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Research Review on the Impact of Teacher-Student Relationship on Teaching Effectiveness

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Abstract. The teacher-student relationship is the most fundamental and core social relationship in the educational context, running through the entire process of classroom teaching, after-class interaction, and student growth, and is a key influencing factor determining the teaching quality and educational effectiveness of teachers. In the macro context of educational transformation and the deepening of quality-oriented education in the new era, the traditional teacher-centered authoritative teacher-student relationship is accelerating its transformation towards an equal, interactive, and symbiotic new partnership. However, with the acceleration of educational digital transformation and the popularization of multimodal teaching methods, the field of teacher-student interaction has extended from physical classrooms to online and offline integrated hybrid spaces, with significantly increased interaction frequency and complexity. This paper systematically summarizes the relevant academic achievements from the past fifteen years both domestically and internationally, focusing on the conceptual connotations, theoretical support, action paths, and research progress of teacher-student relationship and teaching effectiveness. It summarizes the existing shortcomings and controversial issues in the current research field and makes forward-looking prospects for future research directions, hoping to provide theoretical support and practical references for improving teacher-student interaction models, optimizing educational practices, and enhancing the overall educational quality.

Keywords: Teacher-student relationship, Teaching effectiveness, Academic development, Learning motivation, Classroom interaction

1. Introduction

Currently, in the context of the continuous advancement of educational modernization and the cultivation of students' core competencies becoming the core goal of education, the evaluation standards for teaching effectiveness have already moved away from the sole framework of academic performance and have gradually expanded to a comprehensive evaluation system covering learning motivation, classroom participation, mental health status, and comprehensive ability development. The teacher-student relationship, as a core component of the classroom educational ecology, is not only a prerequisite for the orderly conduct of teaching activities but also an important latent factor

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that subtly influences student development and teaching quality. Its enabling role in multi-dimensional teaching effectiveness has received increasing attention from the academic community.

From the perspective of foreign research, the Western academic community has conducted systematic research on teacher-student relationships earlier and formed a mature theoretical and empirical research system. Pianta was the first to focus on the structural dimensions of the teacher-student relationship, proposing a three-dimensional model including intimacy, conflict, and dependence, which laid the foundation for subsequent empirical research [1]. On this basis, Hamre & Pianta conducted long-term tracking of students' development data in primary school and carried out large-sample empirical research, clarifying the significant positive predictive effect of positive teacher-student relationships on students' academic performance and social emotional ability development, further verifying the core value of teacher-student relationships in education [2]. Domestic research, rooted in the local educational context of the transformation from exam-oriented education to quality-oriented education and the implementation of the education policy of fostering virtue and cultivating talents, has conducted extensive explorations on the local connotations, practical forms, and educational effects of the teacher-student relationship, covering multiple educational stages such as primary and higher education, and confirmed the positive role of harmonious teacher-student relationships in enhancing students' learning engagement, alleviating academic anxiety, and promoting comprehensive development [3]. Overall, the existing research results both at home and abroad mostly focus on the exploration of the influence of a single dimension. The research perspectives are rather scattered, and the research conclusions for different educational stages and different groups have certain differences. There is a lack of systematic integration analysis of the mechanism linking teacher-student relationships and multi-dimensional teaching effects, making it difficult to fully meet the practical needs of current educational modernization development. This also provides an entry point for the systematic review and in-depth study in this paper.

Based on this, this article conducts a systematic literature review on the intrinsic relationship and functional logic between the teacher-student relationship and teaching effectiveness, integrates the consensus and controversies of existing research, clarifies the current limitations of the research, and clarifies the development direction of future research, providing a more comprehensive and systematic reference basis for subsequent academic research and front-line educational practice.

2. Core concept definitions

2.1. Teacher-student relationship

The teacher-student relationship refers to the relatively stable interpersonal relationship formed between teachers and students in the process of educational teaching, daily communication, and emotional exchange, featuring an educational nature, an emotional nature, two-way interaction, and role differences, etc. [4]. The academic community has formed a relatively unified understanding of the types of teacher-student relationships. Traditional research divides them into authoritative, democratic, and permissive types based on the teacher's management style; modern research divides them into positive supportive, conflict-antagonistic, and indifferent-distanced types based on the degree of emotional connection and support. Among them, a positive and good teacher-student relationship is characterized by mutual respect, mutual understanding, full trust, and emotional support, with democratic equality as the fundamental principle [5]; while a negative and bad teacher-student relationship is manifested as conflict, emotional estrangement, authoritative suppression, and opposition confrontation.

