

# **Influence of Network Technology Based on "Psychological Contract" on Teaching Quality of University Teachers**

**By**

**Yajing Fufang**

International College of National Institute of Development Administration, 118 Seri Thai Road, Klongchan Bangkok, Bangkok 10240 Thailand

Email: [185668080@qq.com](mailto:185668080@qq.com)

## **Abstract**

In this study, we have discussed the psychological contract's influence on the teachers' teaching effect. With the help of the psychological contract as a theoretical research tool, computer software network technology such as SPSS16.0 is used as an analytical tool. A quantitative and qualitative analysis of the problems and causes of the existing problems of the present university teachers' incentive system is made by the psychological contract principle. In addition, from the transaction dimension, the relationship dimension, and the development dimension in the typical psychological contract, the incentive system of university teachers is reshaped. The results show that through remoulding the incentive system of university teachers, not only has the incentive management of college teachers improved and the teaching quality of teachers improved but also a win-win situation for the sustainable development of the school and the professional development of teachers is achieved.

**Keywords:** psychological contract; network technology; teaching quality

## **1. Introduction**

The study of the psychological contract began first in western countries and has achieved specific results. However, because of the cultural environment of the East and the western countries, the research conclusion of the western psychological contract cannot be directly applied to the management practice of employees in China. The study of the psychological contract in China has gradually shifted from the content and structure dimension to applying the psychological contract. The relationship between psychological contracts and employee performance is one of the hot topics in the present study. Through consulting literature, it is not difficult to find that the research object of the relationship between psychological contract and employee performance is mainly the employees of state-owned enterprises, service employees, and manufacturing employees who have prominent working characteristics, but the research on the teaching quality of college teachers is less. University teachers are a unique group of organizations and firms with many people. Traditional teaching always considers teachers as an economic exchange. They have defects and cannot meet the needs of modern social development. The study of psychological contracts opens a new perspective for the management of teachers. It is mainly to seek a combination of the internal expectations of both employees and organizations. This perspective will undoubtedly have a practical significance to the management of college teachers, such as incentive and career management.

At the same time, with the rapid development of the Internet field, many new technologies, products, formats, and models have been brought up, and a new platform is provided for the enterprise to carry out the strategy. There are few studies on the relationship

between "psychological contract" and the quality of teaching using network technology. Under the background of the networked economy, the problems existing in the incentive system of university teachers are studied, and the incentive system is reconstructed.

## **2. State of the art**

Private colleges and universities are a new form of social education and play an essential role in developing the education system. Sun and Bai believed that the psychological contract factors that affect the development of the teaching innovation team of private colleges and universities are mental satisfaction and psychological vulnerability. As a result, it is essential to establish the psychological contract model of the college teaching innovation team, including the horizontal, vertical mechanism, and the incentive mechanism (Sun & Bai, 2017).

Ping et al. discussed the relationship between the psychological contract of physicians and job satisfaction, turnover intention, and specialization by using different perspectives of psychological contract (a popular concept in business management research). By stratified sampling, a cross-sectional survey was conducted in Shanghai, Hubei, and Gansu, China, from June 10th to October 30th, 2013. Anonymous and self-administered questionnaires were issued in 123 public hospitals, and a scale of psychological contracts for physicians was set up, including four dimensions (hospital transaction, development, relation, and ideological responsibility) and proved effective and reliable (Ping et al., 2016).

Based on transaction cost theory and psychological contract theory, Wei et al. demonstrated how outsourcing knowledge protection affected project performance from the perspective of suppliers. They assumed and used data from 180 IT offshore outsourcing projects to review. It was found that knowledge protection reduced partnership quality and project performance. In addition, the supplier relationship contract model enhanced the negative effect of the outsourcing vendor's knowledge protection on partner quality, and the supplier's transaction contract model weakened the adverse effect. The study extended our understanding of the impact of knowledge protection on project performance and had significant implications for outsourcing project management (Wei, Du, & Bao, 2017).

Pokrajac-Bulian et al. first discussed the understanding of employee psychological contracts in South Asia and the impact of psychological contract performance on their cognitive and behavioural outcomes. And then, they introduced the results of the two components of the study and the discussion on the role of culture in shaping employee expectations. Finally, the advantages and limitations of the research were described, and the future empirical research field was put forward, which is of practical significance to the research of current organizations and employees in the non-Western context (Pokrajac-Bulian & Tkalčić A, 2017).

