

## Supervision and Management of Teaching Quality of College teachers in Hebei University of Engineering

Wenyan Li, Ramir S. Austria

College of Teacher Education, University of the Cordilleras, Baguio City, Benguet, Philippines 2600

\*Corresponding author: **Wenyan Li**

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**Abstract:** *This study extensively examined the monitoring and management of teaching quality in the dynamic higher education context at Hebei University of Engineering. The investigation, based on qualitative interviews and thematic analysis, revealed the underlying strategies and challenges in the educational environment. The study identified four effective strategies: optimizing classroom content, fostering student leadership in learning activities, providing guidance on the quality of students' education, and developing teachers. These strategies are closely aligned with existing literature and emphasize a holistic approach to improving the quality of teaching and learning. Three main challenges are also highlighted: resistance to change, inadequacies in the system of evaluation of teaching quality, and lack of incentives for teachers. These challenges coincide with previous research, emphasizing their key role as barriers to effective teaching quality management. To address these issues, we offer targeted recommendations for Hebei University of Engineering. These recommendations include targeted professional development, robust evaluation systems, meaningful incentives, student-centered approaches, mentorship programs, technology integration, and adept change management. The implementation of these recommendations is expected to foster a culture of teaching excellence and ultimately improve the educational journey for both educators and students. In addition, the results of the quantitative analysis presented in the table reinforce the identified strategies and challenges and provide further insights to guide schools in achieving optimal instructional quality. Specifically, a focus on improving content adaptability, pedagogical methods, and instructional efficiencies is integral to enhancing the overall educational experience at Hebei University of Engineering.*

**Key words:** *supervision, management, teaching quality, college teachers, best practices*

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### I. Introduction

In the field of higher education, the quality of teaching provided by higher education educators is of great significance (Song, 2017). Teaching quality goes beyond imparting

knowledge and includes a range of pedagogical skills, communication skills and assessment methods that together shape students' learning experiences (Xu, 2016). Central to this study is the important interplay between teaching quality and its monitoring and management within Hebei University of Engineering.

Teaching quality goes beyond traditional teaching and aims to develop students' critical thinking, creativity and enthusiasm for lifelong learning (Xu, 2017). The commitment to achieving teaching excellence is consistent with Hebei University of Engineering's mission to produce academically elite and well-rounded graduates. As the field of education continues to evolve, so do the expectations of educators (Yang, 2016). The importance of improving the quality of teaching and learning is more prominent than ever, which requires innovative teaching methods and continuous professional development.

For Hebei University of Engineering, as for other academic institutions, faculty quality is the cornerstone of success. The rationale for this study lies in the need to ensure that educators in higher education receive the necessary support to continually improve the quality of their teaching (Hu, 2020; Fang, 2017; Chen, 2020). By identifying best practices and challenges, this study addresses the urgent need to strengthen the teaching and learning ecosystem within universities.

This study has great potential to contribute in several ways. By revealing best practices, it will provide actionable insights for improving the monitoring and management of teaching quality. Equally importantly, it focuses on challenges; this provides a realistic perspective on the barriers to effective teaching quality management. By directly confronting these challenges, this study creates an environment in which innovation in teaching and learning can flourish.

The core objective of this study is twofold. First, it aims to distill the best practices currently employed in monitoring and managing teaching quality at Hebei University of Engineering. The exploration of successful strategies is intended to provide practical recommendations for educators and administrators. Second, this study endeavors to understand and articulate the challenges faced in maintaining high standards of teaching quality. By identifying these barriers, this study contributes to the development of targeted interventions that will drive improvements in the management of teaching quality at Hebei University of Engineering.

## 2. Literature Review

There is a noticeable upsurge of interest in the field of higher education in improving the quality of supervision and management of teaching and learning as evidenced by various scholarly works. Nurabadi et al. (2019) proposed the model of 'walk-around management', an informal approach to supervision that emphasizes the improvement of the quality of learning. This approach aligns with a broader perspective of improving the quality of teaching and learning through active participation and support.

In emphasizing the impact of technological advances on the management of teaching quality, Zhang and Zhao (2022) delved into the application of the 'Internet Plus' perspective in

building a teaching supervision system for applied undergraduate institutions. This emphasized the importance of adapting to modern teaching trends.

