

THE INFLUENCE OF TEACHING MANAGEMENT SYSTEM ON TEACHERS' TEACHING BEHAVIOR IN A COLLEGE IN ANHUI CHINA

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Abstract

This study focuses on the impact of university teaching management system on teachers' teaching behavior, aiming to investigate the mechanism of the three key dimensions of teaching standardization, teaching quality assessment and teaching resource management in university teaching management system on teachers' teaching behavior. The background of the study is based on the demand for high-quality talents in the era of knowledge economy in the 21st century and emphasizes the central role of university teaching management system in education quality and talent cultivation. The study selected Maanshan Normal College of Higher Education in Maanshan City, Anhui Province, China, as a sample, and used quantitative research methods to collect data through questionnaires and analyze them using statistical methods. The results of the study show that teaching standardization provides teachers with clear teaching standards and processes, which helps to improve the systematic and scientific nature of teaching; teaching quality assessment motivates teachers to continuously improve their teaching methods through scientific and reasonable evaluation standards and feedback mechanisms; and teaching resource management provides teachers with the necessary support and safeguards through the rational allocation and optimization of teaching resources, which enhances the effectiveness of teaching. All these three key dimensions have significant positive correlations with teachers' teaching behaviors. This study not only fills the gap of existing research and enriches the relevant theoretical system, but also provides practical basis and specific strategies for universities to optimize the teaching management system and enhance teaching quality. The conclusions of the study emphasize the important role of teaching management system in guiding and regulating teachers' teaching behaviors, and provide empirical support and policy suggestions for teaching management reform in higher education, which is of great theoretical and practical significance.

Keywords: Teaching management system in higher education, Teachers' teaching behavior, Teaching standardization, Teaching quality assessment, Teaching resource management

Introduction

In the era of knowledge economy in the 21st century, the social demand for high-quality talents is surging, and the importance of higher education, as a key way to cultivate talents, is becoming more and more prominent. As the core of higher education, the teaching management system of colleges and universities has a decisive influence on education quality and talent cultivation. With the rapid development of higher education and the diversification of educational modes, the teaching management system is crucial in regulating teachers'

teaching behavior and guaranteeing education quality. However, the current challenges to improve the quality of teaching in higher education, the teaching management system needs to keep pace with the times and adapt to the changes in educational technology, such as the application of big data, artificial intelligence and other technologies, to improve the level of intelligence in teaching management. At the same time, teachers, as the leader of teaching activities, their teaching behavior directly affects the quality of teaching, and the design and implementation of the teaching management system on the role of guiding the behavior of teachers urgently needs in-depth study.

At present, there are many gaps in the research on the relationship between teaching management system and teachers' teaching behavior in colleges and universities. Teaching management system includes three key dimensions of teaching standardization, teaching quality assessment and teaching resource management, which have a direct impact on teachers' teaching behavior, but the existing research mostly focuses on the macro-design or single-factor analysis, and lacks a systematic and in-depth research on the internal connection and the mechanism's role. This leads to the fact that in actual teaching management in universities, the implementation of the system is not in place, and it is difficult to effectively change teachers' teaching behavior, which seriously affects the improvement of teaching quality and the promotion of educational reform.

This study aims to fill the existing research gaps, improve the research framework of the relationship between teaching management system and teachers' teaching behavior, and provide theoretical support and practical strategies for universities to optimize teaching management system and improve teaching quality. From the theoretical level, the study can help deepen the theory of teaching management and promote the development of the discipline of educational management; from the practical level, the study can help colleges and universities cope with the challenges of educational change, optimize the teaching management system, enhance the normality and effectiveness of teachers' teaching behavior, cultivate high-quality talents to meet the needs of society and promote the sustained and healthy development of higher education.

Research Objectives

1. To explore the impact of teaching standardization in university teaching management system on teachers' teaching behavior.
2. To analyze the impact of teaching quality evaluation in university teaching management system on teachers' teaching behavior.
3. To study the impact of teaching resource management in university teaching management system on teachers' teaching behavior.

Hypotheses

1. There is a significant correlation between the standardization of teaching in the teaching management system of colleges and universities and teachers' teaching behavior.
2. There is a significant correlation between the teaching quality evaluation in the university teaching management system and teachers' teaching behavior.
3. There is a significant correlation between teaching resource management in the university teaching management system and teachers' teaching behavior.

Literature Review

Teaching Management System: The teaching management system in higher education institutions is a comprehensive, guiding, and service-oriented set of rules and procedures that cover aspects such as teaching planning, curriculum design, implementation, and evaluation. It aims to coordinate the relationships among teaching managers, teachers, and students, ensuring the smooth progress and quality improvement of teaching activities. The system also continuously adjusts with societal changes to meet evolving demands.

