

RELATIONSHIP BETWEEN TRANSFORMATIONAL LEADERSHIP
OF ADMINISTRATORS AND TEACHING INNOVATION PERFORMANCE OF TEACHERS
IN INNER MONGOLIA MEDICAL UNIVERSITY UNDER INNER MONGOLIA

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ABSTRACT

The research objective were: (1) to study transformational leadership of administrators in InnerMongolia Medical University; (2) to study the teaching innovation performance of teachers in InnerMongolia Medical University; and (3) to study the relationship between transformational leadership of administrators and teaching performance of teachers innovation performance in InnerMongolia Medical University.

This research was a survey research method. The population consisted of 500 teachers in InnerMongolia Medical University. Sample size was determining as Krejcie and Morgan's table, obtained via simple random sampling techniques. The sample comprised of 217 teachers. The instrument for data collection was a 5-point rating scale questionnaire. The statistic for data analysis were frequency, percentage, mean, Standard Deviation and Pearson Correlation Coefficient.

The results were found that: (1) transformational leadership of administrators in InnerMongolia Medical University, overall was at high level; (2) teaching innovation performance of teachers in InnerMongolia Medical University, overall was at high level; and (3) the relationship between transformational leadership of administrators and teaching

innovation performance of teachers in InnerMongolia Medical University was positive correlation with statistically significant at the .01 level.

Keywords: Transformational Leadership, Teaching Innovation Performance, InnerMongolia Medical University, InnerMongolia

1. Background and significance of research

Inner Mongolia Medical University (IMMU) in China's Inner Mongolia region serves as a pivotal institution for this research, given its significant role in advancing medical education and healthcare services. Established with a mission to enhance medical knowledge and health care, IMMU has developed a reputation for academic excellence and innovation in medical training. The university's comprehensive approach to education, combining theoretical knowledge with practical skills, makes it an exemplary model for studying the impact of leadership on educational practices.

The significance of this research lies in understanding how transformational leadership within such an institution can influence and drive teaching innovation. As medical education faces rapid advancements in technology and methodology, IMMU's adaptation to these changes is crucial. The leadership styles of administrators at IMMU, particularly their ability to inspire, motivate, and foster innovative teaching practices, are key factors in preparing future healthcare professionals to meet the evolving demands of the healthcare sector.

Moreover, the diverse cultural and educational context of Inner Mongolia adds another layer of complexity to this study. How transformational leadership is implemented and received in this unique setting, and its effectiveness in promoting innovative teaching methods, is of great importance. Insights gained from this research can offer valuable implications for educational leadership and policy, particularly in regions undergoing rapid development and change.

In summary, the research at IMMU not only aims to shed light on the dynamics of leadership and innovation in medical education but also seeks to contribute to the broader discourse on how educational institutions can effectively respond to the challenges and opportunities presented by the rapidly evolving landscape of healthcare and medical technology. This research, therefore, holds significant implications for educational leaders, policymakers, and practitioners in the field of medical education and beyond.

2. Research Objectives

1. To study the transformational leadership of administrators in Inner Mongolia Medical University.
2. To study the teaching innovation performance of teachers in Inner Mongolia Medical University.
3. To study the relationship between transformational leadership and teachers' performance of teaching innovation performance in Inner Mongolia Medical University.

3. Research Hypothesis

Transformational leadership of administrators was positive related to teaching innovation performance of teachers in Inner Mongolia Medical University.

4. Research Scope

Scope of Content to Study

This research focuses on analyzing the transformational leadership of administrators in InnerMongolia Medical University and the pteaching innovation performance of teachers.The research content will cover the following aspects:

- (1) Theoretical basis and practical application of transformational leadership.
- (2) Various dimensions of teachers' teaching innovation performance , including teaching methods, curriculum design, student evaluation, etc.
- (3) The relationship n between transformational leadership of administrators and teaching innovation performance of teachers in Inner Mongolia Medical University.

