.01. Specifically, on the one hand, the index of indirect effect between teachers' identity and job burnout equals to -0.170 within the confidence interval (-0.224, -0.121), where 0 is excluded. This indicates that the indirect effect is significant. On the other hand, the index of direct effect between teachers' identity and job burnout equals to -0.071 within the confidence interval (-0.170, -0.023), where 0 is excluded. This indicates that the direct effect is apparent.

5.3 Test of the mediating role of role ambiguity and work overload

Based on the discussion above, we consider a parallel mediating factor model for teachers' identity and job satisfaction, turnover intention, and job burnout, where work overload and role ambiguity are adopted as two mediating variables. The structure of the parallel mediating factor model is shown as Figure 5.4. We consider and use the SPSS19-based PROCESS

2.16.3 plug-in to estimate the following parallel mediation model.
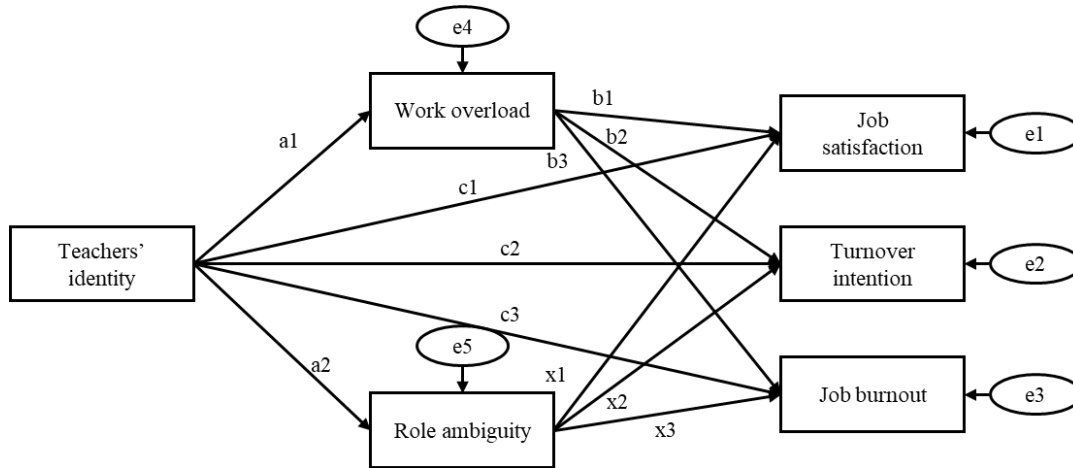
Figure 5.4 Parallel mediation model

The estimated results are given by Figure 5.5, i.e.,
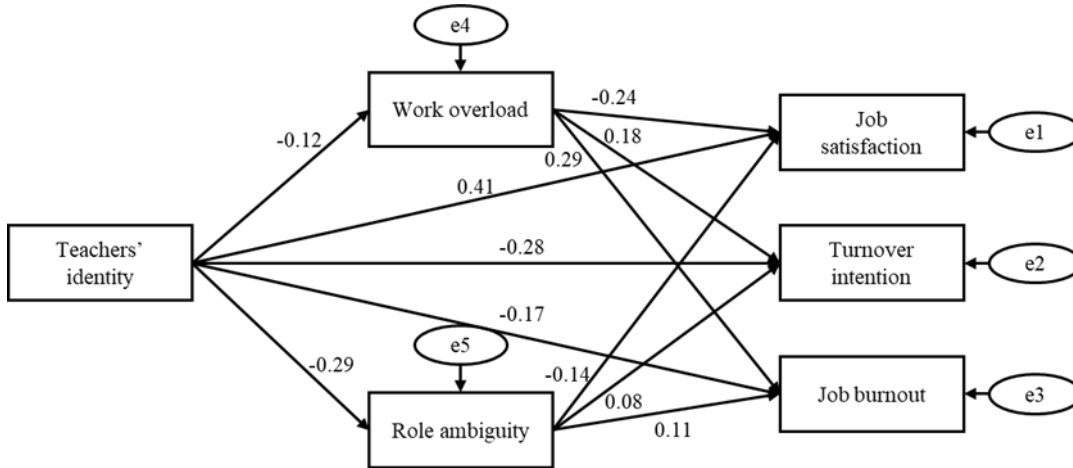
Figure 5.5 The estimating results of the constructed mediating factor model

Based on the above results, we have the following analytical conclusions.

(1) Identity – Job satisfaction

According to the structural model above, the effect between identity and job satisfaction is divided into these components:

- Define variable **sgIE1** corresponding to the indirect effect from teachers' identity through work overload to job satisfaction, where **sgIE1 = a1*b1**;

- Define variable **sgIE2** corresponding to the indirect effect from teachers' identity through role ambiguity to job satisfaction, where **sgIE2 = a2*x1**;

- Define variable **sgdIE** corresponding to the difference between two indirect effects **sgIE1** and **sgIE2**, where **sgdIE = sgIE1 - sgIE2**;

- Define variable **sgIE** corresponding to the total indirect effects between teachers' identity and job satisfaction, where **sgdIE = sgIE1 + sgIE2**;

- Define variable **sgDE** corresponding to the direct effects between teachers' identity and job satisfaction, where **sgDE = c1**;
- Define variable **sgTE** corresponding to the total direct effects between teachers' identity and job satisfaction, where **sgTE = sgIE + sgDE**.

Estimation using SPSS19-based modelling with the PROCESS 2.16.3 plug-in yielded the following estimates. Specifically, the indirect effect between identity-work overload and job satisfaction was 0.029 within the confidence interval (0.008, 0.057), which does not contain zero, indicating a significant indirect effect. The indirect effect between identity and role ambiguity and job satisfaction was 0.041 within the confidence interval (0.020, 0.072), which does not contain zero, indicating a significant indirect effect. The direct effect between identity and job satisfaction was 0.411, within the confidence interval (0.336, 0.497), which does not contain zero, indicating a significant direct effect. In addition, the difference between the two parallel-mediated effects was -0.011 within the confidence interval (-0.048, 0.021) containing zero, indicating that there was no significant difference between the two.

