

**Teachers' Incentive Factors Affecting Working Effectiveness
in Private Colleges and Universities in Shenyang City Liaoning Province**

Zhang Tao

Pornthep Muangman

Peerapong Tipanark

Faculty of Education, Bangkokthonburi University

E-mail: 196646736@qq.com

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ABSTRACT

The objectives of this research were: (1) To study the components of Teachers' Incentive and Working Effectiveness. (2) To study the Teachers' Incentive factors affecting Working Effectiveness in Private Colleges and Universities in Shenyang, Liaoning Province. (3) To propose the guideline for improving of the Working Effectiveness in Private Colleges and Universities in Shenyang, Liaoning Province.

The research methodology was mixed methodology, including qualitative and quantitative research. Population consisted of 4172 teachers and staff from 10 of private colleges and universities in Shenyang city, Liaoning Province, the People's Republic of China. Obtained by stratified sampling method, totalling 365 samples. The key informants were 9 administrators from Private Universities and public Universities, obtained through a purposive sampling method. The expert for Focus Group Discussion were comprised of 7 experts to confirm model. The instruments used for data collection included a five-point rating scale questionnaire and validation checklist. Statistics for data analysis were Exploratory Factor Analysis and Multiple Indicators Multiple Causes model.

The research findings revealed that; (1) There were 3 components of Teachers' Incentive and 4 components of Teachers' Working Effectiveness. (2) The 3 have an impact factor of Teachers' Incentive affecting Working Effectiveness. The Multiple Indicators Multiple Causes (MIMIC) model of Teachers' Incentive factors affecting Working Effectiveness of Private Colleges and Universities in Shenyang, Liaoning Province. (3) To propose puts forward 3 guidelines for improving the Teachers' Working Effectiveness of Private Colleges and Universities in Shenyang, Liaoning Province. Through these guidelines, the vision of Private

Colleges and Universities is realized, retain valuable talents, promoting the quality of Private Colleges and Universities education and the sustainable development of the college.

Keywords: Teachers' Incentive, Teachers' Working Effectiveness, Private Colleges and Universities in Shenyang, Liaoning Province

1. Introduction

In recent years, as the population of newborns in China continues to decline, the intense competition among universities to attract students has become increasingly pronounced. This competition primarily stems from the universities' need to maintain student enrollments, ensuring the sustainable development and growth of the institutions. The ability to provide high-quality education and cultivate exceptional talent will become a crucial determining factor in the future viability of private higher education institutions.

The Working Effectiveness of teachers in higher education is a crucial factor that profoundly impacts the educational landscape. Good university teachers possess subject knowledge and excel in their teaching practices, directly influencing students' learning outcomes and overall development.

Effective university teachers demonstrate a strong command of their respective subjects, delivering accurate and comprehensive content to students. They utilize innovative and engaging teaching methodologies tailored to diverse learning styles, fostering active participation, critical thinking, and problem-solving abilities.

There is a very significant gap between private universities and public universities in China in terms of education quality and faculty. According to the 2022 QS World University Rankings, none of the private universities in Chinese Mainland has entered the top 200. The top 200 universities in Chinese Mainland are all public universities, including Tsinghua University, Peking University, Fudan University, Zhejiang University, Shanghai Jiaotong University, China Science and Technology, and Nanjing University. For private universities, how to attract and retain high-level and high-quality teaching staff has become a key factor in improving the level of education and achieving sustainable development. This has given researchers a profound understanding of the importance of incentive mechanisms for teachers in private universities, triggering their interest in studying the issue of incentive mechanisms for teachers in private universities.

Based on the actual management of teachers in private colleges and universities, combined with my own work experience, the facts and problems that I am accustomed to in work, and with a reflective and questioning attitude, the research starts from the problems

existing in teacher motivation in private colleges and universities, and tries to Attempting to construct a teacher incentive system to improve teacher effectiveness.

2. Research Questions

The research questions are as follows:

1: What are the components of Teachers' Incentive and Working Effectiveness in Private Colleges and Universities in Shenyang city, Liaoning Province?

2: What are the Teachers' Incentive factors affecting Working Effectiveness in Private Colleges and Universities in Shenyang city, Liaoning Province?

3: What are the guidelines for improving the Working Effectiveness in Private Colleges and Universities in Shenyang city, Liaoning Province?

