

Mediation Effects of the Teaching Management and Teacher Job Satisfaction on the Relationship Between Transformational Leadership and Teaching Quality of Public Universities in Guangdong Province

Huang Liuying,
Sukhum Moonmuang and Prapatpong Senarith
Bangkokthonburi University, Thailand
Corresponding Author, E-mail : 477067869@qq.com

Abstracts

The objectives of this research were: (1) to develop the relationship model of teacher transformational leadership and teaching quality of public university in Guangdong Province; (2) to study mediating variables between transformational leadership and teaching quality effects of teaching management; (3) to study mediating variables between transformational leadership and teaching quality effects of teacher job satisfaction; (4) to test the model fit with empirical data.

The research was a quantitative research methodology. The research subjects are teachers from 14 public universities with high teaching quality evaluation in Guangdong Province in 2021. A total of 36,693 people, the sample size was determined by G*Power, and the sample sampling was conducted by stratified sampling method. In total, 480 questionnaires were collected line questionnaire collection. Statistics used for data analysis were Confirmatory Factor Analysis and Structural Equation Model.

The research findings revealed that; (1) the relationship model between transformational leadership and teaching quality was valid; (2) teaching management plays a mediating role between transformational leadership and teaching quality; (3) teacher job satisfaction has a direct mediating effect on transformational leadership and teaching quality; (4) the model fits well with the empirical data ($\chi^2 / df = 3.028$, CFI = 0.989, TLI = 0.985, RMSEA = 0.065).

Keywords: Teaching Management; Teacher Job Satisfaction; Transformational Leadership; Teaching Quality

Introduction

Chinese economy "has shifted from high growth stage to high quality development stage" under the background of rapid economic development in Guangdong province, become a strong province, now also need and may become strong education province, but in the tide of market economy development, also produce many adverse impacts on education, this was the construction of education province cannot be ignored. (Wen, 2020). To meet the needs of social and economic development, the party central committee adhere to the priority development of education, adhere to the talent power strategy, promote power from human resources to talent power transformation, 19 big report to do a good job in people's satisfaction education, further emphasize education, adhere to the education career in priority development strategic height.

The research on education and teaching management reform had become a hot sue in education management and teaching theory at home and abroad. The current situation of teaching management itself had problems such as sovereignty and centralization conflict, "matter text" and "people-oriented" conflict, administrative management and academic management imbalance, and the lack of flexibility of teaching management system in colleges and universities. How to understand the value of education and teaching, so that teaching management can effectively achieve and strive to achieve the ultimate purpose of education and teaching. Improving the quality of talent training was the main theme of higher education reform in the new century, and the lifeline of the survival and development of schools. To ensure and continuously improve the teaching quality, the key lies in management. According to the dictionary of education evaluation, the quality of school education was "composed of the quality of school education work and the quality of education work results, that was, the quality of the trained students." (Wang, 2005: 83-84.), (Tao, 1998).

Grasping the teaching quality of undergraduate education was the key and key to improve the quality of higher education, and the teaching quality of undergraduate education had a huge driving and radiating effect on the quality of education at all levels (Wang, 2003: 168-170).

Universities leadership behavior was one of the important factors affecting teacher job satisfaction. Leaders, especially transformative leaders, can change the value and beliefs of teachers and improve their needs level, so that teachers can realize the value of work objectives. Transformational leadership was sued in western leadership theory since the 1980s, which was regarded as a popular method of studying leadership theory today. Through the encouragement of the common vision of the organization, teachers were encouraged to strive for the realization of the organizational goals, so that subordinates were willing to surpass their original efforts and improve the overall effectiveness of the organization (Kenzie, 1997: 133-151).

However, empirical studies on transformational leadership were rare in China. Under the special cultural background of China, what was the relationship between transformational leadership in the organization and teaching management, teacher job satisfaction and teaching quality in universities. Based on the knowledge-based group, this paper empirical studies the relationship between transformational leadership and teaching quality in public universities in Guangdong Province.

Research Objectives

The objectives of this research are:

- 1.To develop the relationship model of transformational leadership and teaching quality.
- 2.To study Mediating variables between transformational leadership and teaching quality effects of teaching management.
- 3.To study Mediating variables between transformational leadership and teaching quality effects of teacher job satisfaction.
- 4.To test the model fit.