According to the estimation results shown in Table 5.2, the indirect effect between identity and job satisfaction is estimated to be 0.070 within the confidence interval (0.039, 0.112), which does not contain zero, and $Z = 3.889 > 1.96$, indicating a significant indirect effect, i.e., a significant mediating effect. The direct effect between identity and job satisfaction is 0.411 within the confidence interval (0.336, 0.497), which does not contain zero, and $Z = 10.042 > 1.96$, indicating a significant direct effect, i.e., a significant direct effect. The total effect is estimated to be 0.481, within the confidence interval (0.401, 0.566), which does not contain zero, indicating a significant total effect.

Table 5.2 Estimated results of mediating effects of teachers' identity and job satisfaction

| | Point estimate | Product coefficients | of | Bootstrap 5000 times 95% CI | | | |
| | | | | Bias corrected | | Percentile | |
		SE	Z	Lower	Upper	Lower	Upper
			Indirect effects				
Teachers' identity–Job satisfaction	0.070***	0.018	3.889	0.039	0.112	0.037	0.109
			Direct effects				
Teachers' identity–Job satisfaction	0.411***	0.041	10.024	0.336	0.497	0.339	0.500
			Total effects				
Teachers' identity–Job satisfaction	0.481***	0.042	11.452	0.401	0.566	0.401	0.571

***p<0.01

Since the direct effects were significant, this model was a partial mediated effects model,

but the two parallel-mediated effects were not significantly different. Hypothesis H7 that role ambiguity mediates between teachers' identity and job satisfaction holds, and hypothesis H10 that work overload mediates between teachers' identity and job satisfaction holds.

(2) Identity – Turnover intention

According to the structural model above, the effect between identity and turnover intention is divided into the following components:

- Define variable **slIE1** corresponding to the indirect effect from teachers' identity through work overload to turnover intention, where **slIE1 = a1 * b3**;

- Define variable **slIE2** corresponding to the indirect effect from teachers' identity through role ambiguity to turnover intention, where **slIE2 = a2 * x3**;

- Define variable **sldIE** corresponding to the difference between two teachers' effects **slIE1** and **slIE2**, where **sldIE = slIE1 - slIE2**;

- Define variable **slIE** corresponding to the total indirect effects between teachers' identity and turnover intention, where **sldIE = slIE1 + slIE2**;

- Define variable **slDE** corresponding to the direct effects between personal teachers' and turnover intention, where **slDE = c3**;

- Define variable **slTE** corresponding to the total direct effects between teachers' identity and turnover intention, where **slTE = slIE + slDE**.

Estimation using SPSS19-based modelling with the PROCESS 2.16.3 plug-in yielded the following estimates. Specifically, the indirect effect between identity and work overload and turnover intention was -0.021 within the confidence interval (-0.042, -0.005), which did not contain zero, indicating a significant indirect effect. The indirect effect between identity and role ambiguity and turnover intention was -0.022 within the confidence interval (-0.052, -0.005), which did not contain zero, indicating a significant indirect effect. The direct effect between identity and turnover intention was -0.277 within the confidence interval (-0.383, -0.166), which did not contain zero, indicating a significant direct effect.

Depending on the estimation results shown in Table 5.3, the indirect effect between identity and turnover intention is estimated to be -0.043 within the confidence interval (-0.079, -0.012), which does not contain zero, and $Z = 2.529 > 1.96$, indicating a significant indirect effect, i.e., a significant mediating effect. The direct effect between turnover intention and identity is estimated to be -0.277 within the confidence interval (-0.383, -0.166), which does not contain zero, and $Z = 4.946 > 1.96$, indicating a significant direct effect, i.e., the direct effect is significant. The total effect is estimated to be -0.320, within the confidence interval (-0.420, -0.212), which does not contain zero, indicating a significant total effect.

Because the direct effect is significant, this model is a partial mediated effects model.

Table 5.3 Estimated results of mediating effects of teachers' identity and turnover intention

| | Point estimate | Product coefficients | of | Bootstrap 5000 times 95% CI | | | |
| | | | | Bias corrected | | Percentile | |
		SE	Z	Lower	Upper	Lower	Upper
Indirect effects							
Teachers' identity–Turnover intention	-0.043***	0.017	2.529	-0.079	-0.012	-0.078	-0.010
Direct effects							
Teachers' identity–Turnover intention	-0.277***	0.056	4.946	-0.383	-0.166	-0.393	-0.176
Total effects							
Teachers' identity–Turnover intention	-0.320***	0.053	6.038	-0.420	-0.212	-0.430	-0.223

***p<0.01

Hypothesis H9 that role ambiguity mediates between teachers' identity and turnover intention holds, and hypothesis H12 that work overload mediates between teachers' identity and turnover intention holds.

(3) Identity- Job Burnout

According to the structural model above, the effect between identity and burnout is divided into these components:

- Define variable **szIE1** corresponding to the indirect effect from teachers' identity through work vlaues to job burnout, where **szIE1 = a1 * b3**;

- Define variable **szIE2** corresponding to the indirect effect from teachers' identity through role ambiguity to job burnout, where **szIE2 = a2 * x3**;

- Define variable **szdIE** corresponding to the difference between two indirect effects **szIE1** and **szIE2**, where **szdIE = szIE1 - szIE2**;

- Define variable **szIE** corresponding to the total indirect effects between teachers' identity and job burnout, where **szdIE = szIE1 + szIE2**;

- Define variable **szDE** corresponding to the direct effects between teachers' identity and job burnout, where **szDE = c3**;

- Define variable **szTE** corresponding to the total direct effects between teachers' identity and job burnout, where **szTE = szIE + szDE**.