3. Research Objectives

The research objectives are as follows:

1: To study the components of Teachers' Incentive and Working Effectiveness.

2: To study the Teachers' Incentive factors affecting Working Effectiveness in Private Colleges and Universities in Shenyang city, Liaoning Province.

3: To propose the guideline for improving of the Working Effectiveness in Private Colleges and Universities in Shenyang city, Liaoning Province.

4. Research Methodology

4.1 Research Design

The research was mixed methodology design which were comprised of quantitative and qualitative research.

Researchers have found through data learning that Teachers' Incentive in Private Colleges and Universities has a direct impact on Working Effectiveness. The design of this study is divided into three stages as follows:

Phase 1: In this stage, qualitative research methods are used to collect data from all documents related to Teachers' Incentive factors and components of Teachers' Working Effectiveness.

Phase 2: A quantitative research methods will be used, Using MIMIC to study the Teachers' Incentive components affecting Working Effectiveness in Private Colleges and Universities in Shenyang city, Liaoning Province. Using the key components of Teachers' Incentive and Working Effectiveness that resulted from phase 1 studied.

Phase 3: This phase design by using the qualitative research method using the data from phase 2 and the opinions of educational experts in order to filter it, so as to provide an appropriate process for propose the guideline of the Working Effectiveness in Private Colleges and Universities in Shenyang city, Liaoning Province.

4.2 Population and samples

Phase 1: There were 9 key informant's providers from China.

Phase 2: There were 4172 teachers of 10 private colleges and universities in Shenyang city, Liaoning Province. The sample size was determined by Taro Yamane's Formula (1967).

Phase 3: There are 9 experts or key informants in the field of educational administration, having more than 5 years of experience in private colleges, and universities education.

4.3 Instruments

Phase 1: The tool for data collection consisted of two parts. In the first part, data will be collected from the reviewed literature using a data recording form. In the second part, after the researcher's content analysis of the reviewed literature, nine experts will be asked to screen the Teachers' Incentive factors affecting Working Effectiveness, and this part of the instrument uses the Semi-Structured Interview Form (SSI).

Phase 2: The research instrument of this phase is Questionnaire.

4.4 Data collection

Phase 1: All data gathering by researcher own self under closely advise from the research committees.

Phase 2: The data collection steps are as follow:

Step 1: Request permission to collect data for research to the BTU Educational Faculty.

Step 2: Request a letter of recommendation for the researcher from the BTU Educational Faculty.

Step 3: Selection the coordinating teachers to help assist in coordinating data collection in each institution. Those will be oriented to understand the details of the questionnaire administration and data collection.

Step 4: Carry out data collection with the selected samples by sending questionnaires to the coordinator teacher who will help for collect data with the selected samples in each universities /college/department.

Phase 3: All data gathering by researcher own self under closely advise from the research committee.

4.5 Data analysis

Phase 1: All information obtained is make using content analysis which is a method for analyzing quality data.

Phase 2: Computer software will be used for data management and data analysis will be software in computer software packet will be employed for analyses the categorical variables. In terms of the qualitative method, the data analysis use content analysis by bring the experts' opinions to distinguish, to exploring the factors of Teachers' Incentive of Private Colleges and Universities in Shenyang city, Liaoning Province. Statistics for data analysis were Exploratory Factor Analysis and Multiple Indicators Multiple Causes model.

Phase 3: In terms of qualitative methods, the data analysis adopts the content analysis method, through the introduction of expert opinions to distinguish, classify and sort methods, improves the guidelines for the Teachers' Incentive of private colleges and universities in Shenyang city, Liaoning Province.

5. Research Results

5.1 Reliability analysis of initial measurement

Phase 1: The data consists of two parts, In the first part, a data recording form will be used from the 20 pieces of literature reviewed. In the second part, after the content analysis of the reviewed literature, nine experts will be asked to screen 3 components as well as 18 indicators of Teachers' Incentives affecting Working Effectiveness.

Phase 2: There are 51 questionnaires in this phase.

Phase 3: The experts collected data through focus group discussions and the Cronbach's alpha for the Teachers' Incentive affecting Working Effectiveness scale was 0.929, which indicated high internal consistency of the scales.

