

Mechanisms for Developing Sociometric Relationships Between Teachers and Students

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Abstract:

Teacher–student sociometric relationships represent an important dimension of the educational process, influencing classroom climate, academic achievement, social adaptation, emotional well-being, and students’ sense of belonging. Contemporary educational research increasingly recognizes that positive teacher–student relationships contribute significantly to learning effectiveness and psychosocial development. The present study aims to examine the historical evolution, theoretical foundations, methodological approaches, and contemporary educational implications of sociometric relationships between teachers and students. A qualitative research design based on systematic literature review and comparative analysis was employed. Scientific sources from sociometry, educational psychology, social-emotional learning, attachment theory, and restorative practices were analyzed. The findings reveal that teacher–student sociometric relationships have evolved from classical sociometric concepts of interpersonal choice and rejection toward multidimensional frameworks encompassing trust, emotional support, fairness, inclusion, and psychological safety. The study highlights the importance of integrating sociometric, humanistic, socio-constructivist, social-emotional learning, and restorative approaches in modern educational environments. The results suggest that systematic development of sociometric relationships contributes to improved educational outcomes, enhanced classroom climate, and greater student well-being.

Keywords: sociometry, teacher–student relationship, classroom climate, social-emotional learning, educational psychology, sociometric development.

I. Introduction

The quality of relationships established between teachers and students has become one of the

most influential factors in contemporary educational environments. Modern educational systems increasingly recognize that academic achievement alone cannot fully explain students' success, engagement, and psychological well-being. Rather, the nature of interpersonal relationships within the classroom plays a fundamental role in shaping educational outcomes, social adaptation, emotional security, and students' sense of belonging [1], [2].

The concept of sociometric relationships originates from sociometry, a scientific method developed by Jacob Levy Moreno during the early twentieth century to identify patterns of interpersonal attraction, rejection, leadership, and group structure within social communities [1]. Initially, sociometric research focused on relationships among members of small groups, particularly children and adolescents. Over time, educational researchers recognized that teachers occupy a central position within classroom social systems and significantly influence students' social experiences [2].

In contemporary educational research, sociometric relationships between teachers and students extend beyond simple patterns of interpersonal preference. They encompass dimensions such as trust, emotional support, fairness, mutual respect, pedagogical care, communication quality, and psychological safety [3]. These dimensions contribute directly to students' academic engagement, motivation, behavioral adjustment, and emotional development [4].

Research conducted during the last three decades has demonstrated that positive teacher–student relationships significantly enhance students' educational experiences. According to Pianta [8], relationship quality serves as a critical predictor of both academic and socio-emotional outcomes. Students who perceive their teachers as supportive, fair, and approachable tend to demonstrate higher academic achievement, stronger classroom participation, and better psychological adjustment than those experiencing conflictual or distant relationships [8], [15].

The growing importance of teacher–student relationships is also reflected in international educational policy documents. The Organisation for Economic Co-operation and Development (OECD) reports that students who perceive higher levels of teacher support exhibit stronger school belonging, lower anxiety levels, and improved academic performance [13]. Similarly, UNESCO emphasizes that positive educational environments are built upon trust, empathy, inclusion, and meaningful interpersonal interactions [12].

Several theoretical perspectives contribute to understanding sociometric relationships within educational settings. Humanistic educational theories emphasize empathy, acceptance, and authentic communication as essential components of effective teaching [5]. Socio-constructivist approaches highlight the role of social interaction in cognitive development and knowledge construction [7]. Attachment theory suggests that teachers can function as secure attachment figures who facilitate students' emotional regulation and adaptation to school environments [8]. More recently, social-emotional learning (SEL) frameworks have reinforced the importance of relationship-building competencies for both teachers and students [10], [11].

The development of sociometric relationships has also been influenced by research on group dynamics. Lewin's field theory and Sherif's studies on social norms demonstrated how interpersonal interactions shape collective behavior and group functioning [3], [4]. These perspectives helped educators understand that classroom learning occurs not only through instructional processes but also through complex social interactions among participants.

Despite substantial advances in the study of teacher–student relationships, several challenges remain. Educational institutions continue to seek effective methods for strengthening classroom relationships, reducing social exclusion, fostering inclusion, and promoting positive learning environments. Furthermore, contemporary educational contexts characterized by increasing diversity, technological transformation, and evolving social expectations require renewed attention to the mechanisms through which sociometric relationships develop and influence educational outcomes [11], [12].