Estimation using SPSS19-based modelling with the PROCESS 2.16.3 plug-in yielded the following estimates. Specifically, the indirect effect between identity-work overload-job burnout was -0.035 within the confidence interval (-0.067, -0.010), which did not contain zero, indicating a significant indirect effect. The indirect effect between identity-role

ambiguity-job burnout was -0.033 within the confidence interval (-0.064, -0.011), which did not contain zero, indicating a significant indirect effect. The direct effect between identity-turnover intention was -0.173 within the confidence interval (-0.273, -0.079), which does not contain zero, indicating a significant direct effect. In addition, the difference between the two parallel-mediated effects was -0.002 within the confidence interval (-0.041, 0.041) containing zero, implying that there was no statistically significant difference between the two.

According to Table 5.4, the indirect effect between identity and burnout was estimated to be -0.069 within the confidence interval (-0.111, -0.035), which does not contain zero, and Z = 3.632 > 1.96, indicating a significant indirect effect, i.e., a significant mediating effect. The direct effect between identity and burnout was -0.173 within the confidence interval (-0.273, -0.079), which does not contain zero, and Z = 3.460 > 1.96, indicating a significant direct effect, i.e., a significant direct effect. The total effect is estimated to be -0.241, within the confidence interval (-0.339, -0.147), which does not include 0, implying a substantial overall effect. Because the direct effect is significant, this model is a partial mediated effects model.

Table 5.4 Estimated results of mediating effects of teachers' identity and job burnout

	Point estimate	Product of coefficients		Bootstrap 5000 times 95% CI			
				Bias corrected		Percentile	
		SE	Z	Lower	Upper	Lower	Upper
Indirect effects							
Teachers' identity–Job burnout	-0.068***	0.019	3.632	-0.111	-0.035	-0.109	-0.033
Direct effects							
Teachers' identity–Job burnout	-0.173***	0.050	3.460	-0.273	-0.079	-0.277	-0.083
Total effects							
Teachers' identity–Job burnout	-0.241***	0.050	4.820	-0.339	-0.147	-0.344	-0.152

***p<0.01

Hypothesis H8 that role ambiguity mediates between teachers' identity and burnout holds, and hypothesis H12 that work overload mediates between teachers' identity and burnout holds.

5.4 Test of the moderating role of supervised support

(1) Teachers' identity – Job satisfaction

Teachers' identity and supervised support were first standardized and then cross-sectional variables were created, followed by stratified regressions with identity, supervised support and

cross-sectional variables on job satisfaction to obtain the R-squared change results and coefficient estimates. The detailed estimates of moderating effect coefficients for identity and job satisfaction are shown in Table 5.5. From the table, we learn the moderating effects of supervised support for identity and job satisfaction is significant.

Table 5.5 Estimates of moderating effect coefficients for teachers' identity and job satisfaction

	Variable	Standard coefficients	t value	Significance
Model 1	Teachers' identity	0.481	13.514	0.000
Model 2	Teachers' identity	0.327	9.886	0.000
	Supervised support	0.456	13.811	0.000
Model 3	Teachers' identity	0.355	10.686	0.000
	Supervised support	0.446	13.674	0.000
	Teachers' identity * Supervised support	0.111	4.344	0.001

According to the Figure 5.6, on the aspect of teachers' identity, when the degree of the teachers' identity is relatively low: the stronger the supervised support is, the higher the job satisfaction will be. Moreover, when teachers have relatively more sense of themselves, with stronger teachers' identity, the supervised support is still directly proportional to teachers' job satisfaction. Analysing from the perspective of supervised support, it has an obvious moderating effect on teachers' identity and work satisfaction, and the stronger the supervised support is, the greater the impact of identity on job satisfaction will be.
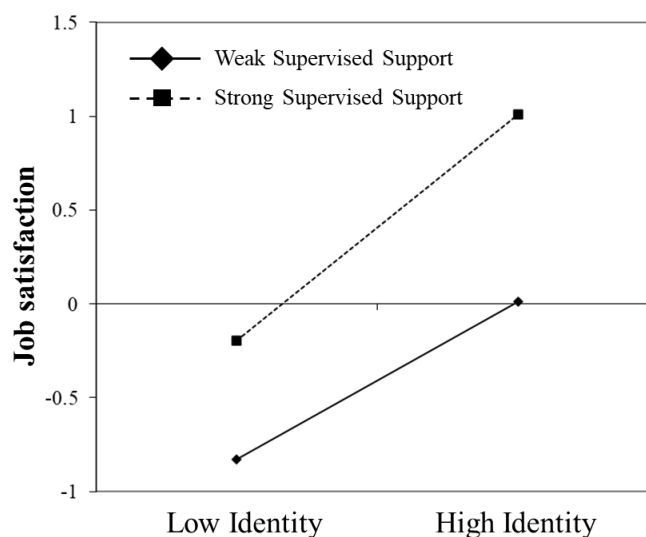
Figure 5.6 The influence of supervised support for teachers' identity and job satisfaction

Derived from the findings of the preceding analysis because the cross-sectional variables entered into the model with a significant F-value corresponding to the change in R-squared of $0.001 < 0.05$ and a significant coefficient estimate of $0.001 < 0.05$, indicating that supervisor support significantly moderates the relationship between job satisfaction and identity, hypothesis H13 holds.

(2) Teachers' identity – Turnover intention

Teachers' identity and supervised support were first standardized and then cross-sectional variables were created, followed by a stratified regression of identity, supervised support and cross-sectional variables against turnover intention, yielding the R-squared change results and coefficient estimates. The results can be found in Table 5.6.

Table 5.6 Estimated coefficients of moderating effects of teachers' identity and turnover intention

	Variable	Standard coefficients	t value	Significance
Model 1	Teachers' identity	-.320	-8.325	.000
Model 2	Teachers' identity	-.221	-5.636	.000
	Supervised support	-.294	-7.506	.000
Model 3	Teachers' identity	-.227	-5.695	.000
	Supervised support	-.291	-7.430	.000
	Teachers' identity * Supervised support	-.032	-.851	.395

Following the results of the preceding analysis because the cross-sectional variables entered the model with a significant F-value corresponding to the change in R-squared of 0.375 > 0.05 and a significant coefficient estimate of 0.395 > 0.05, indicating that supervised support does not significantly moderate the relationship between identity and turnover intention, hypothesis H15 is not valid.

