



# Teacher-Student-Relationship Quality in Inclusive Secondary Schools: Theory and Measurement of Emotional Aspects of Teaching

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Inclusive healthy schools are committed to provide a learning environment for a healthy development and optimal learning support for all students, regardless of their performance, language, learning and behavior disposition or disability. In order to achieve this goal, the relationship between teacher and students is crucial. Research in this area has shown the importance of emotional aspects as a mark of quality of teacher-student relationships, recognizing them as strong predictors for better achievement, compared to professional and subject-related aspects of teaching. Nevertheless, empirical studies in inclusive schools are seldom considering teacher-student relationships, as a theoretically sound conceptualization is missing in the context of research in inclusive schools. In the present paper, based on the attachment theory and the research on joint attention, two emotional components of teacher-student relationships are examined as key-concepts of high relevance for inclusive schools (emotional resonance and shared intentionality). It is also discussed how to empirically operationalize and measure these emotional components with the intention of analyzing the current situation of inclusive schools in future studies.

**Keywords:** teacher-student-relationship quality, inclusive secondary schools, emotional aspects, emotional resonance, shared intentionality, attachment theory, joint attention theory

Inclusive healthy schools are committed to provide, both at the institutional and the pedagogical level, a learning environment for a healthy development and optimal learning support for all students, regardless of their performance, language, learning and behavior disposition or disability (Keller et al., 2020). For this purpose, one of the key elements of inclusive schools builds around the teacher's ability to support all students individually. Individual support itself bears on a deep knowledge of the specific learning needs of each student, on perceiving his or her emotional and motivational states and on recognizing his or her own potential (Krammer, 2009; Brühwiler, 2014). These aspects become more important by the fact that adolescence represents a phase of emotional instability in which being socially included plays an essential role to build up identity (Hartup, 1989; Deci and Ryan, 1993; Larson et al., 2002). In order to feel socially included, students should experience schools as reliable places of learning and support, which in turn is based on the quality of their relationships with teachers and peers. This is even more important for students with special educational needs, who are more exposed to isolation and victimization (Murray and Pianta, 2007; Pijl et al., 2008; Koster et al., 2010; DeVries et al., 2018). When good relationships at school are

lacking, students can see themselves as undesirable outsiders and alienate from school (Skinner et al., 2014). Experiences of insensitivity or indifference, autocratic classroom management, unfair decision-making, or rigid teacher behavior can lead to behavioral problems, rejection and alienation (Jahnukainen, 2001; Baker, 2005; Cooper, 2006; Cefai and Cooper, 2010; Liesen and Luder, 2011). Even considering the increased need for autonomy and orientation to peers, typical for this age, being led by important adults like teachers remains fundamental. Insofar teachers still keep their guiding role and bear responsibility for their teenager students' well-being and development (Bauer, 2017; Bolz et al., 2019a,b). As a result, a deep understanding of students' different needs and potential can be achieved at best when teachers empathically engage with their students (Murray and Pianta, 2007; Lanfranchi, 2018). In this sense the quality of a teacher-student relationship makes a difference at any school level. As a consequence, this factor should be kept in mind if inclusive education at secondary school level is to be successfully implemented.

Over the last 20 years, a large body of research has shown that a high relationship quality is one of the most important and effective ways to promote development, both socially and in terms of learning and achievement (Roorda et al., 2011; Pianta et al., 2012; Allen et al., 2018; Bakadorova and Raufelder, 2018; Mainhard et al., 2018; Holzberger et al., 2019). Nevertheless, many factors can prevent from establishing such a relationship at the secondary school level: Teachers tend to be less responsive to young people, they are more focused on promoting academic knowledge, expect more autonomy from their teenage students and consider their own competence for individual support in the classroom to be rather limited (Mastropieri and Scruggs, 2001; Cefai and Cooper, 2010; Kiel and Weiß, 2015). Empirical evidence suggests that secondary school teachers have greater difficulty in providing more student-centered and differentiated lessons (Löser and Werning, 2013). Thus, if teachers at secondary school level appear rather detached and not willing or feeling able to adapt to students' needs, two key elements of inclusive support (sensitivity and adaptiveness), which are essential for a healthy cognitive and psycho-social development of young people, would be seriously missing.

