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# The Innovative Teaching Practice of University Lecturers in Hebei, China

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# **ABSTRACT**

Higher education is an important part of China's education system. With the changes in social needs and development, many universities actively implement the national education plan. They have made bold attempts and practices in governance structure, professional system, course content, teaching methods, teacher structure and so on, and have made great progress in higher education. Classroom teaching is the main means of college education and teaching. Its quality is closely related to the content, method and efficiency of teachers' teaching activities. Therefore, college teachers should actively reform and innovate classroom teaching in order to meet the requirements of talent training in the new era. This study investigated the full-time lecturers in universities in Hebei province, China. The purpose of this study is to investigate the innovative teaching practices of lecturers in colleges and universities in Hebei province. These innovative measures have injected new vitality into higher education and laid a solid foundation for cultivating high-quality talents.

**Keywords:** Teaching innovation, university lecturers, class teaching activities

# INTRODUCTION

In an era of rapid globalization, the field of higher education also faces the key challenge of innovating teaching to adapt to the social needs of students. In 2007, China's Ministry of Education published Several Opinions on Accelerating the Construction of research-oriented Universities and Enhancing the Independent Innovation Ability of Colleges and Universities, which put forward higher requirements for lecturers' innovation ability and teaching quality. Teaching innovation, which encompasses the development of novel pedagogical methods, curriculum designs, and technology integration, has emerged as a focal point for universities seeking to enhance the quality and effectiveness of their educational programs (Scull, Phillips & Sharma, 2020).

Situated in northern China, Hebei Province is home to numerous universities, each facing its unique challenges and opportunities in the education sector. The ability to innovate in teaching methodologies and practices is pivotal for universities striving to adapt to the complexities of the 21st century Saqib, Omer & Kumar, 2024) (Aithal & Maiya, 2023). With the emergence of new educational technologies and teaching methods, many universities face difficulties in effectively adapting and integrating teaching innovations (Caena & Redecker, 2019).

As a new generation of young people, they can properly cope with and adapt to the requirements of rapid social development, which is closely related to education. Lecturers are the core force to promote cultural inheritance and innovation. Educating, organizing, and leading students is what lecturers do while they are guiding their growth and development. The level of their education is critical to the future and destiny of the country, and has a direct and critical impact on the development of national quality. Today lecturers are facing a great job pressure. For example, teaching staff need to improve students' academic performance through

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume IX Issue V May 2025



teaching innovation. The teaching innovation level of lecturers directly affects the quality of classroom teaching. According to Binnewies and Gromer (2012), a key element influencing university lecturers' innovative teaching practices is their support, trust, and feedback from superior leaders. These elements can positively influence the creation, promotion, and implementation of innovative ideas.

Universities in Hebei Province, like their counterparts around the world, are facing the challenge of preparing students to compete in a globalized workforce (Waller, Lemoine & Mense, 2019). Graduates must possess not only subject matter knowledge but also the ability to think critically, adapt to evolving technology, and communicate across cultural boundaries. Teaching innovation is crucial for imparting these skills effectively (Kalyani & Rajasekaran, 2018). While there is already a great deal of research on innovative ways of teaching and learning, we need to address regional differences in research in order to provide practical guidance for teaching and learning in the region. Therefore, this study aims to investigate the innovative teaching practices of college lecturers in Hebei Province.

# **Lecturer Teaching Innovation**

Lecturer innovation in teaching means that lecturers take promoting students' development and cultivating students' innovative quality as the teaching goal in the teaching process (Agarwal, 2018). Educators actively incorporate their own and other people's teaching ideas into their lessons, update the curriculum, make timely adjustments to their methods and resources, and work to continuously enhance the overall impact of their teaching practices.

The innovation of lecturers in teaching in this study refers to stimulating students' interest in learning and cultivating their creative thinking and behavior. Concept thinking innovation, innovative teaching methods, innovative teaching content, innovative teaching resources, and innovative multiple evaluations are all included.