(3) Teachers' identity-Job Burnout

Teachers' identity and supervised support were first standardized, then cross-sectional variables were created, followed by stratified regressions with identity, supervised support and cross-sectional variables against job burnout, yielding the R-squared change results and coefficient estimates. The results can be found in Table 5.7.

Table 5.7 Estimated coefficients of moderating effects of teachers' identity and job burnout

	Variable	Standard coefficients	t	Significance
Model 1	Teachers' identity	-.241	-6.131	.000
Model 2	Teachers' identity	-.184	-4.500	.000
	Supervised support	-.180	-4.392	.000
Model 3	Teachers' identity	-.179	-4.377	.000
	Supervised support	-.199	-4.774	.000
	Teachers' identity * Supervised support	.090	2.283	.023

According to Figure 5.7, on the aspect of teachers' identity, when teachers are relatively lack of teachers' identity: the stronger the supervised support is, the lower the degree of job burnout will be. Moreover, when teachers have relatively stronger teachers' identity, the supervised support is still inversely proportional to teachers' job burnout. Analysing from the perspective of supervised support, it has an obvious moderating effect on teachers' identity

and job burnout, and the stronger the supervised support is, the less the impact of teachers' identity on job burnout will be.
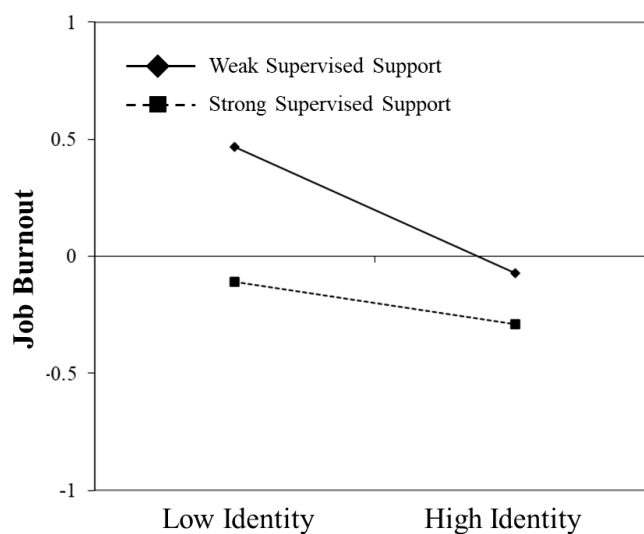
Figure 5.7 The influence of leadership for teachers' identity and job burnout

Considering the results of the preceding analysis, as the cross-sectional variables entered the model the R-squared change in F-value corresponds to a significance of $0.023 < 0.05$ and the coefficient estimate is significant at $0.023 < 0.05$, indicating that supervised support significantly moderates the relationship between identity and job burnout and hypothesis H14 holds.

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Chapter 6: Conclusion and Research Discussion

6.1 Research discussion

Based on the established goals and assumptions, the validation results are summarized as Table 6.1 and discussed below.

Table 6.1 Hypotheses verification results

No	Hypotheses	Result
H1	Teachers' identity has a positive effect on job satisfaction.	
H2	Teachers' identity has a negative effect on turnover intention.	
H3	Teachers' identity has a negative effect on job burnout.	
H4	Teachers' work values mediate the relationship between teachers' identity and job satisfaction.	
H5	Teachers' work values mediate the relationship between teachers' identity and turnover intention.	
H6	Teachers' work values mediate the relationship between teachers' identity and job burnout.	
H7	Role ambiguity mediates the relationship between teachers' identity and job satisfaction.	
H8	Role ambiguity mediates the relationship between teachers' identity and job burnout.	Supported
H9	Role ambiguity mediates the relationship between teachers' identity and turnover intention.	
H10	Work overload mediates the relationship between teachers' identity and job satisfaction.	
H11	Work overload mediates the relationship between teachers' identity and job burnout.	
H12	Work overload mediates the relationship between teachers' identity and turnover intention.	
H13	Supervised support moderates the relationship between teachers' identity and job satisfaction.	
H14	Supervised support moderates the relationship between teachers' identity and job burnout.	
H15	Supervised support moderates the relationship between teachers' identity and turnover intention.	Unsupported

6.1.1 Discussion on the dimensions and influencing factors of teachers' identity

Considering the above data and analysis, we can derive the following essential characteristics of the current teachers' identity in higher vocational colleges:

First, the teachers in Double-High vocational colleges have a stronger sense of identity than in ordinary higher vocational colleges because they are in higher-level schools with better salaries. This difference might result from greater policy support, more sufficient funds,

higher teachers' income and social reputation, and a greater sense of achievement, consistent with Wei's research findings (Wei, 2008).

Second, according to the results of the sampling description, gender has no significant differential impact on the teachers' identity. The findings show that the gender ratio of male to female teachers in higher vocational colleges is about 4:6, indicating that, unlike many studies in which primary and secondary school teachers are predominantly female (Lawrence & Nagashima, 2020), there is no significant association between teachers' identity and gender differences in higher vocational college teachers.

Third, the level of professional values identification is high, as teachers in higher vocational colleges have a keen sense of mission and responsibility to teach and educate. Jackson et al. (2022) investigated the teaching satisfaction of school teachers in South Africa and found that improving teachers' professional identity can increase teachers' satisfaction with teaching results, thus increasing teachers' sense of teaching mission. McNaughton and Billot (2016) points out that teachers' professional identity will affect teachers' values and personal narratives of self.

Fourth, the results reveal no significant differences in the teachers' identity with various professional titles but a significant difference in the results for teachers' sense of belonging, suggesting that school level influences teachers' sense of belonging to some extent. Meanwhile, Gao and Li (2018) have analyzed the relationship between college English teachers' professional value, role value, professional behaviour tendency and professional sense of belonging, and concluded that teachers of English in college have a strong sense of teacher professional identity with no significant differences in age, gender and professional title.