Teachers' Teaching Behaviors: Teachers' teaching behaviors are purposeful activities undertaken by teachers in the teaching process to achieve teaching objectives, including the selection of teaching methods, classroom management, and organization of teaching content. These behaviors are significantly influenced by the teaching management system of higher education institutions. This study focuses on the narrow definition of teaching behaviors and explores the regulatory and optimizing effects of the academic management system on these behaviors.

Institutional Logic Theory: Cultural symbols, practices, and values constructed by society dominate daily life and give it meaning, shaping the cognition and behavior of individuals and organizations. This study applies this theory to analyze how teaching management systems influence teachers' cognition and values at the meso- and micro-levels, thereby changing their teaching practices and decision-making.

Behaviorist Psychology: Skinner's operant conditioning theory emphasizes that learning is a change in behavior, advocating for programmed instruction to reform traditional methods and influencing the teacher training reform in the United States in the 1960s. Tenney believed that teaching skills are a manifestation of teachers' behavior, and Skinner's "shaping technique" cultivates teachers' abilities by breaking down and integrating skills. These theories enhance teachers' teaching behaviors and skills from a behaviorist perspective.

Scholarship of Teaching Theory: In 1990, Ernest L. Boyer, president of the Carnegie Foundation for the Advancement of Teaching, proposed the theory of "teaching as scholarship," dividing scholarship into four dimensions: integration, discovery, application, and teaching. He emphasized that teaching is as important as other academic activities and introduced the concept of a "learning community," which stresses enhancing learning capabilities through teamwork and communication. These views have had a profound impact on higher education reform and provided theoretical support for balancing teaching and research.

Domestic Research Review: Domestic scholars have conducted in-depth research on aspects such as the value orientation of teaching management reform, the people-oriented philosophy, issues in teaching management systems, and factors influencing teachers' teaching engagement. They emphasize core teaching leadership, deepening educational management reform, respecting the primary status of teachers and students, and optimizing teaching management systems to enhance teaching quality and promote the sustainable development of higher education.

International Research Review: International research focuses on the relationship between behavioral intention and individual behavior, new institutionalism theory, characteristics of teachers' teaching engagement, the impact of institutional environments on organizational behavior, comparisons of teaching engagement between the US and South Korea, the relationship between teacher salary incentives and teaching performance, and the impact of teaching incentive measures on teacher motivation. These studies provide multi-dimensional theoretical support for understanding teacher behavior and teaching management.

Definition of Terms

Teaching management system in higher education: The teaching management system of colleges and universities refers to a series of norms, standards, procedures and policies formulated by colleges and universities to ensure the smooth progress of teaching activities, improve teaching quality and achieve teaching goals. These systems include but are not limited to teaching standardization, teaching quality evaluation, and teaching resource management, and aim to guide and standardize teachers' teaching behaviors and improve teaching effectiveness through systematic management means.

Teaching standardization: Teaching standardization refers to the process by which colleges and universities formulate clear teaching standards and processes to guide teachers to follow established norms and requirements in the teaching process, thereby ensuring the standardization and consistency of teaching activities. Specifically, it includes the formulation of teaching syllabuses, the implementation of curriculum plans, the organization of classroom teaching, the assignment and correction, and the setting and grading of examination questions. Teaching standardization aims to improve the systematic and scientific nature of teaching through unified standards and processes, and ensure the achievement of teaching objectives.

Teaching quality assessment: Teaching quality evaluation refers to the regular evaluation and feedback of teachers' teaching effects by colleges and universities through scientific and reasonable evaluation standards and methods, so as to encourage teachers to continuously improve their teaching methods and teaching level. The evaluation content usually includes the scientific nature of teaching content, the diversity of teaching methods, the significance of teaching effects, and students' learning satisfaction. Teaching quality evaluation not only affects teachers' performance appraisal and professional title promotion, but also provides teachers with a reference for improving teaching, thereby motivating teachers to be more actively involved in teaching.

Teaching resource management: Teaching resource management refers to the process by which colleges and universities provide teachers with necessary teaching support and guarantees to improve teaching effectiveness through the reasonable allocation and optimization of teaching resources. Teaching resources include teaching equipment, teaching materials, teaching platforms, teaching funds, etc. Teaching resource management aims to ensure that teachers can make full use of various teaching resources, improve teaching efficiency and quality, and stimulate teachers' teaching enthusiasm and creativity through effective resource allocation.