# LITERATURE REVIEW

# **Definition and Concept of Lecturer Teaching Innovation**

Hang, Van (2020) pointed out that the establishment of teaching strategies is an important task for lecturers and students. Innovative teaching methods, forms and examination evaluation are conducive to the development and promotion of students' creativity.

Facing the era of Industry 4.0, the current higher education needs the teaching innovation ability of lecturers as the main competitive advantage of universities (Asbari, Purwanto & Ong, 2020). Purwanto (2020) pointed out that the teaching innovation of lecturers is regarded by many universities as one of the important internal resources to produce excellent teaching performance. Asbari, Purwanto and Ong (2020) pointed out that innovation is an important aspect of quality education.

In the process of trying to solve a certain problem, people will generate new inspiration, new ideas through verification and other ways to apply to practice (Klaeijsen, Andrea & Marjan Vermeulen, 2018). By exploring new teaching methods and contents, lecturers can effectively solve problems, and the effective new path is innovative behavior, which is complicated and targeted, and lecturer teaching innovation is one of its manifestations. On the basis of the current relevant research, this paper sorts out and summarizes the teaching innovation behavior of lecturers.

# **Dimensions for Lecturer Teaching Innovation**

Kanter's (1988) work on innovation stage puts forward three dimensions, including idea generation, idea promotion and idea realization. In this study, it can be applied to investigate whether lecturers propose new

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume IX Issue V May 2025



ideas for teaching innovation, mobilize support for innovative ideas, and translate innovative ideas into useful practice.

Through years of research on lecturers' teaching innovation. Peterson, Dumont and Lafuente's (2018) research results in this field are relatively scientific and reasonable. They divide teaching innovation into five aspects: conceptual thinking, teaching content, teaching strategy, teaching resources and multiple evaluation of students. Based on previous research results, the empirical analysis shows that teaching innovation can be divided into five dimensions: motivation, novelty, strategy, flexibility and support (Widana, Suarta & Citrawan, 2019). With the change of teaching concept, our teaching goal lies in teaching and educating people, rather than imparting knowledge. Education in modern society aims at cultivating innovative talents and realizing the all-round development of human beings. It should include innovation spirit and innovation ability two related levels. Previous research explains from six dimensions which aspects teaching innovation should start from. First of all, the innovation of teaching concept. Secondly, innovation of teaching objectives. Thirdly, teaching content innovation. Fourthly, teaching method innovation. Fifthly, teaching model innovation. Finally, teaching evaluation innovation (Guardia, Del Olmo & Roa, 2019) (Scull, Phillips & Sharma, 2020).

# Lecture Teaching Innovation

- idea generation (problem recognition)
- idea promotion (dissemination)
- work commitment
- idea realization (application)

Fig. 1 A conceptual framework for lecturers' innovation in teaching

# **Theory for Lecturer Teaching Innovation**

Constructivism theory often associated with thinkers like Piaget and Vygotsky, suggests that learners construct knowledge by building upon their prior experiences (Efgivia, Rinanda & Suriyani, 2021). In the context of teaching innovation, it encourages educators to create learning environments that are interactive, where students actively build their understanding. Lecturers employing innovative methods often draw from constructionist principles to encourage active learning and critical thinking.

The concept of person–environment (PE) fit theory is based on interaction psychology, which posits that the interaction between individual characteristics and environmental factors is the main determinant of human behavior (Andela & van Der Doef, 2019). In a specific time and space, the individual's own state and psychological environment will act to form a matching perception. The external environment influences individual behavior through this psycho dynamic field.

In summary, from the perspective of person-environment fit theory, organizational environment has dynamic influence on individual behavior. Organizational innovation climate is an individual's perception of organizational philosophy, working style, resource provision and organizational environment's support for innovation. It can affect other perceptions and behaviors such as job engagement and job innovation.