6.1.2 Discussion on the direct effects between teachers' identity and job satisfaction, burnout and turnover intention

According to the regression analysis results, teachers' identity has a significantly positive effect on job satisfaction, confirming that hypothesis 1 is supported. Overall, teachers in higher vocational colleges have a high rating and identification with the teaching profession, which is similar to the findings of H. Chen et al. (2020); Lu et al. (2019). This may be related to the Government's reform of the teaching system in recent years, which has improved the salary and personnel system (Tang, 2020), and substantially raised teachers' social status and benefits (Atmaca et al., 2020).

The significance of turnover intention and job burnout of the T-test is smaller than 0.05, indicating that teachers' identity significantly impacts turnover intention and job burnout. However, the equations of regression analysis are negative figures, which indicate that teachers' identity has a significant negative effect on job burnout and turnover intention, confirming that hypotheses 2 and 3 are supported.

The influence of teachers' identity on turnover intention and job burnout may have multiple reasons, Zheng (2012) investigated the job burnout of college teachers and found that the age of college teachers would have an impact on job burnout. Teachers over 45 years old experienced more job burnout than those under 45 years old. Xing (2022) found that the relationship between work engagement and teacher burnout can be influenced by teachers' personal characteristics, self-efficacy, personality strengths, educational environment, close relationships with school colleagues, and emotional intelligence. Cho and JungHeeKim (2018) proposed that teachers' personal emotional exhaustion and impersonal factors significantly impact turnover intention.

6.1.3 The mediating role of work values, work overload and role ambiguity

This study found a significant positive effect of teachers' identity on work values, a significant positive effect of work values on job satisfaction, and a significant negative effect of work values on turnover intention and burnout. Teachers' work values mediated the relationship between turnover intention, job satisfaction and teachers' identity. Research hypotheses 4, 5, 6 are all supported. Teachers with a high teachers' identity clearly understand their work, accept the nature of the work itself, adjust their expectations appropriately, have positive work values and lower job burnout levels. People with a high teachers' identity are more certain of the value of their work, have more positive emotions for their work, and have lower levels of job burnout with no turnover intention. This conclusion is consistent with the research findings of H. Chen et al. (2020) and C. Wang et al. (2020).

The research results also show that the indirect effect of role ambiguity on teacher's identity and job satisfaction, job burnout, and turnover intention is all significant. In contrast, a teacher's identity has direct impact on job satisfaction, job burnout and turnover intention. Therefore, the effect of teacher's identity on job satisfaction, job burnout and turnover intention, mediated by role ambiguity, is a partial mediation effect model. Research hypotheses 7, 8, 9 are all supported. In addition, Merida-Lopez et al. (2017) investigated 288 teachers' engagement and found that the greater the ambiguity of teachers' roles, the lower

their dedication. This conclusion also shows that teachers may increase their job burnout and satisfaction. Surdez Pérez et al. (2017) also pointed out that role ambiguity, such as 'vague needs' and 'vague standards', would affect the criteria and framework of academic performance evaluation, thus negatively affecting job satisfaction and organizational achievements in the field of education.

Meanwhile, the research results show that the indirect effect of work overload on teacher's identity and job satisfaction, job burnout, turnover intention are all significant, while a teacher's identity has direct impact on job satisfaction, turnover intention and job burnout. Therefore, the effect of a teacher's identity on job satisfaction, turnover intention and job burnout, mediated by work overload, is a partial mediation effect model. Research hypotheses 10, 11,12 are all supported. Hong et al. (2021) also confirmed that work overload is negatively related to job satisfaction because it is positively related to work and family conflict.

6.1.4 The moderating role of supervised support

Based on the results, the supervised support as the moderator, with a *p*-value of 0.001 less than 0.05, indicating that supervisor support significantly moderates the relationship between job satisfaction and teachers' identity, hypothesis 13 is supported. Ashraf (2021) concluded that the support of teachers' supervisors would enhance the autonomy of teachers' work and improve teachers' satisfaction with their work by influencing the working atmosphere.

According to the results, the supervised support as the moderator, with a *p*-value of 0.023 less than 0.05, indicating that a significant moderator of the relationship between teachers' identity and job burnout is supervised support, hypothesis 14 is supported. M. T. Jensen and Solheim (2020) explored the relationship between supervised support, teacher burnout and classroom emotional atmosphere and also revealed a significant relationship between supervised support and teacher's job burnout.

However, the supervised support as the moderator, with a *p*-value of 0. 395 bigger than 0.05，indicating that supervised support does not have a significant moderating effect on the relationship between teachers' identity and turnover intention, hypothesis 15 is not valid. This result shows that supervised support will not bring excessive pressure on teachers to increase their turnover intention. On the contrary, it will also bring some promotion to teachers so that teachers can feel the sense of organizational support and organizational identity (L. R. Zhu et al., 2015).

6.2 Implication

The thesis contains both theoretical and practical implications:

6.2.1 Theoretical implication

Based on the empirical research in this thesis, the theoretical implications are as follows.

Firstly, based on JD-R theory, this thesis deduces and verifies the influence of work values in job resources, role ambiguity and work overload in job demands on outcome variables, including turnover intention, job burnout and job satisfaction. Meanwhile, this thesis expands the antecedent variables of job resources and job demands. To be specific, teachers' identity affects work values, role ambiguity and work overload which means work resources and demands will be affected by teachers' identity.

Secondly, besides determining the direct impact of teachers' identity on the outcome variables, this thesis also reveals the influence mechanism of teachers' identity on the outcome variables. Thus, work values, role ambiguity and work overload play a mediating role between turnover intention, job satisfaction, job burnout, and teachers' identity, opening the 'black box' of teachers' identity affecting the outcome variables.

Thirdly, this study provides an integrated perspective for understanding teachers' identity by synthesis of theories from different disciplines. The theoretical framework contains concepts from education, psychology, and organizational behaviours, which enlarges and deepens the understanding of teachers' personal identities.

Fourthly, this thesis deepens the theory of job satisfaction by dividing it into five dimensions: self-fulfilment, work intensity, wage income, leadership relationship and colleague relationship, and makes a more detailed extension of job satisfaction research. We analyzed the influence of antecedent variables on each dimension. That is to say, we studied the influence of teachers' identity on the five dimensions of job satisfaction and the mediating role of work values between teachers' identity and the five dimensions.