Chen and Tang (2012) explored teaching supervision in local higher vocational institutions. Their study emphasized the adoption of targeted strategies to address the uniqueness of vocational education, highlighting the need to improve the quality of teaching and learning according to local conditions.

In the area of secondary education, Ubogu (2020) advocated for instructional supervision as an effective strategy for improving teacher quality. This view holds that effective supervision plays a pivotal role not only in refining teaching skills but also in developing a culture of continuous improvement among educators.

Chen (2018) further explored the role of instructional supervision in promoting teacher professional development. The study explored the role of principals' involvement in the supervision process and teachers' engagement in knowledge management behaviors as a catalyst for improving the quality of teaching and learning.

Feng and Sass (2017) examined the interconnections between teacher quality, mobility, and instructional quality, revealing the potential of strategic supervision and management approaches in mitigating the challenges associated with teacher mobility.

Goos and Salomons (2017) delved into the measurement of teaching quality in higher education, recognizing the challenges posed by potential selection bias in course evaluation. They emphasize the importance of adopting a holistic approach to evaluation that captures the quality of teaching and learning as a whole.

Zhang (2016) scrutinized the field of teaching supervision in local universities, revealing the intricate dynamics involved and contributing to the ongoing dialogue on the different dimensions of teaching quality improvement.

Finally, Kou (2021) examined the role of instructional supervision in promoting the professional development of college and university faculty, revealing the mechanisms by which supervision catalyzes educator growth and professional development.

In summary, these collective studies emphasize the multidimensional nature of teaching quality enhancement, suggesting that targeted approaches, technology integration, and comprehensive evaluation methods can work together to promote a culture of teaching excellence in higher education.

### **3. Method**

In investigating the monitoring and management of the quality of teaching and learning at Hebei University of Engineering, this study used a mixed methodology of surveys, interviews and thematic analysis. This approach helped to gain insights into the perceptions, experiences and insights of key stakeholders such as educators, administrators and related staff.

Data collection relied on interviews and questionnaires as the main means by which key informants shared their diverse perspectives on monitoring and managing the quality of teaching

and learning. Stratified random sampling techniques were used to ensure full representation from different sectors, experience levels and roles to provide a holistic understanding of the subject. Through the use of open-ended questions, key informants were encouraged to openly express their views, challenges and recommendations for improving the quality of teaching and learning.

#### 4. Result and Discussion

The following presents the result and discussion of the findings. The findings of this study revealed four prominent themes that encapsulate the extent of supervision and management of teaching quality of teachers in Hebei University of Engineering best practices in the supervision and management of teaching quality at Hebei University of Engineering. These themes shed light on crucial aspects that contribute to fostering a culture of teaching excellence within the institution.

**Table 1: Extent of Supervision and Management of Teaching Quality of Teachers in Hebei University of Engineering along Content of Courses**

Content of courses	Weighted mean
The adaptability of teaching content to student needs	3.31
Teaching intersections and inclusiveness of subject knowledge	3.02
The adaptability of teaching methods and curriculum content	2.98
Teaching cutting-edge and innovative subject knowledge	2.89
The relevance of teaching content with production and social practice	2.56
Overall	2.95

In Table 1, the overall weighted mean for the extent of supervision and management of teaching quality of teachers in Hebei University of Engineering along the content of courses is 2.95. This average level implies a moderate degree of supervision and management concerning various aspects of course content. The weighted mean of 3.31 for the adaptability of teaching content to student needs suggests that efforts have been made to align the teaching content with the requirements and preferences of the students, reflecting a positive aspect of teaching quality. Additionally, the weighted mean of 3.02 for teaching intersections and inclusiveness of subject knowledge indicates ongoing efforts to integrate multiple subjects and ensure inclusiveness in teaching, aligning with the principles highlighted by Xu B. (2016) regarding the necessity of teaching supervision in universities, particularly concerning subject knowledge. However, the weighted mean of 2.56 for the relevance of teaching content to production and social practice signifies a need for greater alignment of teaching content with real-world applications, as discussed by Zhang L. (2016). Overall, the findings suggest a moderate level of supervision and

management in teaching quality, with opportunities for enhancement in specific aspects of course content, such as relevance to practical contexts and incorporation of cutting-edge knowledge, as mentioned by Yang (2016). These aspects are crucial for improving the overall teaching quality at Hebei University of Engineering and should be targeted for further development, as emphasized in the research by Ubogu (2020).