Therefore, the present study aims to analyze the historical development, theoretical foundations, methodological principles, and practical implications of sociometric relationships between teachers and students. By synthesizing findings from sociometry, educational psychology, social-emotional learning, and contemporary pedagogical research, the study seeks to provide a comprehensive understanding of the role of sociometric relationships in modern educational environments.

II. Methodology

This study employed a qualitative research design based on systematic literature review, historical analysis, comparative analysis, and theoretical synthesis. The methodological framework was developed to examine the evolution, theoretical foundations, and contemporary educational applications of sociometric relationships between teachers and students.

The research process consisted of four interconnected stages. The first stage involved the identification and collection of scientific sources related to sociometry, teacher–student relationships, educational psychology, social-emotional learning, attachment theory, restorative practices, and classroom climate. Academic databases including Scopus, Web of Science, ERIC, Frontiers in Psychology, SpringerLink, Taylor & Francis Online, and educational reports published by UNESCO, OECD, CASEL, and the American Psychological Association were consulted [10]–[14].

The second stage focused on historical analysis. Major milestones in the development of sociometric theory and teacher–student relationship research were examined from the emergence of sociometry in the early twentieth century to contemporary multidimensional approaches. Special attention was devoted to the contributions of Moreno, Lewin, Sherif, Rogers, Dewey, Vygotsky, Pianta, and modern social-emotional learning researchers [1]–[10].

The third stage involved comparative analysis of theoretical approaches. Different conceptual frameworks were analyzed to identify similarities and differences in explaining teacher–student sociometric relationships. The reviewed approaches included:

- Classical Sociometric Theory;
- Humanistic Education Theory;
- Socio-Constructivist Theory;
- Attachment Theory;
- Social and Emotional Learning (SEL);
- Restorative Practices;
- Classroom Climate Theory.

The fourth stage involved thematic synthesis. The collected information was categorized according to three major dimensions:

1. Historical development of sociometric relationships;
2. Theoretical foundations and conceptual approaches;
3. Practical strategies for developing sociometric relationships in educational environments.

The validity of the study was ensured through triangulation of multiple theoretical perspectives and international educational sources. This approach enabled the identification of recurring themes and common findings across different educational contexts and research traditions [12]–[15].

III. Results

The analysis revealed that the development of sociometric relationships between teachers and students has passed through several significant historical and theoretical stages. These stages collectively illustrate the transformation of sociometric thinking from simple interpersonal selection

processes toward comprehensive educational frameworks centered on relationship quality, emotional well-being, and social inclusion.

The earliest stage of sociometric development originated from efforts to understand interpersonal choices within social groups. Moreno introduced sociometry as a scientific method for identifying patterns of attraction, rejection, leadership, and social isolation among group members [1], [2].

Through sociometric questionnaires and sociograms, Moreno sought to visualize hidden social structures within communities. Questions such as “Whom would you prefer to work with?” or “With whom would you like to spend time?” enabled researchers to identify social positions within groups. Although the primary focus was on peer relationships, these methods later influenced educational research by providing tools for examining classroom social structures.

The analysis demonstrates that classical sociometry established the methodological foundation for understanding social inclusion and exclusion within educational settings.

The second stage emerged through the development of group dynamics research. Lewin's field theory emphasized that human behavior is strongly influenced by social environments and group structures [3]. Similarly, Sherif's research demonstrated the significance of social norms, group identity, and collective behavior in shaping individual actions [4].

Although these studies did not specifically focus on teacher–student relationships, they significantly contributed to educational research by highlighting the role of social interactions within classroom communities. Researchers increasingly recognized that teachers function not only as instructors but also as influential participants in the social organization of classrooms.

The findings indicate that group dynamics research expanded sociometric thinking by emphasizing social influence, leadership, and environmental factors affecting interpersonal relationships.

During the 1960s and 1970s, humanistic educational theories introduced a new perspective on teacher–student relationships. Rogers argued that effective educational environments should be characterized by empathy, authenticity, acceptance, and unconditional positive regard [5].

Under this approach, the teacher was no longer viewed merely as a transmitter of knowledge or authority figure. Instead, teachers became facilitators of personal growth and development. Educational success increasingly depended upon emotional support, trust, and meaningful communication between teachers and students.

The analysis revealed that humanistic approaches significantly broadened the understanding of sociometric relationships by incorporating emotional and psychological dimensions into educational interactions.

The socio-constructivist approach further expanded the importance of teacher–student relationships. Vygotsky emphasized that cognitive development occurs through social interaction and collaborative learning experiences [7].

Similarly, Dewey viewed education as an interactive and democratic process based on participation, dialogue, and shared experiences [6]. According to these perspectives, effective learning cannot be separated from positive interpersonal relationships.