Research Methodology

1. Sample of research methods

This study mainly studies the influence factors of transformational leadership on the teaching quality in public universities in Guangdong Province. Based on this point, this study focuses on quantitative, using questionnaire survey, statistical analysis and other specific methods to present the research content and related views.

Questionnaire survey method: select the scale with high reliability and validity, use standardized and structured questionnaire to ask university teachers, administrators, and leaders, conduct statistical analysis of the survey results through questionnaire recovery and review, and write a report.

2. Research design

The implementation path of this study, which is divided into three parts: ask the questions, analyze the problem and solve the problem (see Figure 1).

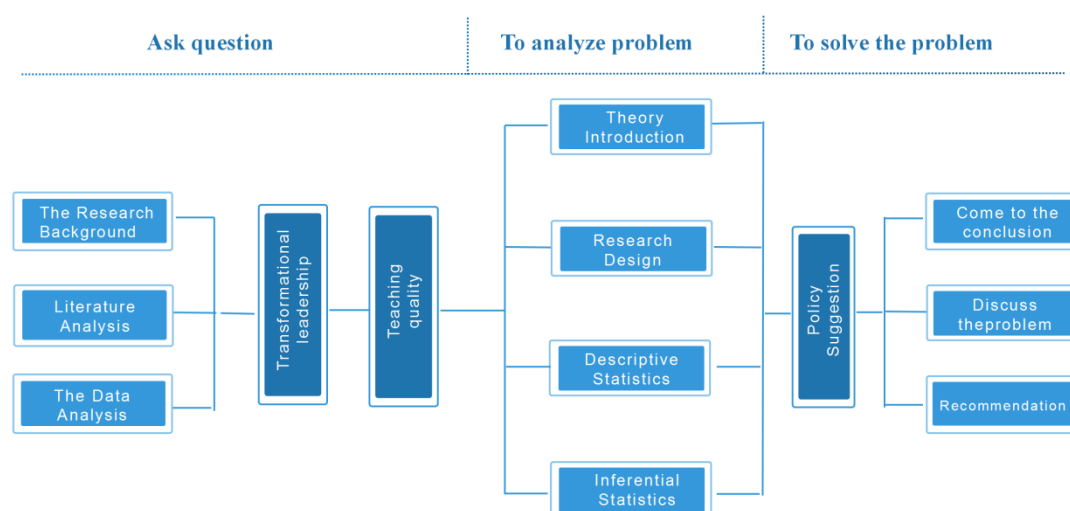


Figure 1. Design Roadmap for Research Implementation

Research Scope

1. Scope of Population

Population in the research were teachers who were teaching in 36 public universities in Guangdong province. And samples were selected from 14 universities by using the proportional multistage random sampling technique with the university were used as cluster. The sample size were not less than 330 teachers by calculated using the G*power software. In fact, 480 valid questionnaires have been collected this time through the questionnaire collection last time.

2.Scope of Content to Study

The research mainly studied the influence of transformational leadership on university teaching quality. Among them, transformational leadership was the independent variable of this research, which mainly included virtue model, vision motivation and personalized care. Teaching quality was the dependent variable of this research, mainly including teacher quality, evaluation system and school quality. Teaching management and teacher job satisfaction were the intermediary variables of this research, among which teaching management mainly included talent training system, management service and teacher team construction, while teacher job satisfaction included job nature, evaluation system and school quality.

Research Findings

Based on the review of the research, a simple model of the conceptual framework of the research (see Figure 2) was established. The model suggests that teaching quality improvement was influenced by transformational leadership.

