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2. INTERPERSONAL RELATIONSHIPS AND STUDENTS' ACADEMIC AND NON-ACADEMIC DEVELOPMENT

What Outcomes Peers, Parents, and Teachers Do and Do Not Impact

INTRODUCTION

The present chapter integrates theory and research in the area of interpersonal relationships in the academic context. It examines why interpersonal relationships are important, how relationships assist outcomes, how relationships can be a useful lens through which to understand educational phenomena, the role of interpersonal relationships in salient achievement motivation theory, recent findings from a multi-study research program, and a summary of 'connective instruction' as an approach to building interpersonal relationships into the everyday course of pedagogy.

THREE MAJOR INTERPERSONAL RELATIONSHIPS IN STUDENTS' LIVES: PARENTS, TEACHERS, AND PEERS

Three major relationship sources are influential in students' academic and non-academic lives: parents/caregivers, teachers, and peers. Each is linked significantly to students' healthy functioning and development. In terms of parents/caregivers, better academic functioning has been associated with parents' positive expectations for their child, the academic goals parents hold for the child, consistent feedback on the child's behavior and performance, and the educational values and standards they hold for their child (see Martin & Dowson, 2009 for a review). Empirical work by Mansour and Martin (2009) showed the positive role of parental involvement in students' academic engagement. This is supported by other recent research demonstrating the significant link between parental involvement and educational outcomes (Bempechat & Shernoff, 2012; Pomerantz & Moorman, 2010).

The role of the teacher is also influential in students' academic and non-academic development (Martin, 2013; Martin & Dowson, 2009; Pianta, Hamre, & Allen, 2012; Wentzel, 2010). Students of the view that their teacher cares for them also report learning more (Teven & McCroskey, 1997). In earlier years, adaptive relationships with teachers are associated with enhanced social, cognitive, and language development among young children (Kontos & Wilcox-Herzog, 1997).

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Students' feelings of being accepted by the teacher have been linked to positive emotional, cognitive, and behavioral engagement (Connell & Wellborn, 1991). Similarly, teacher warmth is associated with student confidence (Ryan & Grolnick, 1986). In terms of autonomy-supporting practices, teachers who encourage student autonomy instill greater motivation in their students (Flink, Boggiano, & Barrett, 1990).

The third major relationship source is peers, who are also significantly linked to academic development (Juvonen, Espinoza, & Knifsend, 2012). Positive peer relationships are the basis of much research attesting to their benefits for young people's academic and non-academic functioning (e.g., Juvonen, 2006; Martin & Dowson, 2009; Wentzel, 2010). In terms of motivation and engagement, for example, it has been shown that adolescents immersed in positive interactions with peers are also higher in motivation (e.g., Furrer & Skinner, 2003), evince greater engagement, and demonstrate higher academic performance (e.g., Liem & Martin, 2011).

THE IMPORTANCE OF INTERPERSONAL RELATIONSHIPS

There are numerous benefits attributed to the role of positive interpersonal relationships. Positive interpersonal relationships have been proposed as a buffer against stress and risk, instrumental help for tasks, emotional support in daily life, companionship in shared activities, and a basis for social and emotional development (Argyle, 1999; ; Battistich & Hom, 1997; De Leon, 2000; Gutman, Sameroff, & Eccles, 2002; Martin, 2013; Martin, Marsh, McInerney, & Green, 2009; Pianta, Nimetz, & Bennett, 1997).

Relatedness also positively impacts students' motivation, engagement, and achievement by way of its positive influences on other self-processes relevant to academic outcomes (Connell & Wellborn, 1991). For example, in the context of a student's life, positive interpersonal attachments to parents, teachers, and peers foster healthy social, emotional and intellectual functioning, as well as positive feelings of self-esteem and self-worth (Martin & Dowson, 2009).

HOW DO INTERPERSONAL RELATIONSHIPS ASSIST STUDENTS' OUTCOMES?