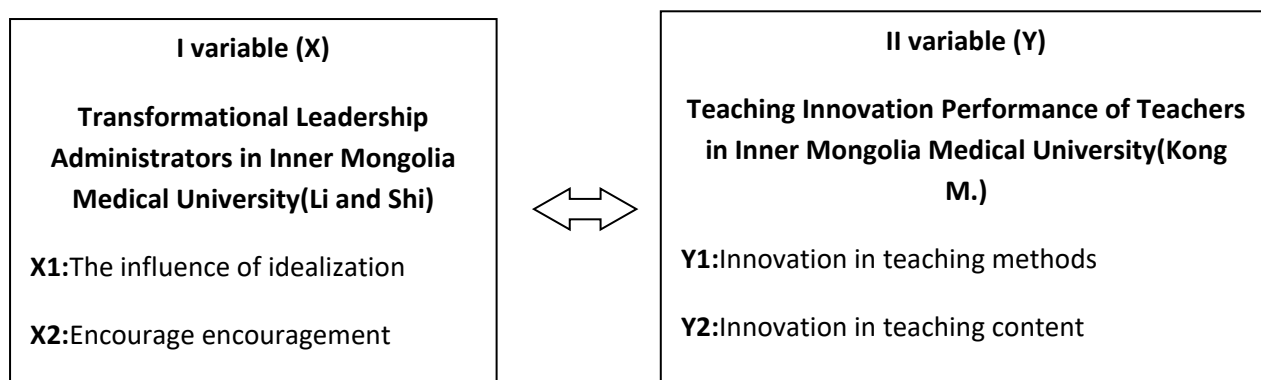
Scope of Population/Sample

Population: In this research, educational administrators and front-line teachers in Inner Mongolia Medical University were selected as research participants out of the need to explore the relationship between transformational leaders and teachers' teaching innovation performance. The total number was 500 people.

Sample: The research sample size was determined from Krejcie and Morgan's table with simple random sampling techniqe., the total number was 217 people. Included education administrators and teachers in Inner Mongolia Medical University.

5. Research Framework: The research framework was shown in figure 1

Figure 1. Research Framework



6. Expected Benefits

(1) Apply the research findings to enhance the educational administration in Inner Mongolia Medical University for higher efficiency. By understanding the dynamics between transformational leadership of administrators and teaching innovation performance, local educational administrators can more effectively develop and implement educational policies.

(2) Offer educators and administrators in Inner Mongolia Medical University the opportunity to develop more systematic approaches to work and administration. The study encourages innovation in school management and teaching methods, improving the efficiency and quality of work for teachers and administrators.

(3) Enable Inner Mongolia Medical University to formulate long-term development plans based on this research. Insights from the study will help educational institutions in the school plan their future direction more scientifically, ensuring continuous improvement in educational quality and teaching innovation performance to meet the demands of modern education.

7. Research Design

This research was a survey design. The research procedure consisted of 4 steps; (1) to study literature and related research; (2) creation of research instrument; (3) data collection; and (4) data analysis.

8. Population and Sample

The population was 500 education administrators and teachers in Inner Mongolia Medical University. The sample was 217 education administrators and teachers in Inner Mongolia Medical University.

9. Research Instrument

The instruments used in this research were a 5-point rating scale questionnaire. The researcher has divided the instruments to 3 parts as Part 1: The questionnaire about the general information of the respondents, Part 2: The Transformational Leadership of Administrators. And Part 3: Teaching Innovation Performance

10. Development Instruments

The research instruments were efficient and consistent with the conceptual framework of the research, the researcher has created an instrument for data collection as: (1) Study the details of how to create from the concept. Theories and research papers related to the relationship between Encourage and support study documents, rules, forms, and methods for constructing a questionnaire-type instrument. (2) Take the questionnaire that was created successfully. To propose the advisors to make sure the accuracy is more appropriate. (3) Revised questionnaire by presented to 3 experts. Consider checking the content validity by using the consistency index between the questions in the questionnaire as: +1 = Make sure the question is consistent with the definition of the given term, 0 = Not sure if the question matches the definition of the given, and -1 = The question does not correspond to the given definition. (4) Record each item, combine the views of the three experts individually and replace them with the IOC (Objective Consistency Index) formula. If the questionnaire is between 0.67-1.00 (Whalley, M, 2014: 106), (5) The instrument was try-out on a non-sample of 30 people to determine the reliability using Cronbach's alpha coefficient formula (Cronbach, 1990) using a packaged program which must have a level of the confidence value of 0.89 with considered.