The findings suggest that socio-constructivist approaches strengthened the connection between sociometric relationships and cognitive development. Teachers became active partners in students' learning processes rather than passive providers of information.

A major transformation occurred through the work of Pianta, whose research established teacher–student relationships as an independent field of educational inquiry [8], [9].

Pianta identified three primary dimensions of teacher–student relationship quality:

- Closeness;
- Conflict;
- Dependency.

Research findings consistently demonstrated that higher levels of closeness are associated with improved academic achievement, greater social competence, and better emotional adjustment. In contrast, conflictual relationships often predict behavioral problems and reduced academic engagement [8].

This stage represented a shift from viewing sociometric relationships as group-level phenomena toward understanding individual relational experiences between teachers and students.

The analysis revealed that attachment theory significantly influenced contemporary understandings of teacher–student relationships. Within this framework, teachers function as secure bases that provide emotional support, guidance, and stability [8].

Students who perceive their teachers as trustworthy and supportive demonstrate greater resilience, stronger school attachment, and more effective emotional regulation. Conversely, insecure or conflictual relationships may negatively affect students’ psychological adaptation to school environments.

These findings indicate that teacher–student sociometric relationships contribute not only to educational outcomes but also to broader aspects of psychological well-being.

Recent developments emphasize social and emotional competencies as fundamental components of educational success. According to CASEL, social-emotional learning promotes self-awareness, self-management, social awareness, relationship skills, and responsible decision-making [11].

The analysis identified several mechanisms through which SEL contributes to sociometric relationship development:

- Empathy training;
- Emotional regulation;
- Communication skills;
- Conflict resolution;
- Collaborative problem-solving.

Similarly, restorative practices focus on repairing relationships rather than imposing punishment [14]. Restorative circles, affective questioning, and collaborative dialogue strengthen trust and mutual respect between teachers and students.

The findings suggest that SEL and restorative approaches provide practical frameworks for systematically improving sociometric relationships within educational settings.

One of the most significant findings concerns the educational consequences of positive teacher–student relationships.

International evidence demonstrates that students who experience supportive teacher relationships show:

- Higher academic achievement;
- Increased classroom participation;
- Stronger school belonging;
- Lower levels of anxiety;

- Improved emotional well-being;
- Better behavioral adjustment;
- Greater motivation to learn [10], [13], [15].

OECD reports indicate that students perceiving high levels of teacher support consistently outperform their peers academically and report stronger feelings of belonging to school communities [13].

Similarly, UNESCO findings emphasize that supportive educational relationships contribute directly to inclusive, equitable, and psychologically safe learning environments [12].

Overall, the results demonstrate that sociometric relationships constitute one of the most influential determinants of educational quality in contemporary schools.

IV. Discussion

The findings of this study demonstrate that sociometric relationships between teachers and students have undergone substantial conceptual transformation over the past century. Originally developed as a methodological approach for identifying interpersonal preferences and social structures within groups, sociometry has gradually evolved into a multidimensional framework that incorporates emotional, psychological, pedagogical, and social dimensions of educational interaction [1], [2].

One of the most important findings concerns the expanding role of teachers within classroom social systems. Classical sociometric theory primarily emphasized peer relationships and patterns of interpersonal choice among group members [1]. However, contemporary educational research increasingly recognizes that teachers occupy a unique position within classroom networks and significantly influence students' social experiences, emotional security, and academic development [8], [15].

The results support previous findings suggesting that relationship quality constitutes a critical predictor of educational outcomes. Pianta's model emphasizes that closeness, conflict, and dependency represent key dimensions through which students experience relationships with teachers [8], [9]. The present analysis confirms that supportive and trusting teacher–student relationships are associated with positive educational and psychological consequences. These findings are consistent with meta-analytic evidence demonstrating significant associations between relationship quality and academic achievement, school engagement, and behavioral adjustment [15].

Another important finding relates to the integration of humanistic educational principles into sociometric theory. Rogers' emphasis on empathy, acceptance, and authentic communication transformed educational relationships from hierarchical structures into collaborative partnerships [5]. The present study indicates that humanistic principles continue to provide a strong theoretical foundation for developing positive classroom climates and enhancing students' psychological well-being.

The socio-constructivist perspective also offers valuable insights into the educational significance of sociometric relationships. Vygotsky's theory suggests that cognitive development occurs through social interaction and guided participation [7]. Consequently, teacher–student relationships should not be viewed solely as emotional phenomena but also as essential mechanisms supporting intellectual growth and learning. Positive sociometric relationships create opportunities for dialogue, collaborative problem-solving, and meaningful engagement, thereby enhancing educational effectiveness.

