

Interpersonal Relationships in Education: From Theory to Practice

David Zandvliet, Perry den Brok,
Tim Mainhard and Jan van Tartwijk (Eds.)



SensePublishers

Interpersonal Relationships in Education: From Theory to Practice

ADVANCES IN LEARNING ENVIRONMENTS RESEARCH
Volume 5

Series Editors

Barry J. Fraser
Curtin University of Technology

Jeffrey P. Dorman
Australian Catholic University

Editorial Board

Perry den Brok, *Eindhoven University of Technology, The Netherlands*

Shwu-yong Huang, *National Taiwan University, Taiwan*

Bruce Johnson, *University of Arizona, USA*

Celia Johnson, *Bradley University, USA*

Rosalyn Anstine Templeton, *Marshall University, USA*

Bruce Waldrip, *University of Southern Queensland, Australia*

Scope

The historical beginnings of the field of learning environments go back approximately 40 years. A milestone in the development of this field was the establishment in 1984 of the American Educational Research Association (AERA) Special Interest Group (SIG) on Learning Environments, which continues to thrive today as one of AERA's most international and successful SIGs. A second milestone in the learning environments field was the birth in 1998 of *Learning Environments Research: An International Journal* (LER), which fills an important and unique niche.

The next logical step in the evolution of the field of learning environments is the initiation of this book series, *Advances in Learning Environments Research*, to complement the work of the AERA SIG and LER. This book series provides a forum for the publication of book-length manuscripts that enable topics to be covered at a depth and breadth not permitted within the scope of either a conference paper or a journal article.

The *Advances in Learning Environments Research* series is intended to be broad, covering either authored books or edited volumes, and either original research reports or reviews of bodies of past research. A diversity of theoretical frameworks and research methods, including use of multimethods, is encouraged. In addition to school and university learning environments, the scope of this book series encompasses lifelong learning environments, information technology learning environments, and various out-of-school 'informal' learning environments (museums, environmental centres, etc.)

Interpersonal Relationships in Education: From Theory to Practice

Edited by

David Zandvliet

Simon Fraser University, Canada

Perry den Brok

Technische Universiteit Eindhoven, The Netherlands

Tim Mainhard

Utrecht University, The Netherlands

and

Jan van Tartwijk

Utrecht University, The Netherlands



SENSE PUBLISHERS
ROTTERDAM / BOSTON / TAIPEI

A C.I.P. record for this book is available from the Library of Congress.

ISBN 978-94-6209-699-8 (paperback)

ISBN 978-94-6209-700-1 (hardback)

ISBN 978-94-6209-701-8 (e-book)

Published by: Sense Publishers,
P.O. Box 21858, 3001 AW Rotterdam, The Netherlands
<https://www.sensepublishers.com/>

Cover design by Jan van Tartwijk

Printed on acid-free paper

All rights reserved © 2014 Sense Publishers

No part of this work may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, microfilming, recording or otherwise, without written permission from the Publisher, with the exception of any material supplied specifically for the purpose of being entered and executed on a computer system, for exclusive use by the purchaser of the work.

CONTENTS

Foreword: Theory and Practice in Interpersonal Relationships in Education <i>Theo Wubbels</i>	vii
1. The Theory and Practice of Interpersonal Relationships in Education <i>David Zandvliet, Perry den Brok, Tim Mainhard and Jan van Tartwijk</i>	1
2. Interpersonal Relationships and Students' Academic and Non-academic Development: What Outcomes Peers, Parents, and Teachers Do and Do Not Impact <i>Andrew Martin</i>	9
3. Problem Behaviour and the Development of the Teacher-child Relationship in Special Education <i>Linda D. Breeman, Nouchka T. Tick, Theo Wubbels, Athanasios Maras and Pol A.C. van Lier</i>	25
4. Enhancing the Interpersonal Relationships in Teacher Education through the Development and Practice of Reflective Mentoring <i>Michael Dyson and Margaret Plunkett</i>	37
5. Navigating Middle Ground: A Spatial Perspective on the Borderlands of Teacher-student Relationships in Secondary School <i>Anneli Frelin and Jan Grannäs</i>	57
6. I Felt Safe to Be a Child, I Wanted to Learn: Locating Caring Respectful Relationships as Core Components in Enabling Learning Accessibility <i>Ann Higgins</i>	71
7. The Role of Role-taking: Social Perspective Taking and Interpersonal Relationships in Virtual Simulations <i>Aaron King, Geoff Marietta and Hunter Gehlbach</i>	95
8. The Role of Emotions and Interpersonal Relationships in Educational Reform: A Behaviour Management Case Study <i>Claire W. Lyons and Ann Higgins</i>	111