Teachers' teaching behavior: Teachers' teaching behaviors refer to a series of purposeful and planned activities that teachers carry out in the teaching process to achieve teaching objectives. These behaviors include the selection of teaching methods, the implementation of classroom management, the organization and presentation of teaching content, the use of teaching resources, and the evaluation and feedback of students' learning. Teachers' teaching behaviors directly affect the teaching effect and students' learning experience, and are an important focus of university teaching management.

Research Methodology

1. Population and Sample

Ma'anshan Normal Higher and Specialized School as the unit of study, which has a relatively well-developed education system, has a total of 10,699 students and 527 staff members, totaling 11,226 students.

$$n = \frac{11226}{1 + 11226(0.05^2)}$$

The sample size for this study was determined to be 387 based on Yamane's formula and rounded upwards. This sample size was determined to ensure the reliability and validity of the results of the study, taking into account the rational use of research resources.

Through the careful design and selection of the sample, this study will be able to gain a comprehensive understanding of the impact of university teaching management systems on teachers' teaching behaviors, and provide a solid database for subsequent analyses and conclusions.

2. Research Instrument

In this paper, through the combing of the literature, the institutional logic theory, the behavioral attention psychology theory and the teaching academic management theory are used as the basis of the quantitative method to carry out the research, and the research tool is a questionnaire. This questionnaire contains three parts, which are: personnel basic characteristics questionnaire; university teaching management system questionnaire; and teacher teaching behavior questionnaire.

In this study, the reliability of the questionnaire was tested using Statistic software, and the overall Cronbach's α coefficient was 0.904, indicating that the questionnaire had high reliability. Further analysis of the variables revealed that the Cronbach's α coefficients for teaching standardization (0.826), teaching quality assessment (0.796), teaching resource management (0.839), and teachers' teaching behaviors (0.817) were all greater than 0.7, indicating that the reliability of the variables was good and suitable for further analysis. In addition, the results of the deletion test for each item were lower than the overall reliability value of the variable in which it was embedded, further supporting the internal consistency of the scale.

In this study, the validity test was conducted by exploratory factor analysis, and the KMO value was 0.938, and the P value of Bartlett's spherical test was less than 0.05, indicating that the data were suitable for factor analysis. Principal component analysis extracted 4 male factors with a cumulative variance explained of 72.948%, which met the validity requirements. Fragmentation plot analysis showed that four factors should be retained, and the factor loadings for each question item were greater than 0.4, verifying the structural validity of the scale.

Correlation analysis showed that there were significant positive correlations between teaching standardization, teaching quality assessment, teaching resource management and teachers' teaching behavior. Among them, teaching standardization is strongly correlated with teaching quality assessment (0.876), teaching resource management (0.746) and teachers' teaching behavior (0.688); teaching quality assessment is positively correlated with teaching resource management (0.739) and teachers' teaching behavior (0.820); and the correlation coefficient between teaching resource management and teachers' teaching behavior is 0.851, indicating that there is a strong link between the variables there is a strong connection.

3. Data Collection

This study uses a variety of data collection methods to gain a comprehensive understanding of the impact of university teaching management systems on teachers' teaching behavior. First, through extensive literature research, the authors systematically reviewed the

academic literature on the relevant theories of teaching management system at home and abroad to provide a theoretical framework and background knowledge for the study. Then, by listening to and observing teachers' classroom instructional management during class the authors gained a more accurate grasp of classroom instructional management. Finally, through a questionnaire survey of teachers, specific data on four aspects of university teaching management systems including teaching standardization, teaching quality assessment, teaching resource management, and teachers' teaching behaviors were collected. The authors prepared the questionnaires into Questionnaire Star, created QR codes, and sent them to the offices of Maanshan Normal Higher Colleges. Teachers were asked to complete the questionnaire, the questionnaire was distributed from November 20, 2024, and stopped on November 30, 2024, the total distribution time was 10 days, 426 questionnaires were recovered, and 387 valid questionnaires were randomly selected for analysis.

4. Data Analysis

In this study, the basic information of teachers and teaching-related variables were analyzed by descriptive statistics. The findings show that there are more female teachers than male, the highest percentage of teachers under 30 years old, master's degree holders dominate, lecturer is the most common title, and the number of teachers with 6-10 years of teaching experience is the highest. In terms of teaching management, teachers rated teaching standardization, teaching quality assessment, teaching resource management and their own teaching behaviors highly. Among them, teaching quality assessment scored the highest (4.05), indicating that teachers generally recognized the school's management in terms of teaching quality. Specifically, teachers had a high agreement with the standardization of teaching methods and curriculum standards, teaching quality assessment standards, the sophistication of teaching resources, and the implementation of their own teaching behaviors. Overall, teachers have a high degree of recognition of the current teaching management system and their own teaching practices.