Rogozińska-Pawelczyk analyzed the relationship between psychological contract and the tendency of knowledge to create store and transfer in an organization. Through the survey of the interviewees in three banks and the analysis of the results, the practical knowledge management in the organization and the four main factors of the psychological contract were identified: the popularity and opportunity of knowledge sharing, the characteristics of interpersonal relationships, the cultural aspects of knowledge management, and the level of perceived security level (Rogozińska-Pawelczyk, 2014).

Starchenko examined the impact of organizational types on psychological contract types. In addition, he explored whether psychological contract types were prevalent in non-government organizations. The study involved 63 employees from the private sector, 64 from the public,

and 44 from non-governmental organizations. The study required participants to be evaluated. The results show a positive correlation between the type of organization and the type of psychological contract (Starchenko, 2014).

### 3. Methodology

#### 3.1 Relevant concept and theory

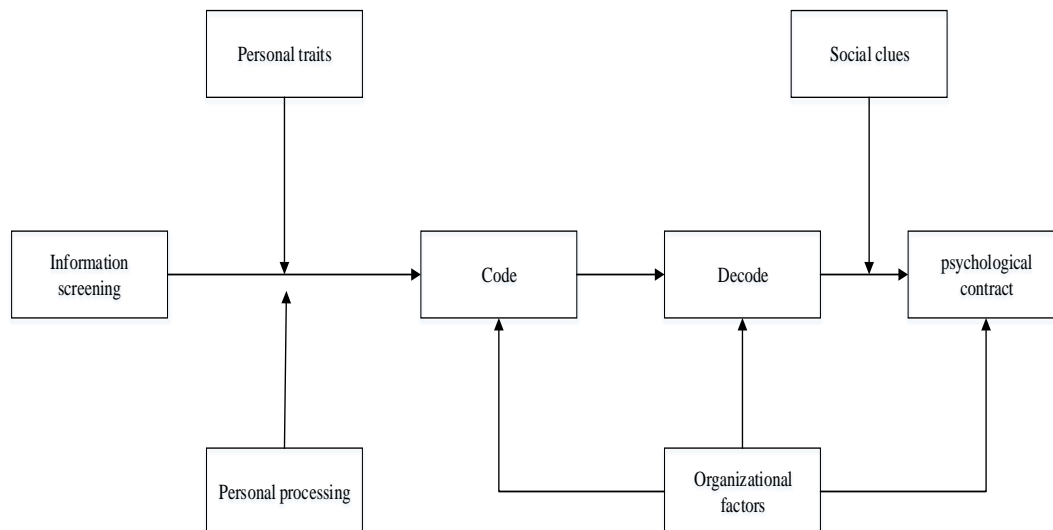
**The definition of psychological contract: the concept of psychological contract originates from the theory** of social exchange first. The theory believed that people established relationships with each other in order to give or obtain valuable things. In the 1960s, psychological contract theory was introduced into the management field. The concept highlights the more critical implicit and informal mutual expectation and responsibility in the relationship between the enterprise organization and the employee and the formal, explicit economic employment contract. These expectations and responsibilities play a significant role in the behaviour of the employees. The psychological contract is a complex psychological structure that is subjective, dynamic, and bidirectional. It is easy to be influenced by its own and external factors.

The content of the psychological contract: the psychological contract is different given different research objects. The factors in the psychological contract between the two subjects of teachers and schools are classified. The classification covers the relationship between the expectations and responsibilities of most of the two parties, as shown in Table 1.

**Table 1** Mutual expectation and duty obligation between school and teacher in psychological contract □

The primary responsibility of the teacher to the school	The primary responsibility of the school for teachers
Be a model for others	Fringe benefits
attend classes on time	Work itself
Maintain the teaching order	Good working environment
Guaranteeing the quality of teaching	Respect and approval
Obey the arrangements and abide by the rules and regulations of the school	Fair evaluation
Give advice and suggestions	Provide training
School of loyalty	Personal development
Intimate relationship between colleagues	Good interpersonal relationship
Pay attention to the cultivation of innovation ability	Encourage scientific research and innovation
Improve the comprehensive quality teamwork	Teaching freedom
Protecting the privacy information of the school	Power demand
	Humanistic care

**The establishment of psychological contract:** Rousseau also believed that the foundation of the psychological contract lies in the individual perception of the organizational state. Therefore, the theoretical model that the psychological contract establishes is based on processing the environment and social information, as shown in Figure 1.