## THEORETICAL BACKGROUNDS AROUND TEACHER-STUDENT RELATIONSHIPS

The assumption that the quality of teacher-student relationships plays a central role in promoting motivation and increasing learning goes back to theories from interpersonal psychology, which views a person's behavior in the context of transactional causality and reciprocal effects (Strack and Horowitz, 2012; Lanfranchi, 2018). As a part of the interpersonal psychology domain, two of the most widely used theoretical approaches to explain the importance of high-quality teacher-student relationships are the attachment theory and the self-determination theory (Davis, 2003; Pianta et al., 2003; Martin and

Dowson, 2009; Roorda et al., 2011; Verschueren and Koomen, 2012).

The *attachment theory* evolves from research on mother-child relationships (Bowlby, 1999; Ainsworth et al., 2015). The central idea here is that positive relationships between parents and children promote the child's sense of safety. This emotional safety is, in turn, a precondition for a child's readiness to explore its environment (Roorda et al., 2011). The application of this concept to the school setting thus explains the impact of high-quality relationships on students' learning motivation and achievement by the fact that positive, emotionally binding teacher-student relationships provide students with the confidence they need to develop a healthy academic curiosity and engagement with learning tasks (Roorda et al., 2011; Carmona-Halty et al., 2019). Through the quality of their relationship, teachers provide their students with important psychological resources like hope, resilience, competence, and optimism (cf. Julius, 2008; Harwardt-Heinecke and Ahnert, 2013). These resources are defined as "Academic Psychological Capital" and are considered the basis for effective learning and better performance as they allow deep learning processes that in turn foster academic success (Carmona-Halty et al., 2019, p. 2). According to this understanding, empathy and warmth, in particular, distinguish a high-quality relationship between teachers and students (Cornelius-White, 2007).

The *self-determination theory* (Deci and Ryan, 1993) explains the linkage between teacher-student relationships and good school adaptation or academic motivation through the fulfillment of three basic psychological needs: the need for attachment, the need for competence, and the need for autonomy. If a teacher meets these three basic needs of students by showing commitment (e.g., through caring behavior or genuine interest), by ensuring clear structures and strengthening the autonomy of students, their learning and achievement motivation will be increased, which is linked to the learning progress (Roorda et al., 2011). To define "commitment," as an emotional component of teacher-student-relationships, self-determination theorists use the attachment theory. As a result, the basic need for attachment is closely linked to the concept of emotional safety (Roorda et al., 2011). According to this understanding, the quality of teacher-student relationships is measured by the fulfillment of the aforementioned three basic needs, which strengthen each other and provide for optimal, healthy development (Bakadorova and Raufelder, 2018).

Within the field of developmental and cognitive psychology, where studies in learning processes are most common, research on *joint attention* has also a long tradition (Moore and Dunham, 1995). The term "joint attention" describes the ability to coordinate attention with an interaction partner in a way that important learning processes are activated (Tomasello et al., 2005; Mundy and Newell, 2007). More than just joint attention, Tomasello and colleagues emphasize the aspect of shared intentionality to reach a so-called "cultural cognition" (2005). They point out that every learning process and human development is based on people's ability to understand and share intentions ("shared intentionality"). According to this, it takes more than just joint attention to an object to activate

learning, indeed it needs the motivation to share a psychological state of mind with the interaction partners. From such intense interactions (e.g., between children and adults) not only a jointly shared goal emerges, but also a jointly shared interest and mutual willingness to support each other to achieve that goal together. The mix of these two components (the ability to understand intentions and the motivation to share emotions) can induce cultural cognition, social engagement and communication (Tomasello et al., 2005, p. 690). Research on “brain-to-brain synchrony” in classroom context indicates that certain “stimuli” like students’ relationship to their teacher or how he or she interacts with the class as well as the social closeness within the class can explain students’ neuronal activity and drive students’ attention far more than their individual characteristics such as concentration, engagement, and personality traits. Students who are less engaged with these “stimuli” show less “brain-to-brain synchrony” with the rest of the group, while students who interact “face-to-face” show increased attention and receptivity (Dikker et al., 2017). Further research by Bevilacqua et al. (2019) showed that beyond pure synchrony (as joint attention and direct interaction in a learning task), the quality of the relationship between teacher and students, in other words their closeness to each other, is the strongest predictor for performance and learning success (Bevilacqua et al., 2019).