Fifthly, the research of this thesis also shows that personals' identity affects the boundary of the outcome variable, that is, supervised support plays a moderating role between turnover intention, job satisfaction, job burnout, and teachers' identity. This thesis finds that supervised support, as an external environment of the above influence, plays a moderating role in the research. The level of supervised support affects the influence of teachers' identity on its outcome variables (turnover intention, job burnout, job satisfaction), which extends the

influence boundary of identity theory.

6.2.2 Practical implications

6.2.2.1 Improving the construction of teachers in higher vocational colleges

For the higher vocational colleges teachers, teachers with both teaching and industry competence qualifications to work, are encouraged and valued by society and the government. According to the research in this thesis, the self-identity of teachers can be enhanced in terms of higher vocational education beliefs, professional theoretical knowledge, professional practice, education and teaching style, career development planning, professional development level, professional belonging identity and job satisfaction. Self-identity can promote the internal construction of teachers to comprehensively develop a talent team with the characteristics of higher vocational colleges.

6.2.2.2 Promoting the professional development of teachers

Professional growth of teachers is closely linked to their professional development, which is based on their identity. In turn, teachers' continuing professional development in higher vocational colleges leads to an increase in their personal professional competence, which positively impacts teachers' professional development.

The core problem of professional development for higher vocational education teachers is the blurred sense of self-development and autonomy. To improve this situation, we can first create a reasonable and appropriate social expectation to give higher vocational education teachers affirmation and motivation; Secondly, from the initial stages of their careers to maturity, teachers undergo different identity shifts. Identity helps senior teachers to clearly outline their particular professional development criteria and pathways, helps different groups of teachers to access guidance and resources for professional development, and facilitates their identity transformation from novice to expert, thus enhancing their identity. In addition, groups of higher vocational education teachers with different titles can combine their knowledge, approaches and responsibilities to develop from a loose network of interpersonal relationships into a community with a shared sense of identity.

6.2.2.3 Improving the teachers' value cognition of identity of higher vocational colleges

The identity of higher vocational college teachers significantly affects their job satisfaction, job burnout, and turnover intention. Usually, teachers in higher vocational colleges can recognize their value cognition of identity in the process of teaching and educating students.

Therefore, good teaching feedback can enhance the awareness of value cognition of identity of higher vocational teachers, thereby enhancing their sense of identity. In real life, higher vocational college teachers not only teach and educate people, but also have other ways to enhance their value cognition of identity, such as school-enterprise cooperation. In fact, in the process of deepening school-enterprise cooperation, higher vocational teachers gradually realize that they also belong to the "active party". Therefore, the role importance of higher vocational college teachers in the process of school-enterprise cooperation has enhanced their understanding of their own self-value of identity, thereby enhancing their identities.

6.2.2.4 Evoking the concerns of high vocational education from society

This study can arouse the concern and care of all parties in society for higher vocational education teachers, as well as increase their social recognition. It will help alleviate the inner turmoil of higher vocational education teachers by ensuring that all facets of society are aware of their working and living environment, thereby improving teacher satisfaction and recognition, stabilizing the teaching force, optimizing the teaching quality as well as strengthening the training of higher vocational education personnel. This will lead to the promotion of the professional development of higher vocational education in China.

6.3 Limitations and future direction

This thesis conducts a systematic review of teachers' identity in relation to promote high-quality development of vocational education in China and has decided to make certain way in the field of teachers' identity. However, due to issues such as the specificity of the research subject, the choice of research methods and the complexity of the influencing variables, there may be many shortcomings in the study, which are necessary to be improved by further research.

6.3.1 Structure of teacher's identity

Limitation 1: The structure of teachers' identity needs further validation. As a positive attitude related to the profession of individual teachers (Atmaca et al., 2020), the structure of teachers' identity cannot be accurately revealed in a single study (H. Chen et al., 2020). This study mainly cites previous studies for theoretical analysis, which has certain limitations.

Prospect 1: In future studies, various methods, such as employing other assessment scales and behavioural analysis, could be used to verify the structure of teachers' identity further.

6.3.2 Appropriateness of teacher's identity scale

Limitation 2: The scale of teachers' identity needs further revision (Hanna et al., 2019). Although the Teachers' identity Scale used in this study has high reliability and validity, it is based on teachers in higher vocational colleges.

Prospect 2: Whether this scale is suitable for kindergarten teachers, university teachers or high school teachers needs to be further tested, revised and improved in future studies (Hanna et al., 2020).

6.3.3 Impact effect model

Limitation 3: The study of the impact effect model requires further improvement (Hanna et al., 2019). The impact model established in this study only covers turnover intention, burnout and job satisfaction. As a professional psychological characteristic of teachers, teachers' identity has many influencing factors.

Prospect 3: In the future, we may consider different variables such as career identity, career adaptation, psychological resilience, organizational identity, job performance and organizational citizenship behavior and other variables.

6.3.4 Sample selection

Limitation 4: The sample of this study has limitations. This study only selects teachers from higher vocational colleges as the sample of the study, which can further expand the scope of sample selection.

Prospect 4: It is helpful to expand the sample size and diversity. In future research, we can ulteriorly test, revise and perfect the teachers' identity scale by involving teachers who work in primary school, high school and university. At the same time, we can also put forward different ideas from teachers at different levels (Richardson & Watt, 2018), and make more accurate research from different locations and different urban areas. Or we can conduct qualitative analysis through interviews in future research to make the research more practical.