**Figure. 1** Psychological contract model

### 3.2 Reliability analysis

Reliability mainly refers to the degree of consistency or stability of measurement tools, and the degree that measurement scores are not affected by measurement errors. The Cronbach's reliability test that is the most suitable for the Likert scale is applied here. It is generally believed that the item of Cronbach's coefficient below 0.65 needs to be deleted; between 0.65-0.70 is considered acceptable; between 0.70-0.80 is quite good; more than 0.8 is very good. After using SPSS16.0 software for data entry and statistical analysis, the Cronbach 'a value is shown in Table 2.

**Table 2.** Reliability coefficient of each scale

Gauge	Cronbach'a
Aggregate table	0.842
Transaction dimension	0.761
Relational dimension	0.872
Development dimension	0.895

### 3.3 Validity analysis

Validity refers to the validity of a questionnaire, which measures whether a topic can accurately measure the required measurement characteristics of a questionnaire. The higher the validity is, the more objective the questionnaire can achieve. KMO test and Bartley sphere test are used for the test. According to the KMO standard, more than 0.7 in general, the greater the value is, the better the effect is. According to the test results, the KMO value of the total scale is 0.863, which is suitable for factor analysis. The total level of Bartley's sphere test is 0, less than 0.05, which is also suitable for factor analysis.

The pre-test found that the questionnaire design is reasonable, but there are still some problems. Some modifications are made to the existing problems, and a formal questionnaire is finally formed.

### 3.4 Implementation of the deep interview method

Considering the courses and grades teachers teach, teachers have different interpretations of spiritual and psychological pursuits such as self-realization. It is not easy to describe them with a structured quantitative questionnaire. Therefore, after the questionnaire,

15 teachers from freshman, sophomore, senior and fourth grade were selected to conduct a one-to-one interview to understand the psychological needs of the teachers and the expectations of the school. It is expected that a non-data qualitative interview study can play an excellent complementary role in the quantitative research of the questionnaire, vividly and directly find out the problems in the teaching quality of college teachers and lay the foundation for improving the plan and opinions.

## 4. Results and discussion

### 4.1 Analysis of psychological contract related research results

5, 4, 3, 2, and 1 value were given to "very satisfactory", "satisfactory", "generally satisfactory", "dissatisfactory" and "very dissatisfactory", respectively, and the final results were shown in Table 3.

**Table 3** Questionnaire survey on psychological contract

<b>Factor</b>	<b>Dividing value</b>
Remuneration and welfare	2.256
Title Evaluation	2.187
work environment	3.354
A fair and fair king makes a chance	3.307
performance appraisal	2.367
Loose, flexible working hours	3.545
Participation in school decision-making	2.952
Work autonomy	3.681
Mutual assistance and mutual assistance of the teachers' team	3.106
The care of the school	3.201
Higher social status	3.359
Democratic management system	3.098
A smooth communication mechanism	3.255
Job challenge	3.653
Personal career planning	3.001
Promotion mechanism and channel	2.784
Opportunities for training and development	2.737
A sense of achievement in work	3.482
The creative space of work	3.509
The match between school development and personal development	3.011

### 4.2 Transactional dimension analysis

The transaction dimension mainly includes the security and incentive factors related to the economic material for the university teachers, including the salary system, the welfare system, the evaluation of the job title, and the work safety and stability. From the quantitative data structure analysis of these factors, the teachers in this school mainly have the following opinions. Firstly, the salary is low, and the difference is not apparent; secondly, it lacks a scientific and reasonable teacher evaluation mechanism; finally, it lacks a sense of work safety.

#### ***4.3 Relational dimension analysis***

The relational dimension mainly includes organizational humanistic care, communication mechanism, and management mode. Compared with the public enterprise, the school has flat characteristics in management. The school human resources and the administrative department do not directly manage the teachers but are managed by the grade and the team leader. The teachers' daily contact is primarily concentrated in the grade and the various subjects, and the opportunities for cross-grade and subject communication are less. Therefore, teachers must work in a relatively relaxed and democratic environment to feel satisfied and happy. However, from the actual situation, it is known that the school is not very good for this dimension. The employees' satisfaction with the two aspects of management mode and communication mechanism shows apparent dissatisfaction, affecting the teachers' organizational commitment. It mainly manifests in the following aspects: first, the information communication mechanism is not smooth, and the organization lacks cohesion; second, the democratic management mechanism is imperfect, and teachers' participation in decision-making is low.