**Table 2: Extent of Supervision and Management of Teaching Quality of Teachers in Hebei University of Engineering along Teaching method**

Teaching method	Weighted mean
The teacher's teaching is organized, systematic and logical	3.27
Teachers grasp and explain the key and difficult points of the textbook	3.18
The stimulation of teachers' interest in students' learning	2.94
Teachers' rational use of teaching AIDS and tools	2.87
Teachers' reflection awareness of teaching problems and improvement measures	2.59
Overall	2.97

In Table 2, the overall weighted mean for the extent of supervision and management of teaching quality of teachers in Hebei University of Engineering along teaching methods is 2.97. This value suggests a moderate level of supervision and management in relation to various aspects of teaching methods. While the overall mean is approaching the upper end of the moderate range, it indicates that there are areas with notable strengths, as well as opportunities for improvement.

The moderate level of supervision and management is reflective of a balanced approach to teaching methods within the university. Teachers are seen to possess a degree of organization, employing systematic and logical approaches in their teaching, which aligns with principles of effective instruction highlighted in educational literature. Moreover, their focus on key and difficult points of the textbook indicates a concerted effort to provide a strong foundation for student learning.

However, there are areas that could benefit from enhancement. For instance, stimulating teachers' interest in students' learning and ensuring the rational use of teaching aids and tools could be areas of focus for further development. Additionally, teachers' reflection awareness of teaching problems and improvement measures may require attention and strategies to promote a more robust reflective practice.

In light of these findings, targeted interventions and professional development opportunities could be considered to augment teaching practices and methods. Encouraging

innovative engagement models and providing guidance for effective use of teaching aids and tools can further contribute to an enriched teaching environment. Moreover, fostering a culture of continuous reflection and improvement among educators can lead to a more adaptive and effective teaching approach.

In summary, the moderate overall weighted mean underscores a balanced assessment of teaching methods, recognizing strengths while also identifying specific areas where targeted improvements can be made. Addressing these areas can lead to an overall enhancement of the teaching quality at Hebei University of Engineering.

**Table 3: Extent of Supervision and Management of Teaching Quality of Teachers in Hebei University of Engineering along Teaching efficiency**

Teaching efficiency	Weighted mean
Students' acquisition of basic professional knowledge and general knowledge	3.26
Students' awareness and ability to analyze and solve practical problems	2.90
The improvement of students' political thought and moral quality	2.85
The mastery of students' learning methods and the improvement of their learning ability	2.77
The effect of teaching activities on students' future development	2.64
Overall	2.88

In Table 3, the overall weighted mean for the extent of supervision and management of teaching quality of teachers in Hebei University of Engineering along teaching efficiency is 2.88. This mean suggests a moderate level of supervision and management in various aspects of teaching efficiency. While the overall mean falls within the moderate range, it indicates a balance between the strengths and areas for improvement in teaching efficiency.

The moderate level of supervision and management in teaching efficiency signifies that the university has been successful in facilitating students' acquisition of basic professional and general knowledge. However, there are areas that present opportunities for further enhancement. Notably, the mean for students' awareness and ability to analyze and solve practical problems indicates a potential area for improvement, highlighting the need for strategies to enhance problem-solving skills among students. Additionally, the mean for the improvement of students' political thought and moral quality indicates a scope for integrating ethical and moral development within teaching strategies. Likewise, the mean for the mastery of students' learning methods and improvement of their learning ability emphasizes the importance of strengthening learning techniques. Furthermore, the mean for the effect of teaching activities on students' future development indicates an area for aligning teaching methods with students' long-term

growth and development.

In summary, the moderate overall weighted mean underscores a balanced assessment of teaching efficiency, acknowledging strengths in knowledge acquisition while identifying specific areas for targeted improvements. Addressing these aspects can lead to an overall enhancement of the teaching quality at Hebei University of Engineering, aligning with best practices in educational pedagogy and supervision. Targeted strategies focusing on problem-solving skills, ethical development, learning techniques, and alignment with students' future development are vital for improving teaching efficiency and, consequently, the overall quality of teaching at the institution.