Exploratory factor analysis (EFA) used in the analysis include Pearson Correlation Coefficients and KMO and Bartlett's Test. The relationship between observed variables (indicators) and latent variables, as well as the measurement of latent variables were analyzed used the Multiple Indicators Multiple Causes (MIMIC) Analysis method, with a statistically ready-made program (SPSS) and AMOS program to analyze models. The value of Relative Chi-square (χ^2/df), Degree of Freedom (df), Statistical Significance (p), Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Root Mean Residual(RMR), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), Factor loading, The Composite Reliability, Average Variance Extracted (AVE), Standard Error(S.E), Z-test for a population proportion(Z-test) and Root Mean Square Error of Approximation (RMSEA), all in line with specified criteria.

Table 1 Result of Data Analysis on Questionnaire: Descriptive statistics

Variable	N	validation sample	Mean	Skewness statistic	Std.	Kurtosis Statistic	Std.
Working Effectiveness	WE1	365	3.58	-.617	.128	.034	0.26
	WE2	365	3.53	-.365	.128	-.307	0.26
	WE3	365	3.61	-.696	.128	.484	0.26
	WE4	365	3.67	-.530	.128	.383	0.26
Teachers' Incentive	F1	365	3.60	-.947	.128	.562	0.26
	F2	365	3.46	-.500	.128	.013	0.26
	F3	365	3.20	-.076	.128	-.433	0.26

The statistics in the table indicate moderate mean scores, varying levels of dispersion, relatively symmetrical distributions, and lighter tails compared to a normal distribution for most variables.

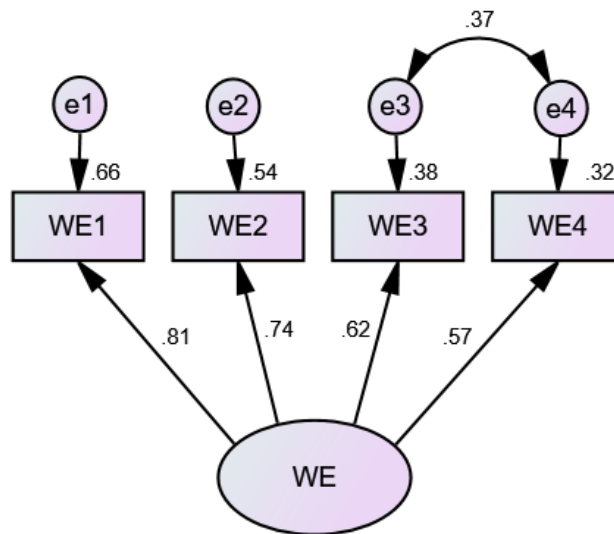
Table 2 KMO and Bartlett's Test of components of Teachers' Incentive affecting Working Effectiveness.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.				.937
Bartlett's Test of Sphericity	Approx. Chi-Square		df	26846.298
			Sig.	.000

This table provides the results of Kaiser Meyer Olkin (KMO) measurements for sampling adequacy and Bartlett's test for sphericity. KMO measurement is a statistical test used to evaluate whether data is suitable for component analysis. In this case, the KMO metric is 0.937, indicating high sampling adequacy. This indicates that the data is suitable for factor analysis. The Bartlett test is another statistical test used to evaluate whether data is suitable for factor analysis. This test evaluates whether there is sufficient correlation between variables for factor analysis. The approximate chi square value of Bartlett's test is 26846.298, and the corresponding degree of freedom (df) is 4186. The p-value (Sig.) related to the test is 0.000, below the typical significance level of 0.05. This indicates that there is sufficient correlation between variables for factor analysis.

Based on the above information, the questionnaire used in this study has good reliability and validity. To examine the relationship between teacher motivation factors and

teacher effectiveness, a structural equation model was constructed using AMOS software. The specific model is shown in the following figure.



Chi-Square = .314, Df =1, P =.575, GFI =1.000, AGFI =.996,
CFI =1.000, TLI =1.009, RMR =.002, RMSEA =.000

Figure 1 Show the first order of Working Effectiveness model that was consistent with the empirical data

Based on the provided statistical indicators, it appears that the model fits the observed data very well, and the model can be accepted. These indicators indicate a good fit between the model and the data, meeting statistical criteria.