This paper uses Statistical software to conduct correlation analysis of the data, this paper mainly uses Pearson correlation to explore the strength of the correlation between teaching standardization, teaching quality assessment, teaching resource management and teacher teaching behavior. There is a positive correlation between teaching standardization and teaching quality assessment, teaching resource management, and teachers' teaching behavior management, with correlation coefficients of 0.876, 0.746, and 0.688; there is a positive correlation between teaching quality assessment and teaching resource management, and teachers' teaching behavior, with correlation coefficients of 0.739, and 0.820; there is a positive correlation between teaching resource management and teachers' teaching behavior has a positive correlation, and its correlation coefficient is 0.851.

Research Results

This paper uses regression analysis to analyze the impact of target 1 teaching standardization on teachers' teaching behavior, and draws the following conclusions based on the regression analysis.

This paper uses teaching standardization as the independent variable and teachers' teaching behavior as the dependent variable to conduct a univariate linear regression analysis. As shown in Tables 4.20-4.22, the F value of the model is 218.904 and the R^2 is 0.348, indicating that the model is relevant and can explain 34.8% of the independent variable teaching standardization on the dependent variable teachers' teaching behavior. Teaching

standardization ($B=0.647, p < 0.05$) has a positive impact on teachers' teaching behavior. To sum up, the regression equation between the independent variable and the dependent variable is obtained: Teachers' teaching behavior = $1.345 + 0.647 * \text{teaching standardization}$

Hypothesis 1: Teaching standardization has a positive impact on teachers' teaching behavior. This hypothesis is established.

Table 1: Standardization of teaching Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.345	0.185		7.654	0.000
Information quality	0.647	0.044	0.588	14.839	0.000

a Dependent Variable: Teaching resource management

This paper uses regression analysis to analyze the impact of target 2 teaching quality evaluation on teachers' teaching behavior. According to the regression analysis, the following conclusions are drawn: teaching quality evaluation has a positive impact on teachers' teaching behavior. The specific analysis is as follows:

This paper uses teaching quality evaluation as the independent variable and teacher teaching behavior as the dependent variable to conduct a univariate linear regression analysis. As shown in Tables 4.23-4.25, the F value of the model is 348.326 and the R^2 is 0.619, indicating that the model is relevant and can explain 61.9% of the independent variable teaching quality evaluation on the dependent variable teacher teaching behavior. Teacher teaching behavior ($B=0.747, P < 0.05$) has a positive impact on teacher teaching behavior. To sum up, the regression equation between the independent variable and the dependent variable is obtained:

$$\text{Teacher teaching behavior} = 1.303 + 0.747 * \text{teaching quality evaluation}$$

Hypothesis 2: Teaching quality evaluation has a positive impact on teachers' teaching behavior. This hypothesis is established.

Table 2: Teaching quality evaluation Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	p.
	B	Std. Error	Beta		
1 (Constant)	1.303	0.142		7.780	0.000
Immediacy of information	0.747	0.035	0.720	23.174	0.000

a Dependent Variable: Teaching resource management

This paper uses regression analysis to analyze the impact of target 3 teaching resource management on teachers' teaching behavior. According to the regression analysis, the following

conclusions are drawn: teaching resource management has a positive impact on teachers' teaching behavior. The specific analysis is as follows:

This paper uses teaching resource management as the independent variable and teacher teaching behavior as the dependent variable to conduct a univariate linear regression analysis. As shown in Table 4.26-4.28, the F value of the model is 316.430 and the R² is 0.464, indicating that the model is relevant and can explain 46.4% of the independent variable teaching resource management's explanation of the dependent variable teacher teaching behavior. Teaching resource management (B=0.513, p < 0.05) has a positive impact on teacher teaching behavior. To sum up, the regression equation between the independent variable and the dependent variable is obtained:

$$\text{Teacher teaching behavior} = 1.359 + 0.513 * \text{teaching resource management}$$

Hypothesis 3: Teaching resource management has a positive impact on teachers' teaching behavior. This hypothesis is established.

Table 3: Teaching resource management Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.359	0.123		15.933	0.000
Personal charisma	0.513	0.032	0.651	17.505	0.000

Discussion

The impact of teaching preparation in the teaching management system of colleges and universities requires teachers to formulate detailed teaching plans at the beginning of the semester in accordance with the format and requirements stipulated by the school. This means that teachers cannot arrange teaching content and progress at will, and must comprehensively consider factors such as course objectives, student foundation, and professional training programs.