Data Collections The researcher has conducted data collection, in the following:

1. Request permission letter to collect data from the Faculty of Education Bangkokthonburi University to the teachers who participated in the survey.

2. The Researcher sent via online questionnaires to the samples. For example, Questionnaire Star, Questionnaire Network, etc.

3. Check the data and data collected by the website for completeness and use it for the next step to collect research data.

Data Analysis The data were analyzed by statistical software packages:

(1) Analysis of the general data using frequency distribution statistics, and percentage.

(2) Analyze by mean and standard deviation, and set criteria for interpreting the results as follows: 4.50-5.00 means the highest level of practice, 3.50-4.49 means the high level, 2.50-3.49 means the moderate level of practice, 1.50-2.49 means the low level, and 1.00-1.49 means the lowest level.

(3) Determining the relationship between transformational leadership of administrators and teaching innovation performance of teachers through Pearson correlation analysis.

Statistics used to analyze data

This research used statistics as: Frequency, Percentage, Mean, Standard Deviation, and Pearson correlation coefficient.

Data Analysis Results: (1) The results of Transformational Leadership Administrators in Inner Mongolia Medical University in table 1

Table 1: The mean, Standard Deviation and level of Administrators leadership in Inner Mongolia Medical University.

Transformational Leadership	\bar{X}	S.D.	Level
The influence of idealization	4.00	0.55	High
Encourage encouragement	3.99	0.58	High
The stimulation of knowledge	4.00	0.55	High
Personalized understanding	3.98	0.55	High
overall	4.00	0.56	High

From Table 1: found that the leadership of administrators in Inner Mongolia Medical University, overall and aspects were at high level ($\bar{X} = 4.00$).

Table 2 : The mean,Standard Deviation and level of Teaching Innovation Performance of Teachers in Inner Mongolia Medical University.

Teaching Innovation Performance	\bar{X}	S.D.	Level
Innovation in teaching methods	4.01	0.57	High
Innovation in teaching content	4.01	0.57	High
Innovation in teaching technology	4.01	0.57	High
Innovation in teaching evaluation	3.99	0.56	High
overall	4.01	0.57	High

From Table 2: was found that the Teaching Innovation Performance of Teachers, overall and aspects were at high level ($\bar{X} = 4.01$).

Table 3: Show the results analyze correlation between Transformational Leadership of Administrators and Teaching Innovation Performance of Teachers in Inner Mongolia Medical University.

X&Y	X1	X2	X3	X4	X	Y
Y1	.223**	.261**	.205**	.324**	.445**	.334**
Y2	.066	.061	.144	.342**	.484**	.177*
Y3	.338**	.305**	.350**	.320**	.321**	.573**
Y4	.228**	.161*	.254**	.255**	.311**	.469**
X	.630**	.524**	.640**	.599**	.383**	.584**
Y	.400**	.351**	.429**	.493**	.517**	.571**

**Statistical significance level at the .01 level

*Statistical significance level at the 0.05 level

From Table 3: shows that the transformational leadership approach of Inner Mongolia Medical University was positive correlation with statistically significant at the .01 level.

11. Discussion

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

(1) The data reveals that administrators at IMMU consistently, overall and aspect were at high levels of transformational leadership qualities including idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. The findings align with literature suggesting transformational leadership positively influences organizational outcomes, such as job satisfaction and performance improvements in educational settings. *Consistent with Andriani, S., Kesumawati, N., & Kristiawan, M. (2018). The influence of the transformational leadership and work motivation on teachers performance.*

(2) Results indicate that teachers at IMMU demonstrate overall and aspect were at high levels of teaching innovation performance, encompassing the use of new teaching methods, curriculum development, and integration of technology in the classroom. *Consistent with Chen, L., & Zheng, Y.W. (2016). The impact of transformational leadership and organizational innovation climate on new product development performance* and enhanced student learning outcomes. effectively encourages and facilitates innovative practices, crucial for preparing future healthcare professionals to meet the demands of a dynamic healthcare industry.