Overall, the presented tables collectively shed light on the supervision and management of teaching quality at Hebei University of Engineering, spanning various dimensions. In Table 1, the evaluation of teaching quality in terms of content of courses highlights a moderate level of supervision. While the content aligns reasonably well with student needs and subject inclusiveness, there's a notable opportunity for improvement in relevance to real-world applications. Table 2 explores teaching methods, showcasing a balanced approach overall. The emphasis on organized teaching and key textbook points is positive, but there's room to enhance engagement and the effective use of teaching aids. Lastly, Table 3 delves into teaching efficiency, indicating a balanced approach with a particular strength in students' knowledge acquisition. However, there's a clear need to further develop problem-solving skills, ethical development, learning techniques, and alignment with students' long-term growth. Collectively, these insights emphasize the importance of tailored strategies and targeted enhancements to optimize teaching quality across different domains, ultimately contributing to a well-rounded and effective educational experience for students at Hebei University of Engineering.

**Table 4: Best practices of in the supervision and management of teaching quality at Hebei University of Engineering**

<b>Themes</b>
Well-designed classroom content
Student leadership in teaching and learning activities
Guidance for the development of students' quality education
Cultivation and construction of teachers

**Well-designed classroom content**

Educators underscored the significance of organizing course materials to be captivating, pertinent, and in harmony with learning goals. This perspective aligns with the discoveries of Zhang and Zhao (2022), who advocated for structuring instructional content through an "Internet+" lens. Merging technology with contemporary pedagogical methods can result in

educational material that resonates with present-day learners. Moreover, the stress on thoughtfully crafted instructional content aligns with Ubogu's (2020) argument that instructional supervision enhances teacher quality by empowering educators to design and deliver impactful curricula.

### **Student leadership in teaching and learning activities**

The concept of student leadership in teaching and learning activities highlighted the significance of involving students in the learning process. Participants stressed the importance of promoting active engagement of students, facilitating group discussions, and encouraging student-led projects. This approach aligns with Nurabadi et al.'s (2019) utilization of the 'walk-around management' model for informal supervision. This model underscores the interaction between educators and students, fostering an environment where students actively contribute to their educational experience. The present findings affirm the notion that empowering students to take the lead cultivates critical thinking abilities and instills a stronger sense of ownership in their learning endeavors.

### **Guidance for the development of students' quality education**

Guidance for enhancing students' educational quality revolves around educators serving as mentors and guides. The significance of offering tailored support, career advice, and personal growth opportunities was underscored by key informants. This aligns with Chen and Tang's (2012) exploration of instructional supervision's role in vocational institutions. Such mentorship enriches instruction quality by acknowledging students' diverse needs and customizing the educational journey to foster comprehensive student development. The present results corroborate that students excel academically and personally when educators provide well-rounded guidance.

### **Cultivation and construction of teachers**

Teacher preparation and development underscored the crucial role of continuous learning opportunities and mentorship for educators. Key informants stressed the importance of ongoing education, collaborative engagement with peers, and mentorship initiatives. This aligns with Chen's (2018) investigation into how instructional supervision can significantly impact the professional growth of teachers. Moreover, these findings resonate with Feng and Sass (2017), who highlighted the interconnectedness of teacher quality and mobility. Effective supervision and mentoring play pivotal roles in retaining experienced educators and cultivating a dynamic teaching workforce.

In summary, the identified themes collectively embody best practices that significantly contribute to the effective supervision and management of teaching quality at Hebei University of Engineering. The alignment of these themes with existing literature underscores the broad applicability of these practices across diverse educational contexts.



The following discussion is about the problems encountered in the supervision and management of teaching quality of teachers.

**Table 5: Problems Encountered in The Supervision and Management of Teaching Quality of Teachers**

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Themes
Resistance to change
Inadequate teaching quality evaluation system
Inadequate incentives for teachers

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**Resistance to change**

The concept of resistance to change addresses the issues that arise when educators hesitate to embrace novel teaching methods and technologies. This reluctance impedes the assimilation of innovative teaching approaches and restricts the adoption of effective management practices for instructional quality. This challenge aligns with Nurabadi et al.'s (2019) "walk-around management" model, which underscores the necessity for educators to be receptive to change. The study's findings underscore the significance of addressing resistance, as it acts as a barrier to the implementation of optimal practices.