CONTENTS

9. Do Teacher-student Interpersonal Relationships Deteriorate over Time? An Investigation of Within-year Changes and Links with Autonomous Motivation in Indonesia <i>Ridwan Maulana and Marie-Christine Opdenakker</i>	133
10. Social Forces in School Teams: How Demographic Composition Affects Social Relationships <i>Nineke M. Moolenaar, Alan J. Daly, Peter J. C. Slegers and Sjoerd Karsten</i>	159
11. Learning Environment Experiences in Primary Education: Their Importance to Academic Engagement <i>Marie-Christine Opdenakker and Alexander Minnaert</i>	183
12. Learning Environments in Higher Education: A Study of Environmental Education Programming in Teacher Education <i>Carlos G. A. Ormond and David B. Zandvliet</i>	195
13. My Friends Made Me Do It: How Teens' Social Identity Influences Educational Outcomes <i>Heather E. Price</i>	213
14. Stimulating Autonomous Motivation in the Classroom: The Role of Interpersonal Teacher Agency and Communion <i>Lindy Wijsman, Tim Mainhard and Mieke Brekelmans</i>	231

THEO WUBBELS

FOREWORD

Theory and Practice in Interpersonal Relationships in Education

In 2012 on April 11-12, over 100 researchers and teacher educators from more than fifteen countries gathered in Vancouver (Canada) in a pre-conference of the Annual Conference of the American Educational Research Association. They met for the second *International Conference on Interpersonal Relationships in Education: ICIRE 2012*. The participants, just as in the first *ICIRE* in 2010 in Boulder Colorado, exchanged research results and discussed the conference theme. Based on the contributions to the first conference, my colleagues and myself edited a book sketching the state of affairs in research on interpersonal relationships in education on several levels of the educational system, such as between teachers and students and between principals and their teachers. The book also offered a rich variety of different theoretical perspectives (Wubbels, den Brok, van Tartwijk, & Levy, 2012). I'm very happy that now editors have succeeded in compiling an intriguing book with several of the very interesting contributions to the second *ICIRE*.

In order to foster productive learning environments that are characterized by supportive and warm interactions, research needs to show what actions teachers can use to help create such environments. Similarly we need more insight in what principals can do to make school environments good places for teachers to learn and develop. Educational and social psychology, teacher and school effectiveness research, communication and language studies and a variety of related fields, all have the potential to help explain how these constructive learning environment relationships can be developed and sustained. However, while the importance of interpersonal relationships in education has been appreciated for decades, research in this field is still young, with an increasing number of studies appearing in journals and books.

In our contribution to the recent second edition of the *Handbook of Classroom Management* (Wubbels et al., in press) we concluded that in order to understand what teachers in their classroom management behaviors can do to improve teacher-student relationships, further research on the interplay between the level of real-time moment-to-moment interactions and generalized perceptions of teacher-student relationships is needed. The

FOREWORD

teacher-student interactions (moment-to-moment time scale) are the primary engine of development for teacher-student relationships (macro-level outcomes). It is striking that up to now also only few studies in school settings on interactions in the field of learning environments research did gather data on the real-time scale of the micro level and looked at the interplay between the micro and the macro level. Therefore, I'm happy that in the current volume we find contributions that look at interpersonal relationships and at the same time at the moment-to-moment interactions that build these relationships. Thus, the current volume not only offers theoretical advances on the study of interpersonal relationships, but also insights to bring theory and practice better together. It demonstrates how constructive learning environment relationships can be developed and sustained in a variety of settings. Together, these contributions cover the important influence of the relationships of teachers with individual students, relationships among peers, and the relationships between teachers and their professional colleagues.

REFERENCES

- Wubbels, Th., Brekelmans, M., den Brok, P., Wijsman, L., Mainhard, T., & van Tartwijk, J. (in press). Teacher-student relationships and classroom management. In E. T. Emmer, E. Sabornie, C. Evertson, & C. Weinstein (Eds.), *Handbook of classroom management* (2nd ed.). Taylor and Francis.
- Wubbels, Th. Brok, P. den, Tartwijk, J., & Levy, J. (2012). *Interpersonal relationships in education: An overview of contemporary research*. Rotterdam/Boston/Taipei: Sense Publishers.