Table 3 Show The results of hypothesis testing in this study

Factor & Variable	Factor loading	R ²	CR	AVE	MSV
WE			.781	.477	.137
WE→WE1	.810	.656			
WE→WE2	.737	.543			
WE→WE3	.617	.381			
WE→WE4	.569	.324			

5.2 Teachers' Incentive affecting Working Effectiveness Satisfaction by AMOS Path Analysis

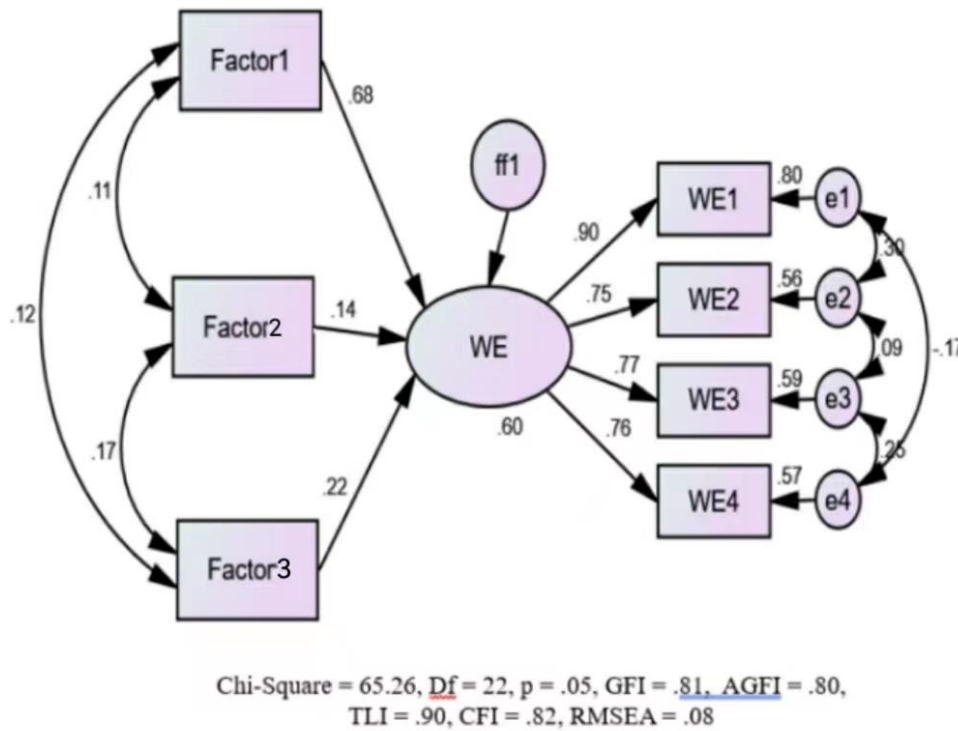


Figure 2 Show the second order of Teachers’ Incentive affecting Working Effectiveness model that was consistent with the empirical data

As shown in Figure 2, Multiple Indicator Multiple Cause modeling (MIMIC) of this study has one potential variables: Working Effectiveness Among them, Teachers’ Incentive factors include three observation variables, Working Effectiveness has four observation variables, by AMOS Path Analysis.

Table 4 Shows the value of fit index that consistent with the empirical data

Value	Standard	Value from analyzed	Result
χ^2	$p = > 0.05$	65.26	accept
GFI	$0.80 < GFI \leq 1.00$	0.81	accept
AGFI	$0.80 \leq AGFI \leq 1.00$	0.80	accept
TLI	$0.80 \leq TLI \leq 1.00$	0.90	accept
CFI	$0.95 \leq CFI \leq 1.00$	0.82	accept
RMSEA	$0.00 \leq RMSEA \leq 0.08$	0.08	accept

As shown in the table, where

p-value (p): A p-value greater than 0.05 (in this case, 65.26) is generally considered acceptable, indicating that the model fits the empirical data well. Therefore, the model's fit with the data is accepted.

Goodness of Fit Index (GFI): A GFI value greater than 0.80 (in this case, 0.81) is typically considered acceptable, indicating a good fit between the model and the data. Therefore, the model's fit is accepted.

Adjusted Goodness of Fit Index (AGFI): An AGFI value greater than 0.80 (in this case, 0.80) is generally considered acceptable, indicating an adequate fit between the model and the data. Therefore, the model's fit is accepted.