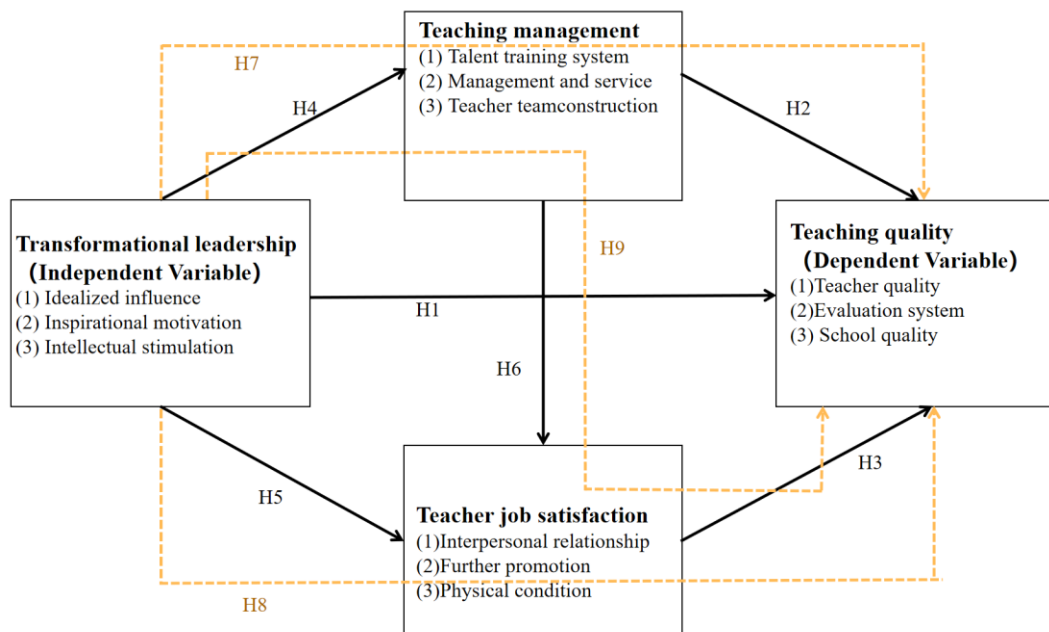


Figure 2 Research conceptual framework

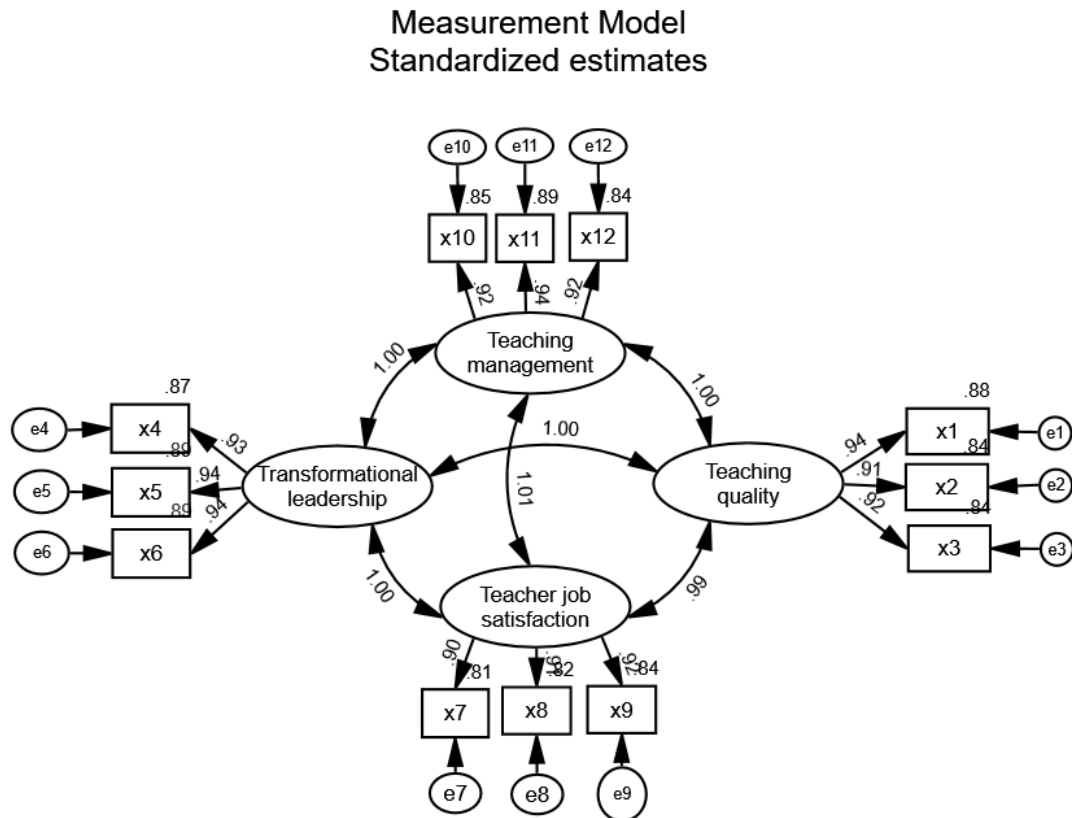
The hypothesis framework of this study contains four variables and nine hypotheses (H1-H9). Teaching quality was the dependent variable, transformational leadership was the independent variable, and teacher job satisfaction and teaching management were the intermediary variables.