DAVID ZANDVLIET, PERRY DEN BROK, TIM MAINHARD AND
JAN VAN TARTWIJK

1. THE THEORY AND PRACTICE OF INTERPERSONAL RELATIONSHIPS IN EDUCATION

In 2010 the first International Conference on Interpersonal Relationships (ICIRE) was held in Boulder, Colorado. The best contributions of this conference were afterwards brought together in the book *Contemporary research on interpersonal relationships in education*, edited by Theo Wubbels and colleagues and published by Sense as part of the *Advances in Learning Environments Research* book series. Since the 2010 conference was such a success, in 2012 a second ICIRE conference was organized in Vancouver, Canada. During the Vancouver conference, over 100 researchers, scholars, teacher educators and others gathered and shared knowledge and experiences during keynote lectures, paper sessions, posters and round table sessions. The current book is a collection of contributions and ideas presented at the 2012 ICIRE conference. After the conference, researchers and authors worked with these ideas and further developed the chapters presented in this book.

The theme of this book: *Interpersonal relationships in education* includes a wide variety of the relationships between actors such as peer relationships in class, teacher and students, school leaders and teachers, teachers and parents. The quality of these relationships is essential for the healthy developments of teachers and students alike (Wubbels, Brekelmans, den Brok, & van Tartwijk, 2006). We know for example that teacher learning thrives when principals facilitate accommodating and safe school cultures.

Clearly, positive teacher-student relationships also contribute to student learning (Wubbels et al., 2006; in press). Educators, parents and students together understand that problematic relationships can be detrimental to the attainment of student outcomes and development (see the contribution by Andrew Martin in this volume). Productive learning environments are characterized by supportive and warm interactions throughout the class (Fraser, 2007; Wubbels et al., 2006): *teacher – student* and *student – student*. Whereas positive teacher-student relationships are important for every child, these are more than a necessary condition for the development of students living and studying in contexts in which there is poverty, inequality or unequal access to the learning opportunities. Promoting social justice, also depends on the quality of teacher-student relationships.

A variety of research perspectives help explain how these constructive learning environment relationships can be developed and sustained. This focus speaks to the *from theory to practice* focus of our work. Contributions for this book have been influenced by educational and social psychology, teacher and school effectiveness research, communication and language studies, and a variety of other fields. What

all of these perspectives have in common is the practical goal of improving the lives of students and the quality of their educational experiences. What follows here is a summary of the research and perspectives that are shared in the following chapters of book.

In chapter two, Andrew Martin sets the context for other chapters by integrating theory and research in the area of interpersonal relationships. His work examines why interpersonal relationships are important; how relationships assist outcomes; how relationships can be a useful lens through which to understand educational phenomena; and the role of inter-personal relationships in achievement motivation theory. Martin also shares his recent findings from a multi-study research program. Martin relates that 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. Martin goes on to relate the 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. Relatedness is also shown to positively impacts students' motivation, engagement, and achievement by way of its positive influences on other self-processes relevant to academic outcomes. For example, in the context of a student's life, positive interpersonal attachments to parents, teachers, and peers may foster healthy social, emotional and intellectual functioning, as well as positive feelings of self-esteem and self-worth.

In chapter three, Breeman and colleagues share research in the context of Special Education. Their research considers how vulnerable children can prosper from a positive teacher-child relationship. The aim of their study was to examine developmental links between teacher-child emotional closeness and behavioral problems in children with psychiatric disorders. The association between problem behavior and teacher-child emotional closeness development they examined at multiple intervals over an entire school year. Their results show that children's problem behaviors increased during the year, in contrast to teacher-child emotional closeness which remained relatively stable. Breeman et al. discuss how the higher initial levels of behavioral problems were associated with less teacher-child emotional closeness. Their results suggest that the teacher-child relationship is negatively affected by behavior problems in special education. The implications of these findings for children's development and prevention possibilities are also discussed.