As reported in Martin (2013) and Martin and Dowson (2009), there are numerous theories and conceptions seeking to explain how interpersonal relationships may assist student outcomes. It has been suggested that social interactions teach students about themselves and about what is needed to fit in with a particular group in the school or classroom (Wentzel, 1999). Additionally, students develop beliefs, orientations, and values that are consistent with their relational environment (Ryan & Deci, 2000). In this way, relatedness in the academic domain teaches students the beliefs, orientations, and values needed to function effectively in academic environments (Ryan & Deci, 2000). These beliefs then function to direct behavior in the form of enhanced goal striving, persistence, and self-regulation (Wentzel, 1999). Through positive relationships, students not only learn that particular beliefs

are useful for functioning in school and the classroom, they also internalize beliefs valued by significant others such as teachers and parents (Wentzel, 1999). In the academic context, for example, good relationships with a particular teacher have a good probability of leading students to internalize some of that teacher's beliefs and values (Martin & Dowson, 2009). Importantly, relatedness is also an important self-system process in itself (Martin, 2013; Martin & Dowson, 2009). For example, positive relationships have an energizing function on the self, working to activate positive mood and affect (Furrer & Skinner, 2003). This energy gained from positive interpersonal relationships provides an important pathway to motivation and engagement (Furrer & Skinner, 2003; Martin & Dowson, 2009).

Further insight into how relationships yield their positive impacts is provided by the 'need to belong' hypothesis. This proposes that "human beings have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships" (Baumeister & Leary, 1995, p. 497). When this need is fulfilled, its fulfillment gives rise to positive emotional responses. These positive emotional responses are believed to adaptively 'drive' students' achievement behavior including their self-regulation, participation, response to challenge, and strategy use (Meyer & Turner, 2002).

INTERPERSONAL RELATIONSHIPS AS A LENS THROUGH WHICH TO UNDERSTAND EDUCATIONAL PHENOMENA

Interpersonal relationships may also serve as a useful lens through which to understand diverse theories of achievement motivation. Hence, relatedness may provide a useful tool with which to view and understand behavior in the classroom and to address any motivation and engagement issues in the classroom that may be 'other' related (Martin & Dowson, 2009). For example, adjustment and settling difficulties in school have been interpreted in terms of the failure of the learning environment to meet a student's need to belong (Wentzel, McNamara Barry, & Caldwell, 2004).

Because relatedness centrally accommodates the interconnectedness of social, academic, and affective dimensions of the student, by implication, recognition of relatedness on these terms demands that educational programs also recognize this interconnectedness (Martin & Dowson, 2009). Accordingly, the concept of relatedness can provide the impetus for educational programs to accommodate 'the whole self' and its place in the relational academic context. More broadly, because positive relationships may be deemed as valued human outcomes in their own right, they are helpful for better understanding human functioning more widely.

INTERPERSONAL RELATIONSHIPS IN SALIENT ACHIEVEMENT MOTIVATION THEORIES

In 2009, Martin Dowson and I reported on a somewhat expeditious search of the Education Resources Information Center (ERIC) database. The search was limited to publications that were: (a) journal articles, (b) peer reviewed, (c) dealing with

motivation and/or achievement as keywords, (d) written in English, and (e) published since 2000 (inclusive). Through searches of keyword and/or mapping onto subject headings, this search identified approximately 1500 articles dealing with "self-efficacy", "self-worth/self-esteem", "achievement goals", "goal orientation", "attribution/s", "expectancy/ies", and "self-determination". We considered 'relationships' in the context of theories of: Attribution, Goals, Self-efficacy, Expectancies and Values, Self-worth, and Self Determination.

