



Research on the Willingness Analysis and Incentive Mechanisms of Digital Transformation among Vocational College Teachers

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Abstract. This study aims to explore the willingness of vocational college teachers towards digital transformation and its influencing factors, as well as to analyze the role of incentive mechanisms in enhancing teachers' willingness for digital transformation. Through questionnaire surveys and case analyses, the study finds that vocational college teachers generally hold a positive attitude towards digital transformation, with their willingness significantly influenced by personal factors, organizational factors, and external environmental factors. Further empirical research indicates that implementing effective incentive mechanisms can significantly enhance teachers' active participation in digital teaching. Based on the research findings, this paper proposes recommendations for vocational colleges: first, to strengthen digital training and support for teachers, creating favorable conditions for improving teachers' digital literacy; second, to develop diverse incentive policies, including material rewards and career development opportunities, to enhance teachers' willingness for digital transformation. Future research could expand the sample scope, conduct long-term follow-up studies, and combine quantitative and qualitative methods to provide more comprehensive guidance for the digital transformation of vocational colleges.

Keywords: Vocational Colleges; Teachers; Digital Transformation; Incentive Mechanisms

1 INTRODUCTION

In the context of rapid information technology development, global education is undergoing a profound digital transformation. This transformation changes teaching methods and learning styles while revolutionizing the allocation of educational resources, learning environments, and assessment modes.^[1] Educational institutions face new challenges and opportunities in integrating digital technology, especially

vocational colleges, which see digital transformation as key to enhancing educational quality and improving employability.^[2]

Vocational colleges play a crucial role in this process, responsible for cultivating skilled individuals and adapting to economic and social needs.^[3] To meet demands from the current economic structural changes and rapid technological updates, these colleges must enhance teaching flexibility and effectiveness through digital transformation, better serving students' skills training and career development. Therefore, exploring vocational college teachers' willingness for digital transformation has significant implications for promoting reform and development in vocational education.

2 LITERATURE REVIEW

The exploration of teachers' willingness for digital transformation and the various factors influencing this willingness is a multidimensional field of study that encompasses a wide range of disciplines and perspectives.^[4] This complexity arises from the interplay of numerous elements that affect how educators perceive and engage with digital technologies in their teaching practices. Several theoretical frameworks contribute to a better understanding of this intricate phenomenon, highlighting both individual and organizational factors that shape teachers' attitudes and behaviors towards adopting digital technologies.

For instance, individual factors may include personal beliefs about technology, prior experiences with digital tools, and levels of digital literacy, all of which can significantly impact a teacher's readiness to embrace new teaching methods. On the organizational side, factors such as institutional support, availability of resources, and the overall culture within educational institutions play a crucial role in facilitating or hindering the adoption of digital technologies. By examining these frameworks, researchers can gain insights into the motivations and barriers that teachers face in their journey toward digital transformation. This comprehensive approach not only enriches our understanding of the challenges involved but also informs the development of targeted strategies to enhance teachers' willingness and ability to integrate digital tools into their educational practices effectively.^[5]

2.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), developed by Davis in 1989, serves as a foundational theory for examining users' willingness to embrace new technologies.^[6] According to TAM, two primary constructs—"Perceived Usefulness" (PU) and "Perceived Ease of Use" (PEOU)—significantly influence technology acceptance.^[7] In the context of vocational college teachers, if they perceive that digital teaching tools enhance their teaching efficiency and are user-friendly, their likelihood of adopting these technologies increases.

Numerous studies have empirically validated TAM in various educational settings, demonstrating its applicability among teachers.^[8] For instance, research indicated that perceived usefulness significantly impacts teachers' intentions to use new technolo-

gies. However, more recent literature critiques TAM for its simplicity, suggesting that it does not adequately account for external factors like institutional support or social influence. This gap suggests a need for a more nuanced understanding of how different layers of influence—personal, institutional, and contextual—affect technology acceptance among vocational college teachers.

2.2 Change Management Theory

Change Management Theory provides a broader framework for understanding how organizational dynamics influence the implementation of digital transformation. This theory posits that effective change initiatives require consideration of leadership roles, employee engagement, and environmental factors. The emphasis on positive communication and guidance is vital for minimizing resistance to change.^[9]

For vocational college teachers, adopting digital tools is often met with skepticism. Understanding this resistance is crucial for change agents within educational institutions. Studies show that clear communication, training, and support systems can significantly lower resistance and increase the likelihood of successful digital adoption.^[10]

3 ANALYSIS OF THE CURRENT STATUS OF VOCATIONAL COLLEGE TEACHERS' WILLINGNESS FOR DIGITAL TRANSFORMATION

3.1 Quantitative Analysis of Teachers' Digital Transformation Willingness

This research collected valid data from 300 vocational college teachers through a questionnaire survey. According to the analysis of the questionnaire, teachers exhibit a generally positive attitude towards digital transformation, which is reflected in a mean willingness score of 4.2 with a standard deviation of 0.7 on a five-point Likert scale, indicating that most teachers have a favorable attitude toward the adoption of digital teaching tools. Additionally, approximately 70% of the surveyed teachers expressed their willingness to try new digital teaching methods, while only 20% held a certain degree of hesitation. This suggests that vocational college teachers demonstrate strong positivity in the process of digital transformation, as shown in Fig. 1.