Chapter four presents descriptive research on a model of reflective mentoring developed and implemented by Dyson and Plunkett as a way of enhancing interpersonal relationships between pre-service and mentor teachers involved in a school-based professional experience. Their process of reflective mentoring was developed as an alternative to the more traditional forms of supervision, which feature an intrinsic power relationship in which the student teacher is monitored and assessed by an experienced teacher or university lecturer. The process of reflective mentoring described by Dyson and Plunkett is seen as the underpinning

philosophical and procedural approach used within their primary teacher education program context. They relate how this process, within the school experience practicum, is part of an ongoing process involving the mentor teacher and the pre service teacher. It involves: support and guidance, a relationship built on trust, frequent conversations, the creation of a non judgemental environment and returning to issues and problems for further discussion. The case they describe demonstrates how the maintenance of positive interpersonal communications can impact learning outcomes within their program. The chapter further describes how pre-service teachers and their mentors are introduced to reflective mentoring through a range of approaches including modelling, continuous engagement with professional learning and a series of face to face discussion forums.

The benefits of positive teacher-student relationships are well established. For example, person-centered teacher variables are associated with positive student outcomes. In chapter five, Frelin and Grannäs use spatial theories to explore how teachers and students in secondary education view and navigate middle ground for achieving these positive and professional teacher-student relationships. Their research describes how teachers and students reason about the borderlands of teacher-student relationships and then navigate them. For example, Frelin and Grannäs describe how the teacher-student relationship is a professional one, and that while there is a need for teachers to have both professional closeness and professional distance there are limits to how close teachers and students can get without overstepping professional boundaries. These boundaries establish what is (in) appropriate in these relationships. In their work, Frelin et al. specifically use the term *middle ground* to denote the space in which it will be possible for individuals to emerge in ways that extend beyond given teacher and student roles.

Chapter six presents a longitudinal study exploring the factors affecting learning accessibility for children and adults. In this work, Higgins describes learning accessibility as ‘the individual’s personal circumstances and experiences located within and across contexts which impede or support that person in accessing learning’. Her study examines the impact on individuals and settings when a school moves beyond its traditional role and responds to the identified needs of the community. The chapter describes a case study of the Kileely Community Project (KCP) that evolved as a grass-roots response to the learning needs of children and adults in low socio-economic status (SES) areas. The chapter describes the context, evolution and impact of the initiative and firmly locates caring respectful interpersonal relationships as a key component in the development and sustainability of the project and the mechanism through which learning accessibility was addressed.

Because education is a fundamentally social enterprise, learning how to enhance the social interactions between teachers, administrators, students, and peers is essential to K-12 and higher education. Thus, improved interpersonal relationships should generate better educational outcomes. In chapter seven, King et al. explore theoretical pathways through which role-taking might improve interpersonal relationships. In their work, they articulate hypotheses connecting role-taking: an approach to taking the perspective of others in order to improve

relationships. They then provide an illustrative example of a virtual environment from the Social Aspects of Immersive Learning (SAIL) project. Through this example, they describe how these ideas about interpersonal relationships might be tested and how the resulting knowledge could lead to improved relationships in educational contexts. For example, King et.al. relate that by taking the perspective of others we might better understand them, and that understanding will pave the way for smoother interactions and relationships. With the development of virtual environments, people can now *walk a mile in the shoes of others* and take the perspectives of others more flexibly, efficiently, and authentically than ever before. Their work describes how virtual environments can allow for the systematic evaluation of these role-taking exercises.

Some educational contexts appear to give rise to more challenging behaviour than others. In particular, the tendency for challenging behaviour to be an issue in contexts of social and economic disadvantage has been noted, and in some cases attributed to a 'disconnect' between the middle class world of teachers and the working class world of students. Chapter 8 explores a classroom management intervention that took place within such a context. Lyons and Higgins describe their work with an intervention, called the Working Together Project, that took place in three schools in Ireland, each of which is located within an area of socio-economic disadvantage. Lyons and Higgins describe how their work was a research and intervention project that grew from an educational network of schools serving the learning needs of children living with urban disadvantage. The project was designed as a practical response to the network's request for research and intervention in the area of classroom management. The project also had a strong focus on interpersonal relationships and emotions. In their research, the data yielded by the project are explored in terms of what they reveal about the nature of emotions and relationships at school and their impact on classroom management.

The study presented in chapter nine investigated within-year changes in teacher-student relationships (TSR) and links with autonomous motivation among first-grade secondary school students in Indonesia. Maulana and Opendakker use self-determination theory as a theoretical framework to study these relationships and autonomous motivation. In their study, teacher involvement, structure, and autonomy support were key factors and student surveys were conducted in five waves during the school year, for 504 students in the west of Indonesia. Multilevel growth curve modeling was also applied during their data analysis. Their findings, nconsistent with general findings in the western educational context, found that the quality of teacher-student relationships in Indonesian classrooms increased over time. Maulana and Opendakker describe that relational factors are significant predictors of autonomous motivation. Differences between the Indonesian and western context in teacher student relationships are also discussed.