Tucker-Lewis Index (TLI): TLI should be between 0.80 and 1.00 for an acceptable fit. In this case, TLI is 0.90, which falls within the acceptable range. Therefore, the model's fit is accepted.

Comparative Fit Index (CFI): CFI should be between 0.95 and 1.00 for an acceptable fit. In this case, CFI is 0.82, which is slightly below the typical threshold. While it's on the lower side, it is still considered acceptable in some contexts.

Root Mean Square Error of Approximation (RMSEA): RMSEA should be less than 0.08 for an acceptable fit. In this case, RMSEA is 0.08, which meets the criterion for an acceptable fit.

Overall, based on the fit index values provided, the model appears to have an acceptable fit with the empirical data. However, the CFI value is slightly below the typical threshold, so you may want to consider the context and specific requirements of your analysis when interpreting these results.

Table 5 Show The results of hypothesis testing in this study

Factors & Observed variable	Estimate		S.E.	Z-test	p	R ²	Rank
	unstandard	standard					
WE					***	.60	
WE ← Factor 2	.203	.139	.057	3.55	***	.02	3
WE ← Factor 3	.352	.221	.063	5.61	***	.05	2
WE ← Factor 1	1.00	.680	-	-	***	.46	1

5.3 Based on the above study, 14 guidelines are proposed to improve the working effectiveness of Private Colleges and Universities in Shenyang city, Liaoning Province.

1. Teachers are required to complete various tasks, including lesson preparation, teaching, grading assignments, participating in assessments, and exams. To enhance work efficiency, appropriate support and resources should be provided, and excessive teaching hours should be limited when necessary.

2. To alleviate the pressure on teachers to complete tasks within limited time constraints, effective time management should be encouraged to improve work efficiency and enhance the quality of education.

3. To assist teachers in meeting various student needs, including learning difficulties, special requirements, behavioral issues, and emotional support, professional support and training should be provided to enhance their educational skills.

4. To reduce the burden on teachers related to administrative and managerial tasks such as document preparation, report writing, and meeting attendance, processes should be simplified, redundant tasks minimized, and necessary support provided to allow them to focus more on educational work.

5. To alleviate the pressure on teachers when it comes to assessing and evaluating student performance, including grade recording and providing quality feedback, effective assessment tools and relevant training should be made available.

6. To increase job satisfaction, teachers should be encouraged to find satisfaction in their work tasks and responsibilities, including teaching content, curriculum design, and textbook selection, and provided with opportunities for innovation and professional development.

7. To enhance teachers' quality of life, support in time management, reasonable holiday policies, and flexible work arrangements should be provided to maintain a balance between work and personal life.

8. Promoting positive interactions and relationship building, including interactions with students, colleagues, superiors, and parents, can improve job satisfaction and educational outcomes.

9. Encouraging a collaborative atmosphere, supportive leadership, and positive teacher-student interaction is essential to foster constructive cooperation and communication.

10. Individual performance and work quality should be fundamental considerations for career development and promotion decisions.

11. Participation in professional training, continuing education courses, and ongoing learning activities demonstrates a commitment to self-improvement and professional development, which can positively influence career advancement.

12. Obtaining professional certifications or credentials in a specific field is often considered advantageous for job title promotion and can validate an individual's professional competence and knowledge.

13. In certain promotion processes, leadership abilities and management skills are important considerations. Demonstrating effective team management, decision-making, and strategic thinking may be valued.

14. In certain cases, organizations may conduct comprehensive assessments, including interviews, evaluations by review committees, and colleague recommendation letters, to gain insights into an individual's performance and potential across multiple aspects and provide promotion opportunities.

6. Discussion

6.1 Discussion about major findings of objective 1

Based on the research objectives, the discussion will be presented as follows:

This research finding was consistent with Cheng Qiongwen (2010). They are results of the studies are consistent. Which was found that Propose the design and recommended measures of a comprehensive incentive model for research universities in China. This article analyzes the incentive methods for research university teachers' incentive under different influencing factors by combining the actual management of research universities in China, and proposes the implementation path to enhance the incentive effect of research university teachers' incentive in China. Also, the findings were in the same direction with Wang Qingru (2012). Analyzed the factors that constrain and affect the improvement of the educational level of private universities.