Attribution theory focuses on the causes ascribed to outcomes and events in one's life and the impact of these causal attributions on behavior, affect, and cognition (Weiner, 1986, 1994). From a relatedness perspective, personal attributions may be learnt from the attributional styles of others. Additionally, the specific consequences of attributions (such as a sense of personal control) can also be developed through feedback from and observation of significant others (Hareli & Weiner, 2000, 2002). *Goal theory* focuses on the 'why' of behavior, or reasons for doing what one does (Elliot, 2005; Maehr & Zusho, 2009). From a relatedness perspective, the 'why' can be communicated through the values and expectations of significant others (working at individual, group, and organizational levels) (Martin & Dowson, 2009). *Self-efficacy* refers to a belief in one's capacity and agency to achieve a desired outcome (Bandura, 1997, 2006; Schunk & Miller, 2002). From a relatedness perspective, this sense of capacity and agency can be instilled through direct or vicarious influence, modeling, and open communication from others (Bandura, 1997). Following on from this, *expectancies* and *values* have also been substantively linked to socializers' beliefs, attitudes, and behaviors (Eccles, 1983; Wigfield & Eccles, 2000; Wigfield & Tonks, 2002). *Self-determination theory* focuses on the psychological need for relatedness which is satisfied through the warmth, support, and nurturance of significant others (Deci & Ryan, 2000; La Guardia & Ryan, 2002; Reeve, Deci, & Ryan, 2004). Hence, SDT has relatedness as a pillar. *Self-worth motivation theory* focuses on the link between worth and achievement (Covington, 1992, 1998). It demonstrates that this link is in part determined by relationships in the child's life in which worth, affirmation, and approval are communicated in either conditional or unconditional ways. Taken together, salient achievement motivation theories directly or indirectly rely on or accommodate interpersonal relationships as an important part of their operational and explanatory processes.

RECENT FINDINGS FROM A RESEARCH PROGRAM INVESTIGATING INTERPERSONAL RELATIONSHIPS

Over the past five years, our research program has investigated diverse aspects of interpersonal relationships and their impact on various academic and non-academic outcomes. This research has traversed multilevel modeling, the role of relationships with teachers, peers and parents, the impact of personality, and even the nature of distant relationships (such as parent-child relationships for students in residential education). An important focus of this research has been to disentangle

what outcomes teachers, parents, and peers do and do not impact. Salient findings from this research program are described.

Teacher-student Relationships in the Educational Ecology

Before turning to the impact of interpersonal relationships in the classroom and the role of teacher-student relationships in students' academic and non-academic outcomes, it is important to address the somewhat neglected issue of how much variance in teacher-student relationships there is from student-to-student, class-to-class, and school-to-school. The answer to this question holds significant implications for the level at which to direct educational intervention aiming to enhance teacher-student relationships. For example, if there is substantial variance in teacher-student relationships from class to class, then whole-class intervention is appropriate. If there is substantial variance from student to student, then more individual approaches to relationships are also indicated. This question was the focus of a study by Martin, Bobis, Anderson, Way and Vellar (2011).

Their study was predicated on the fact that education is a hierarchically structured domain, with students nested within classes that are nested within schools. Martin et al. (2011) explored variance for different psycho-educational phenomena at different levels of this hierarchical education structure. A total of 4,383 middle school students were sampled from Year 5 (22%), Year 6 (22%), Year 7 (28%), and Year 8 (28%), located in 257 classrooms, from 47 Australian schools. Multilevel analyses conceptualized a three-level model: student/residual at the first level (Level 1, L1), classroom at the second level (Level 2, L2), and school at the third level (Level 3, L3). Their analyses showed that 88% of the variance in teacher-student relationships was between students (or, at the residual), while 12% of the variance was between classrooms. Interestingly, there were negligible differences between schools in teacher-student relationships after accounting for student- and classroom-level variance.

The implication of these findings is that the bulk of variance in teacher-student relationships resides at the student level – suggesting that teacher-student relationships very much vary from student to student. This also signals something of a challenge for the teacher in ensuring connections with every student in the classroom. Some variance resided at the classroom and thus there is some merit in whole-class approaches to connecting with students – but not at the expense of developing more individual connections with each student.

Impact of Relationships with Teachers, Parents and Peers

Having established that individual student-to-teacher relationships explain the bulk of variance in interpersonal connections between student and teacher, the question now is: what are the effects of teacher-student relationships on student motivation and engagement and how do these effects compare with the impacts of parent-child relationships and peer relationships? A further question connected to this is: do

different stakeholders have distinct impacts on different academic and non-academic outcomes?

In a study of 3,450 high school students, Martin and colleagues (2009) found that teacher-student relationships explained the bulk of variance in motivation and engagement. Parent-child relationships accounted for the next greatest variance, followed by same-sex peers, with relatively less variance explained by opposite-sex peers. In further analysis of other outcome variables, relationships with teachers, parents and same-sex peers explained significant variance in literacy and numeracy, whereas opposite-sex peer relationships were negatively associated with these outcomes (Martin, 2012).