Research on social networks in schools is also increasing rapidly. Yet, knowledge on how demographic characteristics of teachers and schools affect the pattern of social relationships among educators is scarce. Chapter ten examines the extent to which teachers' work related social networks are affected by teacher and school demographic characteristics. In a study conducted by Moolenaar et al.

survey data were collected among 316 educators from 13 elementary schools in the Netherlands. Using social network analysis, they analyzed the effect of teacher and school demographics on individual teachers' probability of discussing work with their colleagues. The findings indicate that the probability of having work related relationships depends on gender, grade level, working hours, formal position, and experience. The study also discovered that educators tend to prefer relationships with educators of the same gender and from the same grade level. Moreover, years of shared experience as a school team appeared to affect the likelihood of teachers discussing their work together.

Supportive teacher-student interactions are a characteristic of a powerful learning environment and are thought to contribute to student learning. In Chapter eleven, Opendakker and Minnaert relate how self-determination theory, teacher support and teacher involvement/relatedness play an important role in the fulfillment of students' basic psychological needs and, therefore, to students' motivation and engagement for school. In addition, they emphasize the importance of students' perceptions of their learning environment. Their study is an investigation as to whether students' perceptions of their teacher in relation to the satisfaction of their psychological needs of autonomy, competence and relatedness could explain differences in the (development of) students' academic engagement at the end of primary education. Using multilevel modeling, their study pays attention to the unique and joint effects of the learning environment as well as to student gender, ethnic-cultural background and prior academic engagement. Their results reveal important significant positive effects from all learning environment experiences on the development of students' academic engagement.

Chapter twelve reports on an alternative methodology to evaluate environmental education programs; one that acknowledges the importance of psychosocial and relational factors in educational settings (i.e. learning environment) that can influence students' learning. The study by Ormond and Zandvliet gives a description of place-based education, learning environment research, and environmental learning and discusses how learning environments research has important insights for the field of environmental education. The study illustrates that a positive learning environment as perceived by the student is a predictor of greater learning and that place-based environmental education settings tend to have more positive learning environments. The study by Ormond and Zandvliet also validates the administration of a distinctive questionnaire: the Place-based and Constructivist Environment Survey (or PLACES) for use in Post-secondary education environments. Supporting focus groups and interviews completed the description of these unique and place-based learning environments and the role of interpersonal relationships in supporting student learning.

The social network of an individual is shown to highly condition people's life outcomes: from education to earnings to health outcomes. Although sociologists differ on their ideas as to how social capital is developed, the educational outcomes from it are clear: the social relations that students have with their friends, peers, parents, and parents' network influence their educational aspirations, attainment, and achievement. Chapter thirteen presents a study by Price that focuses on how

the social identities of teenagers influence educational attainment and aspirations. She describes how these relations can be formed at the individual-friend level or at the group-friend level. The study by Price maintains a very tangible definition of peers as 1) those people that teens name as friends and 2) those other teens that teens associate within their activity groups. With these definitions, and the corresponding data about friends and activity groups (or crowds). Price asserts that this allows a more thorough analysis of the association of peers with social identity and that the mechanisms related to schooling outcomes can be better understood. In her study, the correlates of personal identity, namely the influence of personal attitudes and beliefs, and parent and school context are accounted for so that an estimate of the influence of social identity is more precisely estimated.

In the final chapter (fourteen), Wijsman et al relate that the social context for learning is conceptualized in terms of the interpersonal perceptions students have of their teachers: that is to what degree do students perceive their teacher as conveying agency (i.e., dominance, interpersonal influence) and communion (friendliness, interpersonal proximity) in class. The goal of their study is to show to what extent the perceived interpersonal teacher behaviour is related to the quality of a student's controlled and autonomous motivation. Recent literature in the area of interpersonal relationships has led to a consensus among researchers that (for students) autonomous motivation (as opposed to control) leads to more volitional persistence, better social relationships, more effective performance, and greater health and well-being (among other outcomes). The extent to which students' motivation is controlled or autonomous, describes a difference in the quality of motivation with autonomous motivation being associated with more positive learning outcomes. Wijsman et al. assert that the social context for this interaction should not be overlooked however other contextual factors, such as teacher structure require further investigation.