# **Past Research on Lecturer Teaching Innovation**

In the study of lecturers' teaching innovation, scholars examining the subject of teaching innovation suggest that it is a challenging endeavor (Hosseini & Haghighi Shirazi, 2021). Educators need to creatively enhance

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume IX Issue V May 2025



and optimize their teaching content, effectively adjust and utilize teaching resources, and improve lecturerstudent interactions through various methods. Additionally, educators should possess personal characteristics such as bravery to face challenges, curiosity, and a propensity for seeking breakthroughs.

According to Hang and Van (2020), lecturers must truly use engaging and innovative teaching strategies in order to achieve their objectives while implementing innovative teaching practices. In the process of educational practice, whether educators can design creative and rational research ideas to complete the innovation of teaching process. Specifically, how to enhance and maximize the inventive teaching process by incorporating one's own distinct perspective and independent thought process into the creative design process.

Zainal and Matore (2019) pointed out that the rapid changes in the education system in the 21st century require innovative actions by all teachers. To guarantee that the educational system stays up to date with the latest advancements and trends, lecturer innovation is crucial. However, it lacks a comprehensive identification of the factors that influence lecturers' innovative behavior, especially in recent decades. Their research uses Systematic Literature Review (SLR) as the research method. The Systematic Literature Review consists of the review protocol, which specifies the topics to be studied and the methods to be customized when reviewing. This is the primary method for identifying pertinent reviews of the literature and for gathering data from preliminary investigations. The Systematic Literature Review technique consists of three phases: planning, implementation, and reporting audits.

Catio (2019) contends that engaging in innovative behavior is crucial for university lecturers to adapt to a rapidly changing society. The demands and expectations of today's educated society diverge significantly from those of the past. Present-day society necessitates not only proficiency in traditional academic subjects like reading and mathematics but also emphasizes the development of creative thinking, critical thinking, and problem-solving skills among students (Luitel, 2022). Today's society not only requires students to be good at reading and math in university, but also requires students to have creative thinking, critical thinking and problem-solving skills.

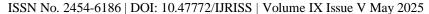
# **METHODOLOGY**

Research design is a framework for collecting, measuring, and analyzing raw data (Vidakis, Barianos & Trampas, 2020). This study uses questionnaires to gather data and employs quantitative research methods. This study first consulted the relevant research results at home and abroad, and sorted them out as the theoretical basis and reference of this paper. On this basis, the research scheme is designed. The main method of this study is to obtain data through questionnaire survey, then analyze and test different data with different statistical methods, and discuss and analyze the survey results. Questionnaires were distributed simultaneously to a large number of subjects, allowing them to complete the test at their own convenience. In addition, by asking many questions, the views of university lecturers on teaching innovation are explored. Thus, this gives a great deal of flexibility in the analysis, and the standardization problem makes the measurement accurate by enforcing a uniform definition on the participants.

# **Population**

The researchers identified the types of information necessary and who was most likely to have it. The main object of this study is the lecturers of universities in Hebei Province. There are about 61 HEIs Offering Degree Programs and Vocational Institutions for Undergraduates in Hebei Province, with more than 3045 full-time lecturers. Therefore, the total population of this study is 3045. However, a total of 341 of survey questionnaires were distributed to be responded that all have been designed in hard copies.

This study was conducted in Hebei Province, China. It is located in the north of China and belongs to the North China Plain region. The comprehensive development level of higher education in Hebei province needs





to be improved urgently. The comprehensive development level of higher education is measured by a series of indicators such as the overall scale of higher education, funding input, teaching staff, information technology, which reflects the basic situation of the development of higher education in different countries or regions. On the level of comprehensive development of higher education, Hebei Province is one of the important regions in the integrated development of Beijing, Tianjin and Hebei. It is not only different from the educational strength of Beijing and Tianjin, but also lower than the national average.