Interestingly, however, relationships with opposite peers had significantly positive connections with non-academic self-concept in the form of mental health. Thus, whilst not being particularly adaptive for academic outcomes, the role of opposite-sex peers was clearly adaptive for non-academic outcomes – thus signaling the overarching desirability of interpersonal relationships across multiple dimensions of students' academic and non-academic lives.

In a complementary study, Martin and colleagues (2007) examined the same sample of 3,450 high school students and their relationship with teachers and parents; importantly, in this study, teacher and parent relationship factors were entered simultaneously into the model thereby enabling researchers to estimate unique variance attributable to teachers and unique variance attributable to parents. Findings indicated that relationships with teachers and parents significantly predicted motivation, engagement, self-concept, and general self-esteem. These results thus further demonstrated the distinct role that different relationship sources play in student outcomes. They also underscored the importance of different sources of interpersonal support for adaptive academic and non-academic functioning. Thus, while positive teacher-student relationships are beneficial, positive parent-child relationships further add to the student's functioning.

Relationships and School Absenteeism

In a subsequent study of 8,300 high school students, the role of peers was included alongside teachers and parents in modeling in order to establish their unique effects on enjoyment of school, class participation, and absenteeism (Martin, 2012). Not surprisingly, relationship with teachers, parents, and peers positively predicted school enjoyment and class participation. Interestingly, however, after controlling for shared variance with peers and parents, only teacher-student relationships significantly predicted absenteeism (negatively; such that poorer relationships with teachers predicted higher absenteeism). In explaining this finding, Martin suggested that most students can navigate through the day staying away from most students with whom they have negative relationships. However, if they have a negative relationship with their classroom teacher, they cannot avoid that teacher. Given the inescapable nature of this poor

relationship, it may be that school absenteeism is seen by the student as the most viable solution.

Same-sex and Opposite-sex Peers

Having dedicated much focus to teachers and parents, our research program oriented more closely to peer relationships and their impact on student outcomes. In particular, we investigated the role of peers in students' academic engagement and the subsequent impact of relationships and engagement on student outcomes (Liem & Martin, 2011). We posed the following questions: does engagement mediate the link between peer relationships and academic and non-academic outcomes and, are there different effects for same-sex vs. opposite-sex peer relationships? Findings from a study of 1,436 high school students indicated the rather substantial role played by same-sex peers in predicting academic engagement, academic performance, and general self-esteem. Interestingly, the role of opposite-sex peers was more focused on non-academic outcomes, with a significant direct link to general self-esteem but no link to academic performance. Once more, these findings suggest that students' relationships with different significant others have distinct effects on different academic and non-academic factors. Thus, specific outcomes are impacted differently by relationships with same-sex peers and opposite-sex peers.

Balancing Multiple Teacher-Student Relationships in the Classroom

In the classroom context it is challenging for the teacher to connect to each student in a qualitatively intensive and equal way. As a student connects with the teacher, that student must also accept that the teacher needs to connect with other students in the class. Thus, there is tension between how much the teacher must attend to an individual student and how much that teacher must attend to other students in the class. This tension may represent something of a zero-sum game in that time dedicated to one student is time not dedicated to other students. What are the implications of this for students' motivation and engagement?

Research reported by Martin (2012) examined the extent to which the teacher's interest in a student impacts that student's motivation and engagement and the extent to which the teacher's interest in the class impacts the student's motivation and engagement. In this study of 4,383 middle school students, respondents were asked to report on the teacher's interest in them and to also report on the teacher's interest in other students in the class. Under focus was the relationship between the two reports and students' motivation and engagement. It was found that the teacher's interest in the individual student significantly predicted that student's motivation and engagement; but that the teacher's interest in the class had no impact on the individual student's motivation and engagement.

This finding suggests a very subjective experience of the teacher such that a student's motivation and engagement rests much more on the teacher's interest in

that student than the teacher's interest in the class as a whole. This very subjective and individualized impact of the teacher demonstrates the challenging task ahead of teachers as they seek to balance their attention to each student in their classroom whilst ensuring academic motivation and engagement is sustained.