1. Teaching quality (F1) composed of 3 parts, there were teacher quality (x1), evaluation system (x2) and school quality (x3).

2. Transformational leadership (F2) composed of 3 parts, there were moral norm (x4), vision motivation (x5), individualized consideration (x6).

3. Teacher job satisfaction (F3) composed of 3 parts, there were interpersonal relationship(x7), further promotion(x8) and physical condition(x9).

4. Teaching management (F4) composed of 3 parts, there were talent training system(x10), management service(x11) and teacher team construction(x12).



Chi-square=49.519 df=48 p=.412 Relative Chi-square=1.032
CFI=1.000 TLI=1.000 RMSEA=.008

Figure 3 CFA Model (Standardized estimates)

Table 1 Hypothesis testing of Structural Equation Model

Hypotheses	Indirect Path	Unstandardized Estimate	Standardized Estimate	P-Value
Direct effect				
H1	F2=> F1	0.495	0.468	***
H2	F4=> F1	0.348	0.355	***
H3	F3=> F1	0.181	0.184	*
H4	F2=> F4	1.047	0.970	***
H5	F2=> F3	0.445	0.413	***
H6	F4=> F3	0.561	0.561	***
Indirect effect				
H7	F2 => F4 => F1	0.364	0.344	**
H8	F2=> F3=> F1	0.08	0.076	0.158
H9	F2=> F4=> F3=> F1	0.097	0.546	0.164

Significance of Estimates: * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$

Hypothesis 1 (F2=>F1): There were some positive relationships between transformational leadership and teaching quality, the estimated path coefficient was 0.495 which was statistically significant ($p < 0.001$). This hypothesis was accepted.

Hypothesis 2 (F4=> F1): There were some positive relationships between teaching management and teaching quality, the estimated path coefficient was 0.348 which was statistically significant ($p < 0.001$). This hypothesis was accepted.

Hypothesis 3 (F3=> F1): There were some positive relationships between teacher job satisfaction and teaching quality, the estimated path coefficient was 0.181 which was statistically significant ($p < 0.050$). This hypothesis was accepted.

Hypothesis 4 (F2=> F4): There were some positive relationships between transformational leadership and teaching management, the estimated path coefficient was 0.181 which was statistically significant ($p < 0.001$). This hypothesis was accepted.

Hypothesis 5 (F2=> F3): There were some positive relationships between transformational leadership and teacher job satisfaction, the estimated path coefficient was 0.445 which was statistically significant ($p < 0.001$). This hypothesis was accepted.

Hypothesis 6 (F4=> F3): There were some positive relationships between teaching management and teacher job satisfaction, the estimated path coefficient was 0.561 which was statistically significant ($p < 0.001$). This hypothesis was accepted.

Hypothesis 7 (F2 => F4 => F1): There were some positive relationships between transformational leadership, teaching management and teaching quality, the estimated path coefficient was 0.561 which was statistically significant ($p < 0.050$). This hypothesis was accepted.

Hypothesis 8 (F2=> F3=> F1): There were some positive relationships between transformational leadership, teacher job satisfaction and teaching quality, the estimated path coefficient was 0.08 which wasn't statistically significant ($p > 0.050$). This hypothesis wasn't accepted.

Hypothesis 9 (F2=> F4=> F3=> F1): There were some positive relationships between transformational leadership, teaching management, teacher job satisfaction and teaching quality, the estimated path coefficient was 0.106 which wasn't statistically significant ($p > 0.050$). This hypothesis wasn't accepted.

After analyzing the hypothesis of direct and indirect effects in this research, the results showed that among the nine hypotheses in this research, the hypothesis of H1-H7 was accepted, but the hypothesis of H8 and H9 does not valid.

Table 2 Inter correlation coefficient between factors.

	Teaching quality	Transformational leadership	Teacher job satisfaction	Teaching management
Teaching quality (F1)	1.000			
Transformational leadership (F2)	0.948	1.000		
Teacher job satisfaction (F3)	0.934	0.941	1.000	
Teaching management (F4)	0.942	0.951	0.944	1.000

Table 3 Decomposition effects of factors affecting on teaching quality.