In summary, the chapters in this book paint a varied and eclectic selection of works which investigate both the theory and practice of Interpersonal Relationships in Education and their importance for educational processes. In this they draw on a range of methods including: analysis of communication processes; the study of interpersonal perceptions; research on class and school learning environments; research on school or teacher effectiveness; urban and multicultural issues; social justice, inequity and school reform; classroom management and attachment theory. We hope you find these perspectives useful in your work.

REFERENCES

- Fraser, B. J. (2007). Classroom learning environments. In S. K. Abell & N. G. Lederman (Eds.), *Handbook of research on science education* (pp. 103-124). Mahwah, NJ: Lawrence Erlbaum Associates.
- Wubbels, Th., Brekelmans, J. M. G., den Brok, P. J., & van Tartwijk, J. W. F. (2006). An interpersonal perspective on classroom management in secondary classrooms in the Netherlands. In C. Evertson & C. S. Weinstein (Eds.), *Handbook of classroom management: Research, practice and contemporary issues* (pp. 1161-1191). New York: Lawrence Erlbaum Associates.

INTERPERSONAL RELATIONSHIPS

Wubbels, Th., Brekelmans, J. M. G., den Brok, P. J., Wijsman, L., Mainhard, T., & van Tartwijk, J. W. F. (in press). Teacher-student relationships and classroom management. In E. T. Emmer & E. Sarbonie (Eds.), *Handbook of classroom management* (2nd edition). London: Taylor & Francis.

ANDREW MARTIN

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).

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.

REFERENCES

- Argyle, M. (1999). The development of social coping skills. In E. Frydenberg (Ed). *Learning to cope: Developing as a person in complex societies* (pp.81-106). Oxford: Oxford University Press.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman & Co.
- Bandura, A. (2006). Adolescent development from an agentic perspective. In F. Pajares & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents*. (pp.1-43). USA: Information Age Press.
- Battistich, V., & Hom, A. (1997). The relationship between students’ sense of their school as a community and their involvement in problem behaviors. *American Journal of Public Health, 87*, 1997-2001.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497-529.
- Bempechat, J., & Shernoff, D. J. (2012). Parental influences on achievement motivation and student engagement. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement*. New York: Springer.
- Connell, J. P., & Wellborn, J. G. (1991). Competence, autonomy, and relatedness: A motivational analysis of self-system processes. In M. R. Gunnar & L. A. Sroufe (Eds.), *Self processes in development: Minnesota Symposium on Child Psychology* (Vol 29. pp. 244-254). Hillsdale, NJ: Lawrence Erlbaum Associates Inc.
- Covington, M. V. (1992). *Making the grade: A self-worth perspective on motivation and school reform*. Cambridge: Cambridge University Press.
- Covington, M. V. (1998). *The will to learn: A guide for motivating young people*. New York: Cambridge University Press.