The Quality of Distant Parent-Child Relationships

Thus far, the discussion has centered on physically proximal relationships occurring in the classroom and in the home. More recent research has investigated distant relationships (Papworth, Martin, Ginns, Liem, & Hawkes, 2012). With a sample of 5,198 high school students, this research explored the nature of parent-child relationships for students in boarding school and compared these relationships with students in day school. The students in boarding school are physically distant from their parents and the students in day school are physically proximal to their parents. Under question was the extent to which 'absence makes the heart grow fonder'.

In fact, boarding school students reported significantly more positive relationships with their parents than did the day school students. When asked to rate their relationship with teachers, there was no significant difference between boarders and day students. Interpreting these findings, Papworth and colleagues (2012) posited that the daily challenges of homework and the like were now the responsibility of the boarding school. Thus, areas of parenting where there is typically conflict between parent and child are no longer a source of conflict for boarding students. In addition, with many negative parent-child interactions no longer present, there ensued greater scope for positive interactions, thus further amplifying positive dimensions of the parent-child relationship for boarders.

The Role of Personality in Interpersonal Relationships

In the aforementioned Papworth et al. (2012) study, we also examined personality factors that predict good parent-child and good teacher-student relationships. The study assessed students on the Big 5 personality factors: extraversion, conscientiousness, neuroticism, openness, and agreeableness (McCrae & Costa, 1996). Across the two relationship dimensions (with parents and with teachers), two personality factors were consistently influential: agreeableness and conscientiousness. Conscientiousness is associated with responsibility, reliability, effort, and the drive to achieve and complete goals. Agreeableness refers to the extent to which an individual feels part of a larger community and is concerned with interpersonal relationships (McCrae & Costa, 1996). Thus, attending to students' agreeableness and conscientiousness may be an avenue of promoting more positive interpersonal connectedness. Although some commentators claim that personality is relatively fixed, other work (e.g., under free trait theory; Little, 1996; Little & Joseph, 2007 and in intervention meta-analyses; Jorm, 1989) suggests personality is not immutable. In addition, the reader is directed to the

review by Ginns and colleagues (2011) who describe how individuals can be taught to change behavior, cognition and affect in the face of personality attributes that might otherwise leave them 'stuck'.

INTEGRATING RELATIONSHIPS INTO THE EVERYDAY COURSE OF PEDAGOGY: CONNECTIVE INSTRUCTION

In terms of applications to practice, for the purposes of the present chapter, the discussion will focus on teacher-student relationships. To the extent that interpersonal relationships are an important factor in student outcomes, teachers who develop their practice in relational terms are more likely to facilitate motivated and engaged students (Martin & Dowson, 2009). The concept of 'connective instruction' was developed to provide guidance on how to effectively integrate interpersonal relationships into the everyday course of pedagogy (Martin, 2010, 2013; Martin & Dowson, 2009; also see Munns, 1998).

Given the very full curriculum in most education systems, it is a reality that teachers do not have a great deal of time to solely dedicate to building relationships with students. It is also realistic to advise that 'perfect' teacher-student relationships are probably not needed (or possible) across the student body. Instead, for most students there will be a need for a positive, functional, working relationship with the teacher – and for some students (e.g., those with additional needs), the relationship may be somewhat closer to ensure individual needs are better met. Thus, the focus here is on how to build positive interpersonal relationships into the everyday course of pedagogy.

As noted, Martin proposed 'connective instruction' as one such approach. Connective instruction is that which connects the teacher to students on three levels: interpersonal, substantive, and pedagogical. The 'interpersonal relationship' refers to the connection between the student and the teacher (i.e., the human connection). The 'substantive relationship' refers to the relationship between the student and the subject matter, content, and nature of tasks in the teaching and learning context. The 'pedagogical relationship' refers to the relationship between the student and the teaching or instruction itself. Considered another way, Martin (2013) proposed that connective instruction refers to the 'who' (interpersonal), 'what' (substantive), and 'how' (pedagogical) of the teacher-student connection. Thus, students are optimally motivated and engaged when they connect to 'who' the teacher is, 'what' the teacher is saying and 'what' tasks and activities are being administered, and 'how' the teacher administers these messages and tasks. In more creative terms, one may liken a terrific lesson to a terrific musical composition: a great singer ('who'), a great song ('what'), and great singing ('how'). As Martin and Dowson (2009) report, connective instruction explicitly positions relatedness as an instructional need and that academic development is promoted when this need is met.