**Inadequate teaching quality evaluation system**

The issue of insufficient systems for evaluating teaching and learning quality underscores the absence of strong methods to assess and offer constructive feedback on the quality of instruction and learning. This obstacle obstructs the precise measurement of teaching efficacy and hampers institutions' capacity to pinpoint areas for enhancement. This aligns with the suggestions of Chen and Tang (2012) and Goos and Salomons (2017), stressing the necessity of a robust assessment of teaching quality to elevate teaching methodologies. This theme underscores the urgency for an encompassing evaluation framework that can furnish educators with insightful feedback.

**Inadequate incentives for teachers**

The theme of insufficient incentives for educators underscores the issue where teachers do not receive adequate recognition for their exceptional teaching practices and efforts in professional development. This obstacle directly impacts their drive to excel in teaching and invest in their own growth. The significance of incentives is also acknowledged in the research by Ubogu (2020) and Kou (2021), stressing the role of acknowledgment and rewards in enhancing teacher quality. This theme underscores the correlation between incentives, motivation, and the overall enhancement of teaching and learning quality.

In summary, the highlighted challenges shed light on the hurdles that hinder effective

management of teaching quality at Hebei University of Engineering. These challenges are not unique to the university and resonate with the existing body of literature, emphasizing their prevalence in educational environments. Addressing these obstacles is crucial in establishing an environment conducive to the implementation of best practices and the continuous enhancement of teaching quality.

### **Conclusion and Recommendations**

This study's comprehensive investigation into the supervision and management of teaching quality at Hebei University of Engineering, enriched by the findings has illuminated vital facets of the educational landscape. The amalgamation of findings from qualitative interviews and quantitative analysis has unearthed essential best practices and challenges. The identified strategies, encompassing well-designed course content, effective teaching methods, and efficient teaching efficiency, align with established literature and present a holistic approach to fostering teaching excellence. Conversely, the recognized challenges of resistance to change, inadequacies in evaluation systems, and a lack of incentives are consistent with prior research, underlining the necessity for targeted intervention.

Based on the comprehensive findings, tailored recommendations are proposed to Hebei University of Engineering to elevate teaching quality. The integration of these recommendations, designed to address the identified challenges and leverage the identified best practices, will play a pivotal role in enhancing the teaching quality at the university.

### **Recommendations:**

#### **1. Tailored Professional Development Programs:**

Design and offer professional development programs that target the specific challenges of resistance to change and aim to promote innovative teaching methods. These programs should be tailored to meet the diverse needs of faculty, enabling them to adapt to evolving educational landscapes.

#### **2. Robust Evaluation Mechanisms:**

Establish a robust evaluation system that provides constructive feedback to educators. Encourage a culture of continuous improvement by using evaluation outcomes to enhance teaching methods and strategies.

#### **3. Meaningful Incentives:**

Introduce a system of meaningful incentives to recognize and reward exemplary teaching practices. Incentives could range from awards, grants, or promotions to encourage educators to strive for excellence in their teaching endeavors.

#### **4. Student-Centered Strategies:**

Foster student leadership and engagement by involving them in the educational process. Encourage feedback mechanisms and platforms for students to share their insights on teaching

methods, creating a more inclusive and responsive teaching environment.

**5. Strengthened Mentorship Programs:**

Enhance mentorship programs to provide guidance and support to educators, particularly in areas of teaching content adaptability, effective teaching methods, and teaching efficiency. Mentorship can significantly contribute to professional growth and teaching effectiveness.

**6. Integration of Technology:**

Embrace and effectively integrate technology into teaching methodologies, aligning with the contemporary needs of the digital age. Utilize various educational technologies to enhance teaching efficiency and engage students more effectively.

**7. Effective Change Management Strategies:**

Employ effective change management strategies to address resistance to change and ensure smooth transitions in the implementation of new teaching methods, tools, and practices. Communication, stakeholder involvement, and a phased approach to change can help navigate potential challenges.

By incorporating these recommendations into the educational framework, Hebei University of Engineering can forge a path towards a vibrant teaching ecosystem, elevating the teaching quality and enriching the learning experiences for both educators and students.

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