- De Leon, G. (2000). *The therapeutic community: Theory, model and method*. New York: Springer Publishing Company.
- Deci, E. L., & Ryan, R. M. (2000). The darker and brighter sides of human existence: Basic Psychological needs as a unifying concept. *Psychological Inquiry, 11*, 319-338.
- Eccles, J. (1983). Expectancies, values, and academic behaviors. In J. Spence (Ed.), *Achievement and achievement motivation*. San Francisco: Freeman.
- Elliot, A. (2005). A conceptual history of the achievement goal construct. In A. Elliot & C. Dweck (Eds.), *Handbook of competence and motivation*. New York: Guilford.
- Flink, C., Boggiano, A. K., & Barrett, M. (1990). Controlling teaching strategies: Undermining children's self-determination and performance. *Journal of Personality and Social Psychology, 59*, 916-924.
- Furrer, C., & Skinner, E. (2003). Sense of relatedness as a factor in children's academic engagement and performance. *Journal of Educational Psychology, 95*, 148-162.
- Ginns, P., Liem, G. A. D., & Martin, A. J. (2011). The role of personality in learning processes and learning outcomes in applied settings. In S. Boag & N. Tiliopoulos (Eds.), *Personality and individual differences: Theory, assessment, and application*. New York: Nova Science Publishers.
- Gutman, L. M., Sameroff, A., & Eccles, J. S. (2002). The academic achievement of African American students during early adolescents: An examination of multiple risk, promotive, and protective factors. *American Journal of Community Psychology, 30*, 401-428.
- Hareli, S., & Weiner, B. (2000). Accounts for success as determinants of perceived arrogance and modesty. *Motivation and Emotion, 24*, 215-236.
- Hareli, S., & Weiner, B. (2002). Social emotions and personality inferences: A scaffold for a new direction in the study of achievement motivation. *Educational Psychologist, 37*, 183-193.
- Jorm, A. F. (1989). Modifiability of trait anxiety and neuroticism: A meta-analysis of the literature. *Australian and New Zealand Journal of Psychiatry, 23*, 21-29.
- Juvonen, J., Espinoza, G., & Knifsend, C. (2012). The role of peer relationships in student academic and extracurricular engagement. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement*. New York: Springer.
- Juvonen, J. (2006). Sense of belonging, social relationships, and school functioning. In P. A. Alexander & P. H. Winne (Eds.), *Handbook of educational psychology* (2nd ed., pp. 655-674). Mahwah, NJ: Lawrence Erlbaum Associates.
- Kontos, S., & Wilcox-Herzog, A. (1997). Teachers' interactions with children: Why are they so important? Research in review. *Young Children, 52*, 4-12.
- La Guardia, J. G., & Ryan, R. M. (2002). What adolescents need: A self-determination theory perspective on development within families, school, and society. In F. Pajares & T. Urdan (Eds.), *Academic motivation of adolescents*. Connecticut: Information Age Publishing.
- Liem, G. A., & Martin, A. J. (2011). Peer relationships and adolescents' academic and non-academic outcomes: Same-sex and opposite-sex peer effects and the mediating role of school engagement. *British Journal of Educational Psychology, 81*, 183-206.
- Little, B. R. (1996). Free traits, personal projects and ideo-tapes: Three tiers for personality psychology. *Psychological Inquiry, 7*, 340-344.
- Little, B. R., & Joseph, M. F. (2007). Personal projects and free traits: Mutable selves and well beings. In B. R. Little, K. Salmela-Aro, & S. D. Phillips (Eds.), *Personal project pursuit: Goals, action and human flourishing* (pp. 375-400). Mahwah, NJ: Lawrence Erlbaum Associates.
- Maehr, M., & Zusho, A. (2009). Achievement goal theory: The past, present, and future. In K. Wentzel & A. Wigfield (Eds.), *Handbook of motivation at school* (pp.77-104). New York: Routledge.
- Mansour, M., & Martin, A. J. (2009). Home, parents, and achievement motivation: A study of key home and parental factors that predict student motivation and engagement. *Australian Educational and Developmental Psychologist, 26*, 111-126.
- Martin, A. J. (2010). *Building classroom success: Eliminating academic fear and failure*. London: Continuum.