Latent variables	Effect			Corr	Spurious
	Direct	Indirect	Total		
Transformational leadership	0.495	0.47	0.965	0.948	-0.017
Teacher job satisfaction	0.181	0.186	0.367	0.934	0.567
Teaching management	0.348	0.472	0.82	0.942	0.122

Discussion

Through the above research, the following discussion was proposed (See table 2 and table 3):

1. Transformational leadership and teaching quality had a positive correlation relationship.

(F2=>F1): There were some positive relationships between transformational leadership and teaching quality, the estimated path coefficient was 0.495 which was statistically significant ($p < 0.001$). This hypothesis was accepted.

2. Teaching management affect teaching quality improvement.

(F4=> F1): There were some positive relationships between teaching management and teaching quality, the estimated path coefficient was 0.348 which was statistically significant ($p < 0.001$). This hypothesis was accepted.

3. Teacher job satisfaction affect teaching quality improvement.

(F3=> F1): There were some positive relationships between teacher job satisfaction and teaching quality, the estimated path coefficient was 0.181 which was statistically significant ($p < 0.050$). This hypothesis was accepted.

4. Transformational leadership affecting teaching management.

(F2=> F4): There were some positive relationships between transformational leadership and teaching management, the estimated path coefficient was 0.181 which was statistically significant ($p < 0.001$). This hypothesis was accepted.

5. Transformational leadership affecting teacher job satisfaction.

(F2=> F3): There were some positive relationships between transformational leadership and teacher job satisfaction, the estimated path coefficient was 0.445 which was statistically significant ($p < 0.001$). This hypothesis was accepted.

6. Teaching management affecting teacher job satisfaction.

(F4=> F3): There were some positive relationships between teaching management and teacher job satisfaction, the estimated path coefficient was 0.561 which was statistically significant ($p < 0.001$). This hypothesis was accepted.

7. Transformational leadership affect teaching quality through teaching management.

(F2 => F4 => F1): There were some positive relationships between transformational leadership, teaching management and teaching quality, the estimated path coefficient was 0.561 which was statistically significant ($p < 0.050$). This hypothesis was accepted.

8. There is no obvious correlation between transformational leadership in influencing teaching quality through teacher job satisfaction.

(F2=> F3=> F1): There were some positive relationships between transformational leadership, teacher job satisfaction and teaching quality, the estimated path coefficient was 0.08 which was statistically significant ($p > 0.050$). This hypothesis wasn't accepted.

9. There were no association between transformational leadership influence the quality of teaching through teaching management and teacher job satisfaction.

(F2=> F4=> F3=> F1): There were some positive relationships between transformational leadership, teaching management, teacher job satisfaction and teaching

quality, the estimated path coefficient was 0.106 which was statistically significant ($p > 0.050$). This hypothesis wasn't accepted.

The research findings revealed that; (1) the relationship model between transformational leadership and teaching quality was valid; (2) teaching management plays a mediating role between transformational leadership and teaching quality; (3) teacher job satisfaction has a direct mediating effect on transformational leadership and teaching quality; (4) the model fits well with the empirical data ($\chi^2 / df = 3.028$, CFI = 0.989, TLI = 0.985, RMSEA = 0.065).

Recommendations

1. Theoretical Recommendation

The researchers also came to different conclusions from different angles. Especially at the beginning of this century, with the deepening of higher education reform and the continuous opening of ideas, the reform of higher education management has presented a new situation with a hundred flowers. However, the vague concept of teaching management is still a major problem plaguing the teaching management of colleges and universities in China, such as: one-sided pursuit of the economic promotion function of college education, neglect of the overall function, blind pursuit of the social value of education, ignorance of students' life mechanism, etc. There is no doubt that different educational concepts will lead to different teaching management behaviors, and corresponding management practices must be carried out under the guidance of correct educational concepts. What kind of educational management concepts and concepts are used to guide the practice and talent training of the school is the most spiritual thing in the quality of the university. The reform of education management and the improvement of teaching quality will inevitably promote the corresponding changes in the quality of university education. The reform of higher education concepts discussed in this paper is mainly based on leading higher education concepts that have an overall impact on the entire university education, especially the new education management concepts that have a great influence on modern university education management.

Transformational leadership in improving teacher job satisfaction, create personalized care project: (1) To establish and improve the system of teachers' sympathy, in view of the teachers' personal situation (illness, wedding, accident, family funeral, etc.) take layered sympathy method, by the union group, department leader and women's joint committee for layered sympathy. (2) Heart-to-heart talk system, timely intervention in the contradictions and disputes between teachers, administrators or teachers and students, resolve contradictions and enhance harmony. (3) Send warmth system, birthday or national traditional festival greetings, enhance the sense of belonging of teachers.