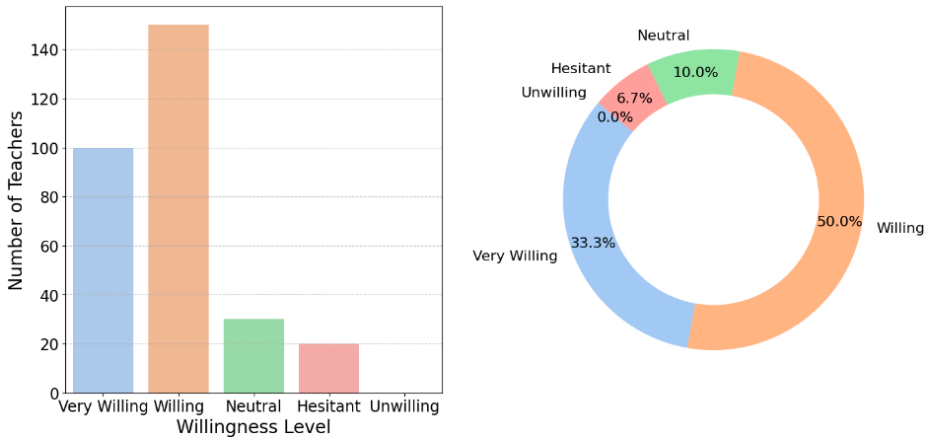


Fig. 1. Distribution of Teachers' Willingness for Digital Transformation

3.2 Analysis of Factors Influencing Teachers' Willingness for Digital Transformation

By analyzing the data collected from the returned questionnaires, we have initially identified several key factors that influence the willingness of vocational college teachers to engage in digital transformation. This analysis has provided valuable insights into the various elements that shape teachers' attitudes and readiness to adopt new technologies in their teaching practices. Among these factors, support policies and training opportunities provided by schools are widely regarded as the primary influences on teachers' willingness to embrace digital transformation. In the survey, approximately 75% of teachers indicated that the relevant training and resource support offered by their institutions are crucial factors that encourage them to attempt to use new technologies. This statistic underscores the importance of institutional backing in fostering a culture of innovation and adaptability among educators. Specifically, teachers generally expect schools to offer more comprehensive training courses focused on the effective use of digital teaching tools. They also hope to see active promotion and support from the management, which can create an environment conducive to experimentation and learning.

Moreover, the impact of the external environment cannot be ignored either. As society places greater emphasis on the digitalization of education, the overall trends in the industry have significantly driven educational institutions' focus on digital transformation. Teachers reported in the survey that their awareness of industry developments and changes in the external social environment—such as policy support and technological advancements—can stimulate their willingness to undergo transformation. This awareness is critical, as it not only informs teachers about the latest trends and tools available but also highlights the necessity of adapting to these changes to remain relevant in their fields. In particular, encouragement for digital transformation embedded within educational policies has become a significant driving force for teachers' active participation in digital learning and teaching. This policy support not only provides a

framework for implementation but also instills confidence in teachers, motivating them to engage with digital tools and methodologies. As shown in Fig. 2, the interplay between internal support mechanisms and external environmental factors plays a vital role in shaping the overall willingness of vocational college teachers to embrace digital transformation.

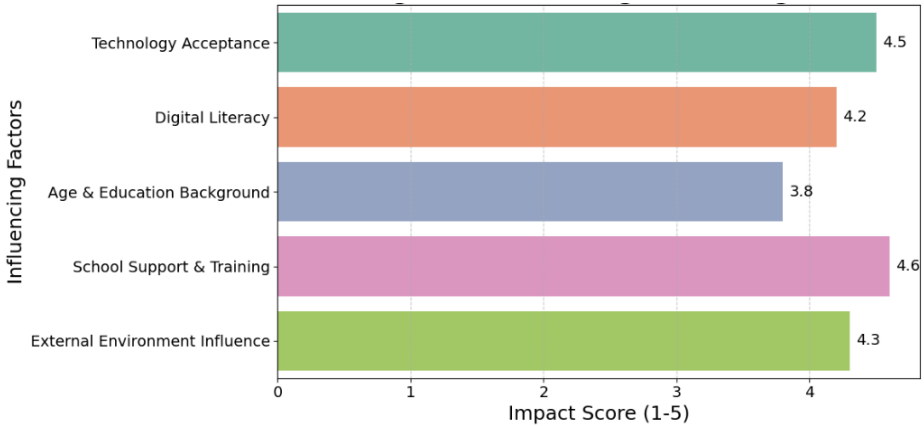


Fig. 2. Factors Influencing Teachers' Willingness for Digital Transformation

4 CONCLUSIONS

This study reveals the overall status of vocational college teachers' willingness for digital transformation through comprehensive questionnaire surveys and in-depth interview analyses. By employing these research methods, we were able to gather a wealth of data that provides a nuanced understanding of teachers' perspectives on digital teaching. The results show that a significant majority of teachers hold a positive attitude towards the integration of digital technologies into their teaching practices. This positive outlook indicates that teachers possess a certain level of acceptance and adaptability when confronted with the rapidly developing landscape of educational technologies. Such adaptability is crucial in an era where digital tools and resources are becoming increasingly prevalent in educational settings.

Moreover, the research findings highlight that there are personalized differences in teachers' willingness to engage in digital transformation. These differences are influenced by a variety of factors, including age, individual technology acceptance, and overall digital competence. For instance, younger teachers may exhibit a higher willingness to adopt new technologies due to their familiarity with digital tools, while older teachers might face challenges in adapting to these changes. Additionally, the level of digital competence among teachers plays a significant role in determining their comfort and confidence in using digital teaching methods.

Furthermore, the availability of support and incentives from schools and external sources emerges as a key factor in significantly enhancing teachers' willingness for transformation. When educational institutions provide robust support systems, such as

training programs, resources, and encouragement from administration, teachers are more likely to embrace digital transformation initiatives. This support not only fosters a positive environment for learning but also empowers teachers to take the necessary steps toward integrating technology into their classrooms. Overall, the study underscores the importance of understanding the diverse factors that influence teachers' willingness to adapt to digital transformation, as this knowledge can inform strategies for enhancing digital literacy and promoting effective teaching practices in vocational education.

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