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2.2. Teaching effectiveness

Teaching effectiveness is the comprehensive manifestation of resource input and educational output in teaching activities, and is the core indicator for measuring the quality of education. The current education field has broken through the limitation of the traditional "only focusing on scores" and constructed a multi-dimensional comprehensive evaluation system: the first is the objective outcome dimension, mainly referring to students' academic performance, knowledge mastery level, and professional skill attainment; the second is the process participation dimension, focusing on students' classroom participation status, learning initiative, and the enthusiasm of interaction between teachers and students, as well as among students; the third is the comprehensive development dimension, covering students' learning motivation, self-efficacy, mental health level, personality improvement degree, and core literacy development situation [6]. The teaching effectiveness discussed in this article is the organic integration and comprehensive manifestation of the above three dimensions.

3. The theoretical foundation of the impact of teacher-student relationship on teaching effectiveness

3.1. Humanistic learning theory

Rogers' humanistic educational philosophy advocates that education should be centered on students, and teachers need to maintain unconditional positive attention, sincere communication, and empathetic understanding towards students [7]. This theory discards the traditional education model centered on knowledge transmission, emphasizing the core position of learners' emotions, attitudes, and subjective experiences in the learning process. It holds that the fundamental purpose of education is to promote the growth and self-actualization of students' complete personalities. From this theoretical perspective, the teacher-student relationship is no longer a simple dominant relationship of teaching and learning, but an equal, respectful, and trusting partnership. A safe and inclusive classroom atmosphere can effectively alleviate students' learning anxiety and psychological pressure, reduce their defensive mentality, and make them more willing to actively participate in classroom interactions and express their own viewpoints, thereby stimulating their intrinsic learning motivation. Thus, a positive teacher-student relationship is an important prerequisite for achieving efficient teaching, promoting students' autonomous development, and the coordinated development of their mental health.

3.2. Self-determination theory

The self-determination theory proposed by Deci and Ryan holds that individuals have three basic psychological needs: autonomy need, competence need, and affiliation need [8]. The degree of satisfaction of these three basic psychological needs directly determines the strength of an individual's intrinsic motivation and the persistence of their behavior. In the educational context, students' learning behaviors are also driven by these needs, and the teacher-student relationship is the key external environmental factor for satisfying these needs. A harmonious and amicable teacher-student relationship can enable students to obtain a sense of belonging in the class and feel the autonomy space and recognition in interactions with teachers, thereby effectively enhancing self-efficacy. When students feel supported and understood, rather than controlled, their learning motivation will shift from external pressure-driven to internal interest-driven, and their learning engagement and persistence will significantly increase, ultimately promoting the steady

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improvement of learning effectiveness and overall teaching quality. This theory also provides a clear psychological mechanism for explaining how the teacher-student relationship affects the learning process.

3.3. Teacher expectation effect

The teacher expectation effect, also known as the Pygmalion effect, proposed by Rosenthal, confirms that teachers' positive expectations of students will be conveyed to students through verbal expression, behavioral style, and attitude tendencies, transforming into students' self-acceptance and learning motivation; conversely, teachers' negative expectations will inhibit students' learning enthusiasm and development potential. As an important person during students' school years, teachers' evaluations and expectations of students will subtly influence students' self-perception and behavioral choices. With the support of a good teacher-student relationship, teachers' positive expectations are more likely to be perceived and accepted by students, thereby forming a positive cycle of "teacher trust-student confidence-performance improvement." This theory profoundly reveals the direct impact of emotional and attitudinal factors in the teacher-student interaction on teaching effectiveness, and from the social psychological perspective, building a warm, encouraging, and positive teacher-student relationship is an indispensably condition for improving teaching effectiveness [9].

3.4. Social support theory

The social support theory states that teachers are one of the most important social support sources for students during their school years. The emotional support, learning guidance, and positive encouragement provided by teachers can help students effectively cope with learning pressure, alleviate psychological distress, enhance learning persistence, and provide a stable guarantee for the realization of teaching effectiveness. For students in the growth stage, problems such as academic pressure, peer relationship troubles, and self-identity confusion often occur, and support from teachers can effectively buffer the negative impact of negative emotions. Emotional understanding and acceptance can enhance students' psychological security, targeted guidance in learning can improve students' problem-solving abilities, and affirmation and encouragement in behavior can strengthen students' learning motivation. A high-quality teacher-student relationship is essentially a systematic social support system. It not only helps to improve students' current learning conditions, but also promotes their psychological resilience and social adaptability, thereby stabilizing and enhancing the overall teaching effectiveness.