The Outline of the 13th Five-Year Development Plan and the Outline of the Medium and Long-Term Education Reform and Development Plan (2010-2020) successively issued by Beijing, Tianjin and Hebei have made clear plans for deepening the coordinated development of Beijing-Tianjin-Hebei and promoting the coordinated development of Beijing-Tianjin-Hebei education. Building a team of first-class innovative lecturers is not only the key to realize the connotative development of colleges and universities in Hebei Province, but also one of the core elements to improve the comprehensive development level of higher education in Hebei Province (Li, Du & Luo, 2022).

# Research Sampling Technique and Sample Size

The main purpose of sampling is to form a representative of the actual population to ensure generalization of the findings from the sample to the whole population (Mohajan, 2020). It is a group of individuals selected from a population for the purpose of studying a representative population in the study. The purpose of a sample survey is to use the information collected in the sample survey to draw inferences about the population.

According to Krejcie and Morgan (1970), the table for determining the sample size shows the sampling technique for the heads of 3045 subjects, with a recommended sample size of 341. Therefore, the recommended subjects of this study include at least 341 lecturers from colleges and universities in Hebei Province. A simple random sampling method was used to select 61 colleges and universities in Hebei Province. At each university, full-time lecturers were randomly drawn from any faculty to assess their own innovation capabilities. This method is used because it allows each member of the sample size to have an equal and independent chance of being selected.

### **Research Instrumentation**

This study collected data in the form of a questionnaire and conducted it in the form of a statistical rating table. The researcher was permitted to use and adapt the instruments by the developer of the instrument and cited from other researchers. The questionnaire was completed anonymously, with the right to protect the privacy of the respondents and ensure the authenticity of the data.

# Part A: Background of Respondent

Information on demographic variables was collected by asking respondents for information on gender, total years of teaching, and degree.

# Part B: Teaching Innovation Questionnaire

According to the characteristics of the research, from the perspective of teaching content and teaching method innovation, the teaching innovation Questionnaire is compiled on the basis of The influence of transformational leadership on junior middle school teachers' Teaching Innovation: The intermediary role of organizational identity. (Toonuk Shawulaiti, 2022). The design process of a questionnaire measuring teachers' innovative behavior. The questionnaire consists of 18 questions. Lecturers are investigated from four dimensions: idea generation (problem identification) (1-6 questions), idea promotion (dissemination) (7-12 questions), work commitment (13-18 questions) and idea realization (application) (19-24 questions). Likert

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume IX Issue V May 2025



scale-5 points were used to score from "strongly disagree" to "strongly agree" (1= strongly disagree, 2= disagree, 3= general, 4= agree, 5= strongly agree).

# Validity and Reliability

Validity refers to the extent to which a test, measurement, or study accurately assesses what it is designed to measure (Sürücü & Maslakci, 2020). From the perspective of content effectiveness, this study covers the dimensions of dean transformational leadership and lecturer teaching innovation. The effectiveness of the tool was obtained through the evaluation of scholars in the field of study. This study will review the relevant literature to ensure that the selected tools are appropriate for the background of higher education lecturers in Hebei Province.

Reliability refers to the consistency, stability or repeatability of measurement or research results. In other words, if the same measurement is repeated, it should yield similar results under consistent conditions (Kennedy, 2022). If you get the same repeated results under the same conditions, then the test will be reliable. Generally, a value of Cronbach's alpha greater than 0.7 is considered acceptable, indicating that the measurement tools have good consistency (Schrepp, 2020).

Table 1 Reliability Analysis

Sample Size	Items	Cronbach's alpha
353	48	0.952

# FINDING AND DISCUSSION

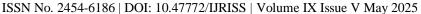
# **Demographic Profile of Respondents**

The table demonstrates the analysis of the demographic factors of the respondents that are related to their personal characteristics such as gender, total years of working, education background. Table 2 indicates the results of the data analysis.