Martin (2011) has developed self-audit sheets for teachers on connective instruction (see Appendices A, B, and C; also downloaded from www.lifelongachievement.com). Each self-audit sheet presents an indicative ten

items for teachers to consider. These items tap into the three dimensions of connective instruction. Thus, a teacher is able to score him/herself up on ten features for each of the 'interpersonal relationship', 'substantive relationship', and the 'pedagogical relationship'. This enables ready identification of strengths for the teacher to sustain – and areas of improvement on which the teacher might like to focus that term or semester.

CONCLUSION

There are substantial data showing that positive interpersonal relationships are important for healthy human functioning; a source of happiness and a buffer against stress; and, instrumental in help for tasks, challenges, and emotional support in daily life. There is also a long line of research and theory emphasizing the substantial role that interpersonal relationships play in students' academic success and engagement and motivation at school. More recent research has progressed current understanding of the distinct roles that different people play in impacting distinct dimensions of students' academic lives. Recent theorizing has also posited a multidimensional framework ('connective instruction') that can assist educators to better integrate relatedness into the everyday course of pedagogy and classroom life. Taken together, research, theory, and practice in the area of relationships attest to the importance of interpersonal connections for healthy human functioning and effective ways to optimize these connections.

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APPENDIX A: CONNECTIVE INSTRUCTION – INTERPERSONAL RELATIONSHIP

Students' relationship with the teacher ('the Singer')
(reproduced with permission from Lifelong Achievement Group – visit www.lifelongachievement.com to download)

	STRENGTH "I do this well and it is a part of my regular practice"	***NOT APPLICABLE/ RELEVANT/ IMPORTANT***	***COULD DO BETTER*** "I don't do this very much or very well"
	TICK ONE (✓)		
I make an effort to listen to my students' views			
A good teacher-student relationship is one of my priorities			
I give my students input into things and decisions that affect them			
I enjoy working with young people			
Where appropriate I try to have a sense of humor with my students			
I get to know my students			
I explain the reasons for rules that are made and enforced			
I show no favoritism			
I accept my students' individuality			
I have positive but attainable expectations for students			
TALLY			

APPENDIX B: CONNECTIVE INSTRUCTION – SUBSTANTIVE RELATIONSHIP

Students' relationship with the message/content/assessment ('the Song')
(reproduced with permission from Lifelong Achievement Group – visit www.lifelongachievement.com to download)

	STRENGTH "I do this well and it is a part of my regular practice"	***NOT APPLICABLE/ RELEVANT/ IMPORTANT***	***COULD DO BETTER*** "I don't do this very much or very well"
	TICK ONE (✓)		
I set work that is challenging but not too difficult			
Where possible, I set work that is important and significant			
I inject variety into my teaching content			
I inject variety into my assessment tasks			
I provide students with interesting work			
I use broad and authentic (relevant and meaningful) assessment			
I try to ensure that my teaching content is not boring to young people			
In class and assigned work, I reduce monotony as much as possible			
Where possible I draw on material that is fun to learn			
Where possible I use material that arouses my students' curiosity			
TALLY			

APPENDIX C: CONNECTIVE INSTRUCTION – PEDAGOGICAL RELATIONSHIP

Students' relationship with the teaching/pedagogy ('the Singing')
(reproduced with permission from Lifelong Achievement Group – visit
www.lifelongachievement.com to download)

	STRENGTH "I do this well and it is a part of my regular practice"	***NOT APPLICABLE/ RELEVANT/ IMPORTANT***	***COULD DO BETTER*** "I don't do this very much or very well"
	TICK ONE (✓)		
I get students to do something well as much as possible and provide support needed to do this			
I have multiple indicators of success in schoolwork (marks, effort, group work, reaching goals, improve)			
I provide clear feedback to students focusing on how they can improve			
I make an effort to explain things clearly and carefully			
I inject variety into my teaching methods and reduce repetition or monotony			
I encourage my students to learn from their mistakes			
I aim for mastery by all students			
I show students how schoolwork is relevant and/or meaningful			
I make sure all students keep up with work and give opportunities to catch up or go over difficult work			
I don't rush my lessons or my explanations			
TALLY			