4. Early, recent studies and future research trends

4.1. Early research

Early studies on teacher-student relationships and teaching effectiveness in both domestic and foreign contexts focused on the preliminary exploration of the basic correlation between the two. The research perspectives were relatively concentrated, with the core focusing on the analysis of explicit teaching outcomes.

Early foreign research started earlier and was the initial foundation stage of this field of study. It mainly explored the direct correlation between teacher-student relationships and students' academic levels. Through a large amount of empirical data verification, it was found that positive and positive teacher-student relationships could directly affect students' academic performance. They could not

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only significantly improve students' academic achievements but also effectively reduce the dropout rate of students and the occurrence of classroom disciplinary violations, initially confirming the positive impact of teacher-student relationships on the basic effect of teaching.

Early domestic research followed the pace of foreign research, conducting preliminary explorations based on local educational realities, with the core focusing on the basic correlation analysis of teacher-student relationship types and teaching effectiveness. Through preliminary empirical research, it was concluded that democratic, supportive teacher-student relationships could help improve teaching effectiveness, while authoritative, indifferent, and conflictual negative teacher-student relationships would directly reduce classroom teaching efficiency and induce students' negative learning emotions such as boredom and anxiety. Initially, basic research was conducted on the role of teacher-student relationships in different educational stages, finding that the teacher-student relationship centered on emotional attachment in primary school and the teacher-student relationship emphasizing respect and understanding in middle school, respectively, have a fundamental impact on students' learning interest and motivation [10, 11], laying a local theoretical foundation for subsequent in-depth research.

4.2. Recent research

With the continuous deepening of educational research, recent studies on teacher-student relationships and teaching effectiveness at home and abroad have ben conducted. The research perspectives have become more diverse, and the research content has become more targeted, resulting in rich research achievements.

Recent foreign research shows a clear diversified development feature. The depth and breadth of research have significantly expanded. Firstly, it conducts detailed research on differences in educational stages, clearly indicating that the influence of teacher-student relationships on teaching effectiveness is more prominent in primary and secondary school stages. Secondly, it focuses on special student groups, deeply exploring the compensatory and promoting effects of teacher-student relationships on left-behind children, students with learning difficulties, and special education students. Thirdly, it adapts to the new situation of educational development and combines the development trend of digital education to explore the construction path of new teacher-student relationships in the online teaching environment and its impact on online teaching effectiveness. Fourthly, it extends the research influence period, based on the long-term development perspective of students, confirming that good teacher-student relationships have a lasting positive effect on students' personality shaping and social adaptability [12]. At the same time, recent foreign research has always used empirical research as the main method, with scientifically standardized research designs, forming a standardized and mature research paradigm, focusing on deeply exploring the internal mechanism of the influence of teacher-student relationships on teaching effectiveness.

Recent domestic research has closely followed international trends while deeply integrating China's educational context, achieving refined and systematic research content, and enriching core achievements. Firstly, it has deepened differentiated research, not only clarifying the core characteristics and differential impacts of teacher-student relationships in different educational stages (primary school, middle school, and university), but also confirming the significant improvement effect of teacher-student relationships on teaching outcomes in special educational scenarios such as rural education and vocational education; Secondly, it has delved into the influencing mechanisms, through rigorous empirical verification, demonstrating that teacher-student relationships do not directly act on teaching outcomes but instead have an indirect impact through intermediary variables such as learning motivation, classroom participation, self-efficacy, and

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psychological security, and also play a regulatory role in the relationship between teaching input and academic achievement; Thirdly, it has focused on practical implementation, combining actual teaching and educational practices, proposing specific practical intervention strategies such as strengthening effective communication between teachers and students, changing the positioning of teachers' roles, respecting individual differences of students, and building an emotional support system, providing practical references for educators to implement [5].

Based on the recent domestic and international research results and the direction of educational development, future research in the field of teacher-student relationships and teaching effectiveness will present more forward-looking and innovative development trends.

In terms of research perspectives, it will further align with the trends of educational digitalization and intelligence transformation, continuously deepen the research on the construction model and interaction mechanism of teacher-student relationships in online and offline hybrid teaching scenarios, explore the paths of optimizing teacher-student relationships through new technologies such as artificial intelligence and big data, and further improve the research system in the digital educational environment. In terms of research objects, it will pay more attention to diversified and niche student groups, in addition to the existing special student groups. The construction and influence research of teacher-student relationships for groups such as migrant children, students with artistic and sports talents, and cross-cultural students will continue to be enriched, achieving full coverage of research objects. In terms of research methods, it will break through the limitations of traditional empirical research, combine longitudinal tracking research, action research, and interdisciplinary research, more accurately explore the long-term impact mechanism of teacher-student relationships on teaching effectiveness, and enhance the practical guidance of research results. In terms of research focus, it will place greater emphasis on the deep integration of theory and practice, focus on the regular construction and long-term intervention mechanism research of positive teacher-student relationships, promote the research results to better serve educational reform, and help improve the overall quality of education.