The teaching management system stipulates the classroom behavior standards of teachers, such as teachers should arrive in the classroom early, finish class on time, and not use mobile phones in class, among other non-teaching-related behaviors. This helps to create a good teaching order and set an example for students. The rigorous teaching behavior of teachers will also make students feel the rigor of the medical profession. The language expression of teachers in the classroom also needs to meet the standards. Teachers are required to use standard Mandarin (except for special professional language courses), and the expression should be accurate, concise, and vivid. In literature courses, the language expression of teachers is even more important to avoid inappropriate words or vague expressions. Standardization of teaching encourages teachers to choose appropriate teaching methods to achieve teaching goals. Teachers cannot choose teaching methods based on personal preferences alone, but must consider factors such as the nature of the course and the characteristics of students. In courses with strong theoretical content, teachers cannot only use traditional lectures, but also need to combine case teaching methods, problem-solving methods and other methods to improve students' application ability. For courses with strong practicality, teachers must arrange sufficient practical teaching links in accordance with the regulations. Teachers must guide

students to complete projects within the specified time and evaluate students' work according to certain evaluation criteria to improve students' practical ability.

Standardized teaching management systems have certain requirements for the content, quantity and difficulty of homework assignments. Teachers cannot arbitrarily assign a large number of homework assignments that are too difficult or too easy. Teachers should combine classroom teaching content with the requirements of curriculum standards to control the amount of homework. At the same time, some exploratory small experimental homework assignments can be appropriately assigned to improve students' learning interest and hands-on ability. There are also corresponding norms for homework marking. Teachers should carefully mark homework, point out students' mistakes and give feedback. Teachers should annotate students' strengths and weaknesses in detail, put forward suggestions for improvement, and help students improve their writing skills.

The teaching system requires teachers to conduct regular teaching reflection and summary. Teachers need to review their teaching process, including the achievement of teaching objectives, the effectiveness of teaching methods, and students' learning feedback. If students find it difficult to understand a certain tactic, teachers should think about whether the teaching method is not intuitive enough or the teaching progress is too fast, and then make adjustments in subsequent teaching. Teaching summary is also an important part of teaching standardization. Teachers should organize the teaching experience and problems of a given stage to provide reference for the next round of teaching.

Recommendations

Research recommendations

1. Establish a scientific teaching evaluation system.
2. Effectively integrate teaching resources and establish a mature evaluation system.
3. Establish a sound teaching and training system.

Recommendation for Future Research

1. Expand the sample to cover more schools and teacher groups to enhance the representativeness of the study.
2. Introduce more influencing factors (e.g., self-efficacy, subjective motivation, etc.) to construct a better theoretical model.
3. Combine interviews and student feedback to analyse the impact of the teaching management system on teachers' teaching behaviours from a multi-dimensional perspective and provide targeted suggestions.

References

- Fishbein, M., & Ajzen, I. (2011). *Predicting and changing behavior: The reasoned action approach*. Taylor & Francis.
- Kim, M. M., & Cummings, W. K. (2011). Faculty time allocation for teaching and research in Korea and the United States: A comparative perspective. *Korean Social Science Journal*, 38(1), 1–40.
- Liang, G., Zhang, Y., Huang, H., et al. (2015). Teacher incentive pay programs in the United States: Union influence and district characteristics. *International Journal of Education Policy and Leadership*, 10(3), n3.
- Lounsbury, M. (2007). A tale of two cities: Competing logics and practice variation in the professionalizing of mutual funds. *Academy of Management Journal*, 50(2), 289–307.

- Medley, D. M., & Shannon, D. M. (1994). Teacher effectiveness: A research review. In V. Richardson (Ed.), *Handbook of research on teaching* (3rd ed., pp. 659–686). Macmillan.
- Medley, M. (1982). *Teacher competency testing and the teacher educator*. University of Virginia, Bureau of Educational Research.
- Skinner, B. F. (1938). *The behavior of organisms: An experimental analysis of behavior*. D. Appleton-Century Company.
- Thornton, P. H., & Ocasio, W. (2008). Institutional logics. In *The SAGE handbook of organizational institutionalism* (pp. 99–129). Sage Publications Ltd.
- Thornton, P. H., Ocasio, W., & Lounsbury, M. (2012). *The institutional logics perspective*. Oxford University Press.
- Winslow, S. (2010). Gender inequality and time allocations among academic faculty. *Gender & Society*, 24(6), 769–793.