6.4 Conclusion

This study investigates the mechanism of teachers' identity on the outcome variables under the circumstance of higher vocational college. It selected samples from east, west, central areas in China, and 608 valid questionnaires were collected according to the regional

sampling method. Structural equation modelling, confirmatory factor analysis and other quantitative methods were adopted in this research. The results revealed that teachers' work values, work overload and role ambiguity play a mediating role between job satisfaction and teachers' identity, turnover intention and job burnout. Supervised support significantly moderates the relationship between job satisfaction and teachers' identity, turnover intention and job burnout. This research enriched the theory of teachers' identity, extended the traditional JD-R model and provided an integrated perspective of teachers' identity. Also, it improved the development of the teacher in higher vocational colleges and enhanced the professional advancement of teachers. Moreover, the research strengthened the school-enterprises cooperation and evoked concerns from society. In further research, the scope of the research object could be expanded to kindergarten teachers, university teachers or high school teachers. The structure of teachers' identity will be further verified by using the examiner-rating scale and behaviour analysis method.

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Annex A: Questionnaire

Dear teachers,

    Thanks for your supports to this research that focuses on the basic information about teachers' personal identity in higher vocational colleges. The result of this research will only be analyzed on the whole and used by academic application. Each questionnaire is anonymous that is not related to your professional title evaluation, performance evaluation and teaching evaluation. Each question will be answered that not by longer time for turning over but by your first impression. Please answer all questions carefully, because only in that way that you will contribute to the success of this research. Please answer each question objectively and truly. If you have any questions, please feel free to contact me (e-mail). The quality of this questionnaire will directly affect the results of my research, so your help is very important to me. **I will assure you that your answer is completely confidential, and not cause an inconvenience to you and your school.** Thank you very much for your support and generous help!

Part I Personal information

1.Gender: Male □ Female □

2. Age:

3. Job Designation:

4. Have any enterprise work experience? Yes □ No □

4a.Years of Experience (in the enterprise): ___ years

5. Seniority (in current college): ___ years

6. Education Background:

（**Please circle the number that best describes your condition**）

1	Bachelor's Degree or Below
2	Master's Degree
3	Doctoral Degree

7. Professional Titles:

（**Please circle the number that best describes your condition**）

1	Teaching Assistant
2	Lecturer
3	Associate Professor
4	Full Professor

8. Monthly Income:

（**Please circle the number that best describes your condition**）

1	Less than or equal to 3000 CNY
2	3000 to 6000 CNY
3	6000 to 10000 CNY
4	More than or equal to 10000 CNY

9. College Location:

（**Please circle the number that best describes your condition**）

1	Western China
2	Central China
3	Eastern China

10. Vocational College Classification

（**Please circle the number that best describes your condition**）

1	Double-High vocational colleges
2	General vocational colleges

Part II Your attitude towards current job

This part of the questionnaire is designed to investigate **some of your cognition and feeling your current job.** Please circle the following options on the descriptive statement behind. To indicate that you agree to extent of these descriptions.

11.During last year, how many <u>hours</u> did you spend at work (on average)?

_____hours

12.Work Overload：

Please circle the corresponding number using the following 5-point scale. Try not choose "Not Sure" unless the other four choices are not really true.

Strongly Disagree	Slightly Disagree	Not Sure	Slightly Agree	Strongly Agree
1	2	3	4	5

1. There is a need to reduce some parts of my role	1	2	3	4	5
2. I feel overburdened in my role	1	2	3	4	5
3. I have been given too much responsibility	1	2	3	4	5
4. My workload is to heavy	1	2	3	4	5
5. The mount of my work I have to do interferes with the quality I want to maintain	1	2	3	4	5

This scale was compiled by Peterson et al. (1995) with the scoring method of Likert 5-point.

13.Role Ambiguity：

Please circle the corresponding number using the following 5-point scale. Try not choose "Not Sure" unless the other four choices are not really true.

Strongly Disagree	Slightly Disagree	Not Sure	Slightly Agree	Strongly Agree
1	2	3	4	5

6. I have clear planned goals and objectives for my job.	1	2	3	4	5
7. I know exactly what is expected for me.	1	2	3	4	5
8. I know what my responsibilities are.	1	2	3	4	5
9. I feel certain about how much responsibility I have.	1	2	3	4	5
10. My responsibilities are clearly defined.	1	2	3	4	5

This scale was compiled by Peterson et al. (1995) with the scoring method of Likert 5-point.

14.Teachers' Work Values：

Please circle the corresponding number using the following 5-point scale. Try not choose "Not Sure" unless the other four choices are not really true.

Extremely Unimportant	Partially Unimportant	Not Sure	Partially Important	Extremely important
1	2	3	4	5

11.Higher salaries and benefits.	1	2	3	4	5
12.Offering housing or housing subsidies.	1	2	3	4	5
13.Sensible relationship between dedication and payback	1	2	3	4	5
14.Teachers' income can basically meet the needs of life.	1	2	3	4	5
15.Higher Social Status.	1	2	3	4	5
16.Certain social influence.	1	2	3	4	5
17.Work is valued by others.	1	2	3	4	5
18.Respect from the community.	1	2	3	4	5
19.Schools can provide conditions for scientific research.	1	2	3	4	5
20.Greater autonomy.	1	2	3	4	5
21.Sharing working achievements with colleagues.	1	2	3	4	5
22.Get along well with colleagues.	1	2	3	4	5
23.Making enough friends at college.	1	2	3	4	5
24.Coworkers look out for each other.	1	2	3	4	5
25.Comfortable working environment.	1	2	3	4	5
26.User-friendly management system.	1	2	3	4	5
27.Democratic decision-making mechanism at college.	1	2	3	4	5
28.Realize personal ideals and aspirations.	1	2	3	4	5
29.Work can inspire creativity.	1	2	3	4	5

30.Teachers' kindness to students.	1	2	3	4	5
31.Strong sense of responsibility to students.	1	2	3	4	5
32.Devotion to the cause of education.	1	2	3	4	5
33.Relatively stable.	1	2	3	4	5
34.Diversified position of being a teacher.	1	2	3	4	5
35.Little risk of personnel reform.	1	2	3	4	5

This scale was compiled by Xu Xingchun (2007) with the scoring method of Likert 5-point.

15.Supervised Support：

Please circle the corresponding number using the following 7-point scale. Try not choose "Not Sure" unless the other six choices are not really true.