2. Policy Recommendations

The direction of university education in China is the connotative development path with improving the quality as the core, paying more attention to comprehensively improving the quality of university education, and making an overall management system for the education evaluation and education supervision reform in the new era. To improve the quality of economic growth, Guangdong Provincial government has put forward the strategy of industrial and labor transfer, strengthened the implementation of

innovation-driven development strategy, strengthened innovation, innovation depends on talents. Higher education is an important way to cultivate high-quality talents. Therefore, the development of higher education is the key to the development of high-quality economic development.

3. Practical Recommendations

This research topic has strong practical and specific theoretical significance, but in the process of practical research, on the one hand, due to the author's time limit and lack of ability, the research subjects are only some public universities in Guangdong Province, and the factors of private universities have not been considered, so the psychological factors of the population will be very different. On the other hand, conceptually, the teaching quality of dependent variable and the teaching management of intermediary variable are easy to be confused or conceptually related. The dimension of teaching management has no clear operational definition, so it is difficult to measure. In the existing literature, the perspective of teaching management and teaching quality on the problem have produced many different views. The author can only design the dimension and questionnaire from the existing theoretical basis and the practical experience of teaching management. This inevitably leads to the objective inherent flaws of the constructed model and research hypotheses.

(1) Transformative leaders and traditional leaders are not distinct opposites, but complementary, and are reflected in different leaders to different degrees. In the context of educational change, transformational leadership are increasingly receiving more attention. The various behavior characteristics of school transformational leadership must be closely related to teaching management and teacher satisfaction. The implementation of transformational leadership will undoubtedly have a great impact on the teaching quality.

(2) The main goal of teaching management is to improve the teaching quality, and the premise of improving the teaching quality is that the school should have a team of teachers with both teaching ability and coordinated efforts. Teaching is completed by teachers, teachers' quality, ability, character, teaching methods, teaching experience, psychological and physiological conditions are different, to organize the work, we must understand the mutual differences between teachers, reasonable deployment, to make up for the shortage.

(3) Teaching management is a core content of higher school education management. Reform and innovation of teaching management is urgent and imperative, and should the teaching management thought, teaching management system, teaching management mode and teaching management means; to handle the three relationships between rigid management and flexible management, academic management and administrative management, and management and management. The efficiency of teaching management in colleges and universities directly affects the quality of running schools. In view of the problems existing in teaching management, colleges and universities should update the teaching management concept, improve the teaching management system, build a professional teaching management team, and enrich the teaching management mode, so as to improve the talent training system, improve the management and service of the school, including academic management and teaching

operation management, in the construction of teachers, step by step, to provide a better platform for teachers.

(4) With the expansion of the scale of all levels and the increasingly rich teaching content, teaching management activities become more important and complex. Teaching management from a relatively simple general teaching practice activities gradually to the teaching ideas, teaching system, teaching quality, teaching resources and other aspects of the comprehensive and systematic management. The research shows that the good and bad teaching conditions, the high and low teaching level, directly affect the quality of talent training and the realization of training objectives; teaching, learning and management is also an important factor restricting the improvement of teaching quality. The construction of the teaching quality of universities should be improved from five dimensions, that is, it is necessary to implement the reform of education and teaching concepts, improve the teachers' professional ability, promote the improvement of students' style of study construction, establish a scientific system incentive and evaluation mechanism, and give full play to the role of students' teaching evaluation and teaching inspection scientifically.

The authors will continue to focus on all the issues listed above in a subsequent follow-up work.

References

- Kenzie, S. P. (1997, 10). The impact of organizational citizenship behavior on organizational performance: A review and suggestions for future research. *Human Performance*, pp. 133-151.
- Tao, x. (1998). *Beijing Normal University Press*.
- Wang, P. (2005). Promoting teaching Management Reform with Innovative Spirit [J]. *China Higher Education Research*, pp. 83-84.
- Wang, R. (2003). Strengthening teaching management to improve the quality of undergraduate teaching. *Journal of Shaanxi Normal University (Philosophy and Social Sciences)(S1)*, pp. 168-170.
- Wen, H. (2020). Correlation degree and Coordination degree analysis of higher education level and economic growth quality in Guangdong Province. *Jiangxi University of Finance and Economics*.