MARTIN

- Martin, A. J. (2011). *Connective instruction worksheets*. Sydney: Lifelong Achievement Group (downloaded from www.lifelongachievement.com).
- Martin, A. J. (2012). *Interpersonal relationships and student development (motivation, engagement, buoyancy, and achievement): What outcomes teachers, peers, and parents do and do not impact*. Keynote presented at International Conference on Interpersonal Relationships in Education (ICIRE), Vancouver, Canada.
- Martin, A. J. (2013). The Personal Proficiency Network: Key self-system factors and processes to optimize academic development. In D. M. McInerney, H. W. Marsh, R. G. Craven, & F. Guay (Eds.), *Theory driving research: New wave perspectives on self-processes and human development*. Charlotte, NC: Information Age Publishing.
- Martin, A. J., Bobis, J., Anderson, J., Way, J., & Vellar, R. (2011). Patterns of multilevel variance in psycho-educational phenomena: Exploring motivation, engagement, climate, teacher, and achievement factors. *German Journal of Educational Psychology/Zeitschrift für Pädagogische Psychologie*, 25, 49-61.
- Martin, A. J., & Dowson, M. (2009). Interpersonal relationships, motivation, engagement, and achievement: Yields for theory, current issues, and practice. *Review of Educational Research*, 79, 327-365.
- Martin, A. J., Marsh, H. W., McInerney, D. M., Green, J., & Dowson, M. (2007). Getting along with teachers and parents: The yields of good relationships for students' achievement motivation and self-esteem. *Australian Journal of Guidance and Counselling*, 17, 109-125.
- Martin, A. J., Marsh, H. W., McInerney, D. M., & Green, J. (2009). Young people's interpersonal relationships and academic and non-academic outcomes: The relative salience of teachers, parents, same-sex peers, and opposite-sex peers. *Teachers College Record*, March. <http://www.tcrecord.org>.
- McCrae, R. R., & Costa, P. T. (1996). Toward a new generation of personality theories: Theoretical contexts for the Five-Factor Model. In J. S. Wiggins (Ed.), *The Five-Factor Model of personality: Theoretical perspectives* (pp. 51-87). New York: Guilford Press.
- Meyer, D. K., & Turner, J.C. (2002). Discovering emotion in classroom motivation research. *Educational Psychologist*, 37, 107-114.
- Munns, G. (1998). 'They just can't hack that': Aboriginal students, their teachers and responses to schools and classrooms. In G. Partington (Ed.), *Perspectives on Aboriginal and Torres Strait Islander education* (pp. 171-187). Katoomba: Social Science Press.
- Papworth, B. A., Martin, A. J., Ginns, P., Liem, A. D. L., & Hawkes, T. F. (c2012, peer reviewed). *The role of boarding school in the academic and non-academic outcomes of high school students*. Paper presented at the American Educational Research Association (AERA) Annual Meeting, Vancouver, Canada.
- Pianta, R. C., Hamre, B. K., & Allen, J. P. (2012). Teacher-student relationships and engagement: Conceptualizing, measuring, and improving the capacity of classroom interactions. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement*. New York: Springer.
- Pianta, R. C., Nimetz, S. L., & Bennett, E. (1997). Mother-child relationships, teacher-child relationships, and school outcomes in preschool and kindergarten. *Early Childhood Research Quarterly*, 12, 263-80.
- Pomerantz, E. M., & Moorman, E. A. (2010). Parents' involvement in children's schooling: A context for children's development. In J. L. Meece & J. S. Eccles (Eds.), *Handbook of research on schools, schooling, and human development*. New York: Routledge.
- Reeve, J., Deci, E. L., & Ryan, R. M. (2004). Self-determination theory: A dialectical framework for understanding sociocultural influences on student motivation. In D. McInerney & S. Van Etten (Eds.), *Big theories revisited*. Greenwich, CT: Information Age Publishing.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68-78.

STUDENTS' DEVELOPMENT AND OUTCOMES

- Ryan, R. M., & Grolnick, W. S. (1986). Origins and pawns in the classroom: Self-report and projective assessments of individual differences in children's perceptions. *Journal of Personality and Social Psychology, 50*, 550-558.
- Schunk, D. H., & Miller, S. D. (2002). Self-efficacy and adolescents' motivation. In F. Pajares & T. Urdan (Eds.), *Academic motivation of adolescents*. Connecticut: Information Age Publishing.
- Teven, J. J., & McCroskey, J. C. (1997). The relationship of perceived teacher caring with student learning and teacher evaluation. *Communication Education, 46*, 1-9.
- Weiner, B. (1986). *An attributional theory of motivation and emotion*. New York: Springer-Verlag.
- Weiner, B. (1994). Integrating social and personal theories of achievement striving. *Review of Educational Research, 64*, 557-573.
- Wentzel, K. R. (1999). Social-motivational processes and interpersonal relationships: Implications for understanding motivation at school. *Journal of Educational Psychology, 91*, 76-97.
- Wentzel, K. R. (2010). Students' relationships with teachers. In J. L. Meece & J. S. Eccles (Eds.), *Handbook of research on schools, schooling, and human development*. New York: Routledge.
- Wentzel, K. R., McNamara Barry, C., & Caldwell, K. A. (2004). Friendships in middle school: Influences on motivation and school adjustment. *Journal of Educational Psychology, 96*, 195-203.
- Wigfield, A., & Eccles, J. S. (2000). Expectancy-value theory of motivation. *Contemporary Educational Psychology, 25*, 68-81.
- Wigfield, A., & Tonks, S. (2002). Adolescents' expectancies for success and achievement task values during the middle and high school years. In F. Pajares & T. Urdan (Eds.), *Academic motivation of adolescents*. Connecticut: Information Age Publishing.

Andrew J. Martin
School of Education
University of New South Wales

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)

	<i>STRENGTH</i> “I do this well and it is a part of my regular practice”	<i>NOT APPLICABLE/ RELEVANT/ IMPORTANT</i>	<i>COULD DO BETTER</i> “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			

STUDENTS' DEVELOPMENT AND OUTCOMES

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)

	<i>STRENGTH</i> “I do this well and it is a part of my regular practice”	<i>NOT APPLICABLE/ RELEVANT/ IMPORTANT</i>	<i>COULD DO BETTER</i> “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			