Table 2 Background of the Respondents (n=353)

Variable		Frequency	Percent	
Gender	male	154	43.6	
	female	199	56.4	
Teaching age	5years	104	29.5	
	6-10 years	138	39.1	
	11-20 years	69	19.5	
	Less than 20 years	42	11.9	
Degree	Junior college	65	18.4	
	undergraduate	185	52.4	
	master	103	29.2	

The respondents demographic profile shows that more female lecturers 199 (56.4%) participated in this study compared to male lecturers 154 (43.6%). Among them, the number of lecturers with 6-10 years of teaching experience is in the majority (39.1%). The largest number of lecturers are undergraduate graduates (52.4%).





# Level of Lecturers' Teaching Innovation in Hebei Province

Table 3 Mean and standard deviation of teaching innovation

Variables	Dimension	No.	Mean	SD
Teaching innovation	idea generation	neration B 1		1.270
		B 2	3.67	1.257
		В3	3.65	1.277
		B 4	3.64	1.250
		B 5	3.62	1.272
		B 6	3.69	1.259
	idea promotion	B 7	3.70	1.244
		B 8	3.69	1.267
		B 9	3.69	1.275
		B 10	3.71	1.258
		B 11	3.71	1.213
		B 12	3.70	1.266
	work commitment	B 13	3.74	1.255
		B 14	3.77	1.241
		B 15	3.73	1.240
		B 16	3.72	1.213
		B 17	3.70	1.197
		B 18	3.66	1.296
	idea realization	B 19	3.75	1.205
		B 20	3.72	1.226
		B 21	3.74	1.185
		B 22	3.66	1.271
		B 23	3.70	1.277
		B 24	3.77	1.244

Table 3 Mean and standard deviation of teaching innovation. It presents statistical data on various dimensions of teaching innovation, such as idea generation, idea promotion, work commitment, and idea realization, with specific numbered categories (B1 to B24) and their corresponding mean and standard deviation values. The means range from 3.58 to 3.77, indicating a generally positive level of teaching innovation among the lecturers in Hebei Province. The standard deviations suggest a moderate spread in the responses. This data is essential for understanding the current state of teaching innovation and for identifying areas for further development and support.

The level of lecturers' teaching innovation in Hebei Province appears to be actively promoted and recognized through various initiatives. For instance, the Third Hebei Province Teaching Innovation Contest for College Teachers is an event that showcases the innovative teaching practices of lecturers. This teacher teaching innovation competition is aimed at promoting teaching innovation and cultivating first-class talents, highlighting the integration and innovative development of information technology and higher education teaching. The establishment of innovation centers and the emphasis on high-level technological self-reliance and self-improvement also contribute to a supportive environment for teaching innovation. These efforts reflect a commitment to enhancing the quality of education through innovative teaching methods, which is essential for meeting the challenges of the 21st century and preparing students with the skills and knowledge they need to succeed.

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume IX Issue V May 2025



# **CONCLUSION**

This study helps to build a body of knowledge about educational practice and teaching innovation. The results of this study suggest that teachers' innovative teaching practices have a wider impact on promoting teaching quality in academic institutions in Hebei Province, China.

We should pay attention to cross-cultural research, conduct similar studies in different cultural backgrounds, and compare the enthusiasm of university lecturers in teaching innovation under different education systems. Conduct in-depth case studies within specific academic institutions in Hebei Province to explore the factors that influence the teaching innovation background of lecturers. This will provide rich, context-specific insights. Second, we need longitudinal studies. The research could also be expanded in the future to include other education roles, such as department heads, principals and administrators, to understand their impact on teaching innovation.

This study probes into the innovative practice ability of university lecturers in Hebei Province. Data is collected from lecturers through quantitative analysis of surveys or questionnaires to assess their involvement in teaching innovation. The results show that the lecturers have strong innovation ability. The global implications of this study highlight the critical role of instructor innovation in promoting educational development.

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