Totally Disagree	Disagree	Partially Disagree	Not Sure	Partially Agree	Agree	Totally Agree
1	2	3	4	5	6	7

36. My supervisor helps me solve work-related problems.	1	2	3	4	5	6	7
37. My supervisor encourages me do develop new skills.	1	2	3	4	5	6	7
38. My supervisor keeps informed about how employees think and feel about things.	1	2	3	4	5	6	7
39. My supervisor encourages employees to participate in important decisions.	1	2	3	4	5	6	7
40. My supervisor praises good work.	1	2	3	4	5	6	7
41. My supervisor encourages employees to speak up when they disagree with a decision.	1	2	3	4	5	6	7
42 My supervisor refuses to explain his or her actions.	1	2	3	4	5	6	7
43. My supervisor rewards me for good performance.	1	2	3	4	5	6	7

This scale was compiled by Oldham and Cummings (1996) with the scoring method of Likert 7-point.

16.Teacher's Professional Identity：

Please circle the corresponding number using the following 5-point scale. Try not choose "Not Sure" unless the other four choices are not really true.

Strongly Disagree	Slightly Disagree	Not Sure	Slightly Agree	Strongly Agree
1	2	3	4	5

44.I think that it is important to be a teacher in promoting the development of human society.	1	2	3	4	5
45. I care about others' views on the profession of being a teacher.	1	2	3	4	5
46 As a teacher, I always be respected.	1	2	3	4	5
47. I can finish my teaching work seriously.	1	2	3	4	5
48 I am cut out for being a teacher.	1	2	3	4	5
49. Becoming a teacher can achieve the value of my life.	1	2	3	4	5
50. When I see or hear words glorifying the teaching profession, I feel gratified.	1	2	3	4	5
51. I can finish my task on time.	1	2	3	4	5

52. When introducing myself, I like to mention that I am a teacher.	1	2	3	4	5
53. I think that the profession of being a teacher is one of the most important professions in social division.	1	2	3	4	5
54. Attitudes toward teachers of others really matter me.	1	2	3	4	5
55. I develop harmony relationship with my colleagues positively and forwardly.	1	2	3	4	5
56. I think that the profession of being a teacher is of great significance to promote individual development in human society.	1	2	3	4	5
57. I can take works in my responsibility seriously.	1	2	3	4	5
58. In order to maintain the normal teaching order of the school, I will follow the informal rules.	1	2	3	4	5
59. I feel insulted when someone makes groundless accusations against the teachers' community.	1	2	3	4	5
60. I think that works of teachers are really important to the growth and development of students.	1	2	3	4	5

This scale was compiled by Wei Shuhua (2008) with the scoring method of Likert 5-point.

17.Teachers' Job Satisfaction：

Please circle the corresponding number using the following 5-point scale. Try not choose "Not Sure" unless the other four choices are not really true.

Strongly Disagree	Slightly Disagree	Not Sure	Slightly Agree	Strongly Agree
1	2	3	4	5

61. Imparting knowledge and cultivating people make me feel important.	1	2	3	4	5
62.I am always proud of being loved by my students and their parents.	1	2	3	4	5
63. It is the most satisfied to witness achievements from the growth of students.	1	2	3	4	5
64. My work gives full play to my capability.	1	2	3	4	5
65. My work makes me feel fulfilled.	1	2	3	4	5
66. Being a teacher is to achieve my desired.	1	2	3	4	5
67. It's really exhausted to say too much every day.	1	2	3	4	5
68. I often feel tired during my work.	1	2	3	4	5
69. I need to fully devote myself to my work.	1	2	3	4	5
70. It's unhealthy to inhale too much chalk dust every day.	1	2	3	4	5
71. I am unsatisfied with my salary.	1	2	3	4	5
72. I am satisfied with teachers' allowance and subsidies of college age.	1	2	3	4	5
73. I am quite satisfied with the recent salary.	1	2	3	4	5
74. Relatively lower benefits at college.	1	2	3	4	5
75. I cannot bear the sight of most of college leaders.	1	2	3	4	5
76. I am always cared by college leaders.	1	2	3	4	5
77. Unfair treatment by college leaders.	1	2	3	4	5

78. Harmonious relationship with college leaders.	1	2	3	4	5
79. I cannot fully confide in one at college.	1	2	3	4	5
80. I can get along with most of colleagues.	1	2	3	4	5
81. A few of people that really understand me at college.	1	2	3	4	5

This scale was compiled by Feng Bolin (1996) with the scoring method of Likert 5-point.

18.Job Burnout：

Please circle the corresponding number using the following 7-point scale. Try not choose "Not Sure" unless the other six choices are not really true.

Never	Rarely	Occasionally	Regularly	Frequently	Very Frequently	Always
1	2	3	4	5	6	7

82. Do you feel worn out at the end of the working day.	1	2	3	4	5	6	7
83. Are you exhausted in the morning at the thought of another day at work.	1	2	3	4	5	6	7
84. Do you feel that every working hour is tiring for you.	1	2	3	4	5	6	7
85. Do you have enough energy for family and friends during leisure time.	1	2	3	4	5	6	7
86. Is your work emotionally exhausting.	1	2	3	4	5	6	7
87. Does your work frustrate you.	1	2	3	4	5	6	7
88. Do you feel burnt out because of your work.	1	2	3	4	5	6	7

This scale was compiled by Kristensen (2005) with the scoring method of Likert 7-point.

19.Teachers' Turnover Intention：

Please circle the corresponding number using the following 5-point scale. Try not choose "Not Sure" unless the other four choices are not really true.

Strongly Disagree	Slightly Disagree	Not Sure	Slightly Agree	Strongly Agree
1	2	3	4	5

89.I haven't thought about leaving my present job.	1	2	3	4	5
90.I have a long-term development plan on my present job.	1	2	3	4	5
91.I often feel tired about my present job and want to leave it.	1	2	3	4	5
92.I may leave my present job in the next six months.	1	2	3	4	5

This scale was compiled by Mobley et al. (1979) with the scoring method of Likert 5-point.

…THANKS FOR YOUR PATIENCE AND HELP…