## STATE OF RESEARCH AND MEASUREMENT ON TEACHER-STUDENT-RELATIONSHIP

Although international research agrees on the essential role of a high-quality of teacher-student relationships, setting universally valid criteria for its measurement is still a problem, since teacher-student relationship is a multidimensional construct, defined and operationalized differently depending on its respective theoretical tradition (Cornelius-White, 2007; Roorda et al., 2011; Koomen et al., 2012; Leitz, 2015; Lei et al., 2016; Longobardi et al., 2019). Indeed, many factors representing relationship quality have to do with professional and subject-related aspects of teaching within such relationships—for instance competences in individually adapted learning assignments, feedback, instruction or classroom management (Krammer, 2009; Brühwiler, 2014; Mainhard et al., 2018). In this respect, Hamre and Pianta (2005) identified two important aspects of positive teacher-student interaction: teaching-related support and emotional support. Both have a significant impact on the emotional-motivational self-regulation processes and on the social skills of adolescents as they can reduce the risk of developing internalizing problem behavior (cf. Murray and Pianta, 2007). Teaching-related support refers on one hand to instruction and learning support that is adaptable to individual needs, on the other hand it refers to effective and positive classroom management. Emotional support includes the teacher’s empathy and responsiveness. In this respect, a positively experienced relationship between teacher and student can act as a buffer, especially against demographically and functionally related risk factors. Thus, depending on their quality, teacher-student interactions can have a positive or negative impact both

on learning and achievement competence as well as on the social and emotional inclusion of the students. Moreover, they can either reduce the educational gap or, in negative cases, widen it even further (Hamre and Pianta, 2005). According to the authors, it would be a mistake to consider each student’s learning engagement merely as a proper personal characteristic. Rather, it is the relationship to the teacher that leads to conclusions about each student’s engagement (Pianta et al., 2012; Harwardt-Heinecke and Ahnert, 2013). For this reason, learning motivation should be considered a relational process, which is conditioned by the interactions experienced. This aspect is even more important for students with emotional and social impairments, who could particularly benefit from responsive and sensitive teachers, learning from them positive models of attachment and having a possibility to break negative interactional loops (Bolz et al., 2019a).

In empirical research on teacher-student relationships, the incorporation of professional or teaching-related factors to the emotional ones for measuring relationship quality aims to investigate all three basic psychological needs (autonomy, competence, and attachment) according to the self-determination theory. However, Mainhard et al. (2018) found that, even more than the need for autonomy and competence, the gratification of the need for attachment and social embedding through the teacher’s emotional closeness and warmth to his or her student is a stronger predictor for young people’s learning motivation and achievement and should therefore be regarded as the strongest motor for a positive developmental loop (Mainhard et al., 2018, p. 115). Also the research by Carmona-Halty et al. (2019) confirms the stronger role of emotional components in teacher-student relationships to foster learning and knowledge, compared to the professional and didactic ones.

Even by focusing just on emotional aspects of teacher-student relationships, research tools may include many indicators which overlap in several ways, so drawing a distinctive line between them remains difficult (Leitz, 2015; Lei et al., 2016). Therefore, the problem around a clear definition and measurement of relationship quality is not only due to several convergent factors (Roorda et al., 2011; see Koomen et al., 2012), but also to the fact that these are described or considered differently depending on the author. Often mentioned factors in relation to teacher-student-relationship quality are the *attention* a teacher pays to his or her students (also understood as *social attention*) or a teacher’s *genuine interest* for each student. Social attention and interest (also called *caring*) are important elements for children and adolescents to build upon their identity and their capability self-concept and to increase well-being and resilience as well (Pianta et al., 2012; Leitz, 2015). Deci and Ryan (1993) associate these qualities with *caregiver’s commitment*, in this case the teacher. Another fundamental effect of social embedding, attention and teacher involvement is the promotion of intrinsic motivation (Deci and Ryan, 1993). In educational research, Hattie (2008) was able to show that the relationship between the teacher and the students has a far greater effect ( $d = 0.72$ ) than, for example, professional competence ( $d = 0.09$ ). According to Hattie, teachers’ commitment, which arises from

their enthusiastic actions and is complemented by empathy and positive expectations, creates an inspiring effect. In this sense, relatedness to learning contents arises from the relationship to the teacher (Leitz, 2015; Bevilacqua et al., 2019).