#### ***4.4 Development dimension analysis***

The development dimension focuses on three factors: teachers' training, promotion, and career planning. This dimension belongs to a higher factor in the level of teachers' demand and is related to teachers' self-development and realization. For most teachers who pursue and have expectations for education, the development dimension plays a crucial role in their work motivation. However, from the actual survey and interview, the satisfaction of teachers in this dimension is poor. It is mainly reflected in the following aspects: first, the system of talent training is not reasonable; secondly, the promotion mechanism is not sound, and the growth space is limited; finally, the career development planning is not precise.

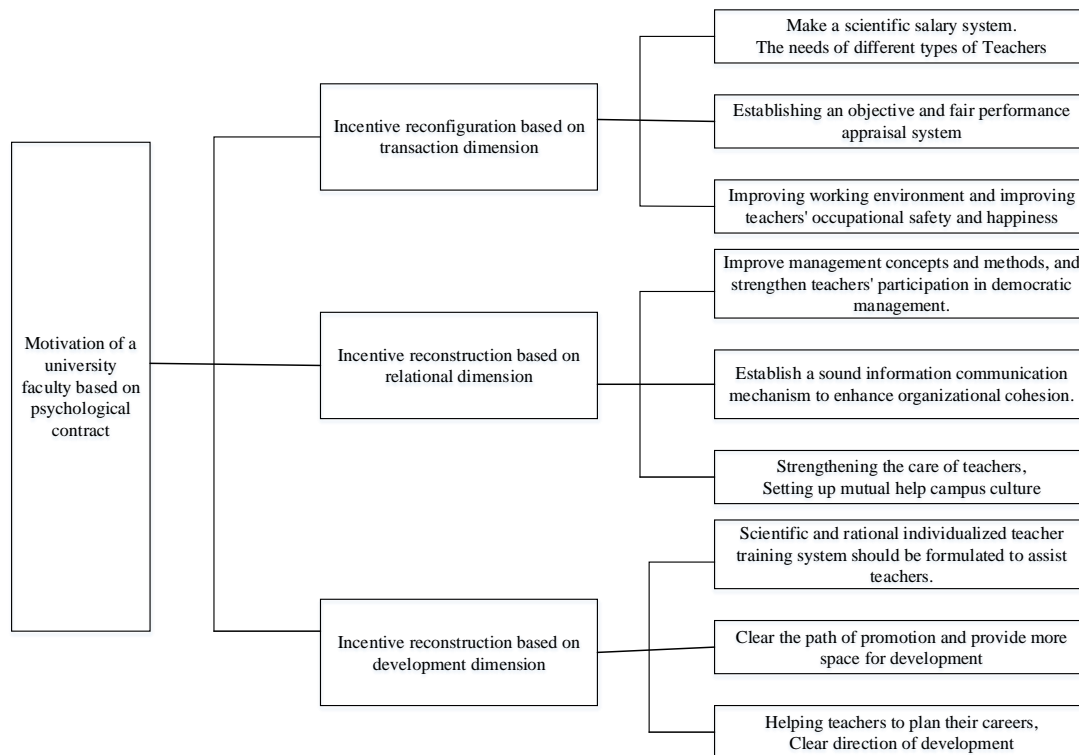
#### ***4.5 Reconstruction of teachers' incentive system in colleges and universities***

In the reconstruction of a teacher incentive system based on psychological contract, it is necessary to adhere to the following four essential principles:

1. It is the principle of combining organizational goals and personal goals.
2. It is the principle of a combination of material incentives and spiritual incentives.
3. It is the principle of a combination of long-term incentives and short-term incentives.
4. It is the principle of fairness.
5. It is the difference principle.

The feasibility plan for reconstructing the teacher incentive system can be put forward from the transaction, relationship, and development dimensions, respectively, as shown in Figure 2.





**Figure. 2** Reshaped framework of psychological contract incentive system in a university

## 5. Conclusion

Based on the questionnaire on the psychological contract of a university teacher, the method of combining quantitative and qualitative analysis is used to make a comprehensive analysis of the survey data. The psychological contract incentive factors of the schoolteachers are summed up, and it shows that, in the teacher psychological contract, teachers have problems in the transaction dimension, the relationship dimension, and the development dimension three incentive managements. Given the existing problems, practical proposals are put forward for remolding the incentive system from three dimensions. The results show that the school's administrators should stimulate and motivate teachers with a psychological contract in formulating various incentive policies and systems, promote the enthusiasm and creativity of the teachers' team, and further improve the quality of the teachers' teaching.

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