Also, the findings were in the same research content with Song Guangwei (2017). The results of this study indicate that measuring the turnover rate of private school teachers during the compulsory education stage and the achievement rate of school education goals can indirectly measure the work enthusiasm of school teachers and the effectiveness of incentive mechanisms. The incentive factors for private school teachers in the compulsory education stage include both material and non-material factors. This is same with the views put forward in the research content of Zhou Lijuan (2016). The research on the incentive mechanism for social organization growth has to some extent grasped the law between social organization growth and government Incentive, providing a systematic and sustainable path for social organizations and governments to clarify their relationship and promote each other's growth.

The research results of this paper have highly expanded the research contents and results of the above researchers, and better sorted out 3 Component of Teachers' Incentives of private colleges and universities.

However, the research of Researcher Qiu Kai (2011).it was found that Compared with ordinary personnel, members of the science and technology innovation team in local universities have higher cognitive abilities and rationality. There is an inverse ratio between the risk of delegation and the degree of control of the principal to the agent in the technology innovation team of local universities. Which was different.

6.2 Discussion about major findings of objective 2

After analyzing the exploratory factors, the model factors which are most suitable for the Teachers' Incentive components and Working Effectiveness components. Then used Multiple Indicators Multiple Causes (MIMIC) model for analysis, used to analyze the relationships between multiple observed variables and multiple latent factors. Through model analysis, the research obtains good model results based on data.

The results of this good model are obtained on the one hand because of the effectiveness of the research tool design based on theoretical analysis. On the other hand, it also reflects the important relationship between teacher motivation and work efficiency. However, whether the data model is real and effective, in addition to the data itself, also need the relevant field of experts, as well as practical practice. to better illustrate the effectiveness of the model.

6..3 Discussion about major findings of objective 3

The major findings were revealed as such because to propose the guidelines for improving the Working Effectiveness of Private Colleges and universities in Shenyang, Liaoning Province. By Working pressure, Job satisfaction and happiness and Promotion Incentive. In recent years, with the adjustment of national policies and economic transformation, the Northeast region of China has faced challenges such as economic restructuring and talent loss, which have also affected the development of private higher education in Shenyang city, Liaoning Province. While pursuing high-quality higher education, it is necessary to break free from the constraints of inefficient teacher efficacy, propose feasible specific measures and guidelines through feasible incentive strategies, inject vitality into regional higher education, and provide teachers with a diverse higher education environment and rich higher education content. Promote the quality of private higher education and the sustainable development of colleges. This guide is applicable to private colleges and universities in Shenyang city, Liaoning Province.

7. Recommendations

According to the research results of this paper, the following suggestions were

(1) In response to the serious problem of the turnover of highly educated young teachers, the leadership should take measures to improve their career development opportunities, provide promotion opportunities and development plans, and retain these promising teachers. The leadership should understand the ideological dynamics of teachers and the reasons for teacher turnover. Make every effort to meet talent needs, understand the relationship between departmental needs and teacher needs, protect the rights and interests of teachers, and increase their recognition to ensure that teachers are no longer lost.

(2) Improve the basic salary and welfare benefits of teachers, at least not lower than the level of public universities in the same region. Ensure that teachers maintain a balanced mindset in their work. On the basis of basic salary, use incentive mechanisms to reward teachers for their work and ensure their remuneration.

(3) In terms of welfare benefits, the leadership should take measures to provide more competitive benefits, including medical insurance, housing allowances, etc., to attract and retain outstanding teachers.

(4) Develop more diverse and widely recognized teacher performance standards to ensure fair evaluation of teachers' work and encourage them to continuously improve the quality of their work.

(5) Reduce the burden on teachers to allocate administrative tasks and ensure that they have sufficient time and energy for teaching and research work.

(6) Increase opportunities for teachers to participate in policy formulation to understand their needs and make policies more realistic. An anonymous suggestion platform can be established to allow teachers to express their personal wishes, so that they can truly understand their views on policy formulation. After the policy is formulated, anonymous voting is organized to understand teachers' recognition of the policy.

(7) In order to address the lack of happiness and satisfaction among teachers, the leadership should take measures to enhance their psychological well-being and professional satisfaction, including providing psychological counseling and support services, improving working conditions and educational resources, and enhancing interaction and support among teachers.

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