Furthermore, the findings highlight the growing importance of attachment theory in educational research. Modern studies increasingly interpret teachers as secondary attachment figures who provide emotional security and support within school environments [8]. This perspective is particularly

relevant for understanding students who experience social difficulties, anxiety, or adjustment challenges. Positive relationships with teachers may serve as protective factors that promote resilience and facilitate successful adaptation to school life.

The analysis also underscores the significance of Social and Emotional Learning (SEL) frameworks in contemporary educational practice. SEL approaches extend traditional sociometric concepts by emphasizing emotional competence, empathy, communication skills, relationship-building, and responsible decision-making [10], [11]. These competencies contribute directly to the development of healthy interpersonal relationships and positive classroom environments. In this regard, sociometric development is no longer limited to measuring social positions but increasingly involves cultivating social and emotional competencies among all participants in the educational process.

Similarly, restorative approaches provide practical mechanisms for strengthening sociometric relationships. Unlike traditional disciplinary models that emphasize punishment and control, restorative practices prioritize communication, accountability, empathy, and relationship repair [14]. The findings suggest that restorative strategies contribute to the development of trust, mutual respect, and inclusion within classroom communities. Such approaches are particularly valuable in culturally diverse educational settings where maintaining positive social relationships is essential for effective learning.

The international evidence reviewed in this study further supports the educational importance of sociometric relationships. OECD reports consistently demonstrate that teacher support predicts stronger school belonging, lower anxiety levels, and higher academic achievement [13]. UNESCO similarly emphasizes that positive relationships constitute a fundamental component of inclusive and equitable educational systems [12]. These findings indicate that sociometric relationships should be regarded not merely as interpersonal phenomena but as strategic factors influencing educational quality at both institutional and national levels.

Despite these positive findings, several challenges remain. Modern educational systems increasingly face issues related to cultural diversity, digital communication, social isolation, and mental health concerns among students. These developments require further refinement of sociometric theories and methodologies to address emerging educational realities. Future research should investigate how digital learning environments influence teacher–student sociometric relationships and explore culturally responsive approaches to relationship development in diverse educational contexts.

Overall, the discussion demonstrates that sociometric relationships represent a central mechanism through which educational environments influence students' academic, social, and emotional development. Their importance extends far beyond interpersonal preference, encompassing broader processes of inclusion, support, well-being, and educational success.

V. Conclusion

This study examined the historical development, theoretical foundations, methodological approaches, and educational implications of sociometric relationships between teachers and students. The findings reveal that sociometric relationships have evolved considerably from their origins in classical sociometry to become a comprehensive framework for understanding educational interaction and classroom social dynamics.

The historical analysis demonstrated that early sociometric research focused primarily on identifying patterns of social choice, rejection, and group structure. Subsequent developments in group dynamics, humanistic psychology, socio-constructivism, attachment theory, social-emotional learning, and restorative practices significantly expanded the conceptual scope of sociometric relationships. Contemporary approaches emphasize not only interpersonal preferences but also trust, emotional security, fairness, empathy, support, and psychological well-being.

The study further revealed that teacher–student sociometric relationships play a critical role in shaping educational outcomes. Positive relationships contribute to academic achievement, school belonging, emotional adjustment, classroom engagement, and overall student well-being. Conversely, conflictual or distant relationships may hinder learning, increase behavioral difficulties, and negatively affect students’ psychological development.

The analysis identified several theoretical perspectives that provide a foundation for understanding and developing sociometric relationships. These include classical sociometry, humanistic education, socio-constructivist theory, attachment theory, social and emotional learning, and restorative approaches. Together, these perspectives offer a multidimensional understanding of the factors that influence relationship quality within educational settings.

From a practical perspective, effective development of sociometric relationships requires systematic implementation of diagnostic assessment, supportive classroom environments, individualized interaction, collaborative learning, empathetic communication, fair pedagogical practices, and continuous monitoring. Educational institutions should regard relationship development as an essential component of educational quality rather than a supplementary aspect of instruction.

The findings also highlight the growing importance of international educational initiatives that promote inclusion, well-being, and positive school climates. Evidence from OECD, UNESCO, CASEL, and other organizations demonstrates that supportive teacher–student relationships represent a key factor in creating equitable and effective learning environments.

In conclusion, sociometric relationships between teachers and students constitute a complex socio-pedagogical system that influences virtually every aspect of educational experience. Their development should therefore be considered a strategic priority for educators, researchers, and policymakers seeking to improve educational quality and student outcomes in the twenty-first century.

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