## CURRENT SITUATION IN SCHOOLS

Despite these results, international research on the current situation in European and US schools shows that closeness and empathy in teacher-student relationships neither are a standard practice nor even are considered a professional competence to focus on (Murray and Pianta, 2007; Brackett and Rivers, 2014; Allemann-Ghionda et al., 2017; Allen et al., 2018; Lanfranchi, 2018). In general, research on teacher-student-relationship and its impact on students' social and learning behavior especially at secondary school level is still not widespread enough to have a considerable effect on how teaching can be conceived and implemented (Wentzel, 2002; Verschuere and Koomen, 2012; Mainhard et al., 2018). Moreover, a significant link between inclusive school concepts and teacher-student-relationship quality is missing since empirical studies in inclusive schools are seldom considering this aspect (Baker, 2006; Roorda et al., 2011; Bolz et al., 2019a). In this sense, there is a lack of theoretically sound conceptualization in the context of research in inclusive schools.

On the other hand, international policy shifts toward inclusive education make it urgent to examine how schools respond to this change and what are the best conditions for schools and practitioners to achieve this ambitious goal (Mastropieri and Scruggs, 2001; Murray and Pianta, 2007; Hughes et al., 2013; Kiel and Weiß, 2015). In Switzerland, within the national effort to implement an inclusive school system, educational policies at state level set on different approaches. Indeed, the Swiss educational system lets its states, and in turn each school, freely decide upon how to conceive and implement inclusive education, especially at secondary schools. The new curriculum in the German speaking part of Switzerland for instance explicitly recommends:

*“Teachers [ensure] through sensitive leadership and as much individualized learning support as possible that all students can build up competencies according to their own prerequisites and possibilities. A relationship between teacher and student based on personal caring, mutual respect and trust is fundamental”* (Bildungsdirektion des Kantons Zürich, 2017, p. 11).<sup>1</sup>

Due to the diversity of the Swiss educational system, there is still a long way to go until a general and consistent inclusive school concept can be implemented. Moreover, the high selectivity in the Swiss educational system, with highly stratified school levels based on students' performance, clashes in many ways with the idea of inclusive schools (cf. Feyrer and Prammer, 2003; Altmeyer et al., 2018). As a result, a fundamental (ideological or structural) incompatibility between the new inclusion mandate and the longstanding culture-specific selection mandate of the Swiss school system makes

it particularly challenging implementing inclusive pedagogy at secondary level. At this point the actual state in Swiss inclusive secondary schools should be evaluated to deeply understand what is already working and how, and what, instead, should be changed.

## CONCEPTUALIZING TEACHER-STUDENT-RELATIONSHIP QUALITY IN RESEARCH

As explained so far, research tradition in developmental and cognitive psychology field has shown that teacher-student relationships have a considerable impact on students' social, psychological, and cognitive development. Especially in inclusive learning environments, they play a crucial role for meeting at best students' individual needs and potential. In particular, emotional aspects of such relations, i.e. emotional support, are considered a mark of quality in teacher-student relationships. Considering that, a desirable research goal will be focusing on purely emotional aspects of teacher-student relationships. In doing so, two important dimensions will be considered as the ones which can distinguish at best those emotional components already highlighted by past research. Hence, a list of characteristics of teacher-student-relationship quality, as mentioned in section “State of Research and Measurement on Teacher-Student-Relationship,” will be subsumed in two big indicators, *emotional resonance* (i.a.w. Leitz, 2015) and *shared intentionality* (i.a.w. Tomasello et al., 2005).

The term *emotional resonance* leans on Leitz' research (2015) on teacher-student-relationship. It is one of five relationship dimensions included in her project, each related to professional and didactic competences, too. In contrast, a focus just on emotional aspects of teacher-student relationships brings us to narrow down Leitz' construct, choosing only those specific elements which better represent teachers' emotional support based on empathy and closeness to their students. As a result, we advocate for an adapted construct of “emotional resonance,” which embraces teacher's empathy, his or her interest for each student's concern or need, and the closeness he or she builds up to students. This also implies teacher's capability to deeply understand each student's current emotional state and teacher's appropriate responsiveness to it. The adapted construct “emotional resonance” rests upon the attachment theory.