5. Deficiencies and future prospects of existing research

5.1. Deficiencies in research

Although there are abundant relevant research results both domestically and internationally, there are still significant limitations in terms of research depth, methods, and practical implementation: The research methods mainly focus on correlation analysis, with insufficient exploration of causal mechanisms. Most studies only confirm the correlation between teacher-student relationships and teaching effectiveness, while experimental research and long-term tracking studies on the deep causal mechanisms between the two are scarce. This makes it difficult to clearly reveal the internal logic of their interaction. The evaluation dimensions of teaching effectiveness are relatively simple. The existing research still overly emphasizes academic performance indicators while paying insufficient attention to the long-term developmental effects, such as students' mental health, innovation ability, and core literacy. The construction of a localized theoretical system is lacking. Domestic research mostly borrows Western theoretical models and measurement scales, and the theoretical innovation and local development of tools based on China's educational culture background, home-school collaboration model, and class management characteristics are relatively lagging. Research on digital scenarios is relatively weak. With the comprehensive popularization of online teaching and blended teaching, research on the characteristics, construction strategies, and impact of new teacher-student relationships on teaching effectiveness is still in its infancy. The

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research on practical intervention lacks practicality. Existing research mostly remains at the theoretical discussion level, and there are few practical intervention plans with operability and generalizability, as well as corresponding empirical effect verification studies.

5.2. Future research prospects

To address the deficiencies of existing research, future research can further deepen and expand in the following five directions:

Deepen causal mechanism and longitudinal tracking research. Use experimental research and long-term tracking research methods to deeply explore the internal mechanisms by which teacher-student relationships affect teaching effectiveness and explore their continuous impact on students' lifelong development.

Build a diversified evaluation system for teaching effectiveness. Break the limitation of "only focusing on academic performance" in evaluation, incorporate core literacy, mental health, innovation ability, and social adaptability into the evaluation scope, and achieve a comprehensive and scientific assessment of teaching effectiveness.

Strengthen local theoretical and practical research. Based on China's educational conditions and classroom ecology, construct a teacher-student relationship theoretical model that conforms to local characteristics, develop local measurement tools, and form replicable and scalable practical intervention strategies.

Focus on new digital education scenarios. Explore the new characteristics, new patterns, and impact of teacher-student relationships in online teaching and blended teaching, study the influence of digital interaction models on teaching effectiveness, and construct a new type of teacher-student relationship that is suitable for digital education.

Conduct refined research on groups and scenarios. Target different school stages, subjects, special student groups, as well as urban-rural education and home-school collaboration, and conduct precise and refined research to enhance the targeting and practical value of the research.

6. Conclusion

Teacher-student relationships are the most core interpersonal relationships in educational and teaching activities, and they are the fundamental and key variables that affect teaching effectiveness. Through literature review, it can be found that positive, democratic, and supportive teacher-student relationships can significantly enhance students' academic performance, learning motivation, and classroom participation, and promote the comprehensive development of students' mental health and overall literacy.

Theoretically, this study integrates scattered research, clarifies core concepts and causal logic, compensates for the scattered research perspectives and divergent conclusions of existing research. Practically, it provides practical guidance for frontline teachers to optimize teacher-student interactions and build good teacher-student relationships, helping to solve practical problems such as students' disinterest in learning and special group education.

However, this article still has some shortcomings and areas for improvement. The analytical perspective is relatively broad and general, lacking detailed comparative studies on different educational stages, specific subjects, urban-rural differences, and special student groups. Therefore, this article will be based on the existing research deficiencies. In the future, it will deepen the causal mechanism and longitudinal tracking research on the impact of teacher-student relationships on teaching effectiveness, and clarify the internal logical relationship. Future studies will also focus on

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the digital transformation of education, deeply explore the construction and impact of new teacher-student relationships in new scenarios such as online and blended teaching.

Current domestic and international research has fully confirmed the significant correlation between teacher-student relationships and teaching effectiveness. Future research should deepen the exploration of the mechanism of action, based on China's local educational practice, and construct a scientific and complete theoretical system and feasible intervention strategies.

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