(3) The positive correlation between the transformational leadership of administrators and the teaching innovation performance of teachers, which statistically significant. This indicates that the leadership style of administrators at IMMU can be directly linked to the innovative teaching behaviors of the faculty. *Consistent with Song, Z.Y. (2022). Research on the relationship between transformational leadership and employee innovation behavior,* enhancing as a leader in innovative medical education was importance of leadership in achieving strategic educational goals and adapting to changes in healthcare education.

12. Recommendations

This study has shed light on the significant impact of transformational leadership on teaching innovation at Inner Mongolia Medical University, highlighting several avenues for further research to deepen our understanding of this dynamic. Future studies should consider longitudinal approaches to track the sustainability and long-term effects of transformational leadership on teaching innovation. Such studies would help distinguish lasting leadership influences from temporary improvements.

Comparative research across different educational institutions or within various departments of the same institution can provide insights into how contextual factors influence the effectiveness of transformational leadership. This would allow for a broader understanding of whether specific leadership traits are universally effective or if their impact varies by academic discipline or cultural setting.

Exploring other leadership models alongside transformational leadership could also enrich our understanding of effective educational leadership. Comparisons with styles such as transactional or participative leadership might reveal complementary strategies that equally or more effectively promote innovation in teaching.

Investigating the mechanisms and mediators that enhance or inhibit the relationship between transformational leadership and innovation is another crucial area for further research. This includes the role of organizational support, resource allocation, policy frameworks, and the psychological empowerment of faculty, all of which could significantly impact the effectiveness of leadership practices.

Additionally, assessing the direct impact of innovative teaching practices, driven by transformational leadership, on student learning outcomes would provide valuable insights into the educational effectiveness of these innovations. Such studies would not only validate the teaching approaches but also highlight their practical benefits in enhancing student success. Collectively, these research areas would not only extend the existing literature but also provide practical insights for educational leaders aiming to foster a culture of innovation and excellence in teaching. These recommendations aim to encourage a continuous cycle of improvement and inquiry into the relationship between leadership and educational innovation.

13. Proposals for next research

To build upon the relationship between transformational leadership and teaching innovation at Inner Mongolia Medical University, several strategic initiatives are recommended. These initiatives are designed to cultivate an environment that continually supports and advances innovative teaching practices.

First, enhancing the skills of educational administrators through targeted leadership development programs is crucial. These programs should focus on deepening understanding of transformational leadership competencies, such as fostering intellectual stimulation,

providing personalized support, and articulating a compelling vision. Strengthening these areas will enable leaders to more effectively inspire and facilitate innovation within their faculties. In addition to leadership development, the university should bolster its support structures for innovation. This could involve setting up a system of incentives for innovative teaching methods, including seed funding for pilot projects, technology grants for classroom integration, and recognition programs that highlight and reward successful innovations. Such support not only nurtures initial efforts but also encourages the scaling of effective practices across the institution.

Creating collaborative platforms is another critical step. These platforms would allow faculty to exchange ideas and resources, fostering an interdisciplinary approach that can lead to richer educational experiences. By facilitating dialogue and cooperation across departments, the university can enhance the diffusion of innovative teaching strategies, thus raising the overall educational quality.

Implementing continuous feedback mechanisms is also essential. Gathering insights from faculty and students about the effectiveness of teaching practices can guide future innovations and adjustments. This ongoing feedback loop is vital for ensuring that innovations meet actual teaching and learning needs and for refining approaches based on direct stakeholder input.

By taking these steps, Inner Mongolia Medical University can enhance its educational offerings and maintain its leadership in academic innovation, ensuring that it continues to meet the changing demands of higher education and prepares students effectively for their future careers.

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