The second dimension, *shared intentionality*, bears upon research within the cognitive psychology field on neuronal synchrony between teachers and students by strengthening the idea that a face-to-face interaction boosts attention on, and retention of new learning contents. Choosing the term “shared intentionality” according to the work of Tomasello et al. (2005) aims to point out the quality of teacher-student interactions, in other words the capability, during interactions, to understand each other's intentions, the willingness to support each other for achieving a learning goal and at last the motivation to share emotions.

The basic question in researching on emotional aspects in teacher-student relationships will be about *what role relationship*

<sup>1</sup>Translation by the authors.



quality is playing in inclusive secondary schools and what is its impact on each student's inclusion at school.

## CONCLUSION

International research could widely prove how important teacher-student relationships are for students' social, psychological, and cognitive development. However, the biggest challenge remains the clear identification of what a teacher-student-relationship implies, as well as a precise definition of its single characteristic, that can underline its quality, and finally methodological consistence. The emotional aspects of such relationships resulted in having a stronger impact on students' engagement and achievement compared to the impact, that teachers' professional and didactic competences can have. Hence, emotional aspects are considered a mark of quality of teacher-student relationships. In this sense teachers' empathy and closeness to their students make a difference. These results are fundamental if we account for students to cope with a period of greater emotional instability and give them the chance to build up identity in a healthy way. Not to mention the fact that, in inclusive learning environments, where the range of students' special educational needs becomes bigger and more complex, empathy and closeness can play a crucial role considering that students with special educational needs are tendentially more at risk of isolation or victimization in inclusive schools (Murray and Pianta, 2007; Pijl et al., 2008; Koster et al., 2010; DeVries et al., 2018). So, a deeper understanding of students' needs, and potential, based on real engagement, warmth, and closeness, is important at any age but in inclusive learning environments it should be one of the key components to focus on. Nonetheless, international research could already show how difficult it is for teachers at secondary school level to get involved with their students. These results are problematic in the face of the increasing trend toward inclusive schools whereas empirical studies in this field are seldom considering teacher-student-relationship quality. Where a significant link between inclusive educational concepts and relationship-quality is missed, there is a questionable lack of theoretically sound conceptualization in that research context. This, in turn, makes the implementation of inclusive secondary schools susceptible to mistakes. In addition, an ideological incompatibility (reflected in some school structures) between the inclusion idea on one side and the high selectivity of educational systems on the other side, makes it even more challenging to apply a consistent inclusive secondary school concept at national level.

Considering that, this paper aims to draw particular attention to two dimensions, emotional resonance, and shared

intentionality, considering them as distinctive elements of teacher-student-relationship quality, which can easily and clearly delineate its emotional aspects. Both dimensions bear on two accredited theories in the field of interpersonal psychology, which take into account mutually influencing behavior mechanisms, like emotional safety and joint attention, at the heart of learning processes. *Emotional resonance*, as presented in this paper, embraces teacher's empathy, teacher's interest for each student's concern or need, and the closeness teachers build up to students. This also implies the teacher's capability to deeply understand each student's current emotional state and the teacher's appropriate responsiveness to it. This dimension is an adapted version of Leitz' construct (2015) and rests upon the attachment theory. *Shared intentionality* dates from research on joint attention particularly referring to the work of Tomasello et al. (2005). It points out the teacher's capability to understand students' intentions during interactions, the teacher's willingness to support and share emotions with students in order to let them achieve a learning goal.

The suggested approach aims to give a contribution to school development and teaching quality considering the significant impact emotions have on students' learning and psychosocial development. In the context of inclusive environments, where students' needs become even more heterogeneous and school dynamics more challenging, highlighting the role of teachers' emotional support in interaction with their students and give some insides of its implications for each student's life, could offer a further opportunity for schools to realize truly inclusion.

## DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author/s.

## AUTHOR CONTRIBUTIONS

GP outlined the submission. RL revised the original version. Both authors contributed to this publication and will jointly contribute to the data collection.

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**Conflict of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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