South Korean Teachers' Social-Emotional Practices and their Association with Student Connectedness

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Abstract

Teachers' social-emotional practices provide a promising avenue for fostering student well-being, particularly in countries such as South Korea where students experience disproportionate levels of stress. Little research has been conducted on teachers' social-emotional practices internationally, and even less in the South Korean context. In the present research, two studies were conducted with South Korean middle-school students to explore Korean teachers' social-emotional practices as perceived by students. Data were used to explore the underlying structure of students' perspectives of teacher behaviours and group these behaviours into cohesive domains and profiles. A refined 88-item version of Harvey et al.'s (2003, 2012) teacher social-emotional behaviour inventory was used. In Study one, 30 students completed a card-sorting task where they sorted 88 social-emotional behaviour items according to perceived similarity. Multidimensional scaling and hierarchical cluster analysis were applied to the data to produce visual representations of the structure of student-perceived teacher social-emotional practices. In Study two, 222 Korean middle-school students completed a rating task wherein they rated the extent to which they perceived their teacher to engage in each of the 88 social-emotional behaviours. A connectedness questionnaire assessing student feelings of connectedness to their teacher, school and peers was also completed. Application of Horn's parallel analysis and rotated factor analysis on student rating data revealed five factors or themes of teacher social-emotional behaviours, interpreted as *Social-emotional coaching, Relationship-building, Classroom and emotion management, Attitude to teaching,* and *Emotional transference.* Then, factor analysis and Q-factor analysis were applied to identify profiles, where each profile represented a group of students who reported similar patterns of teacher behaviours for their homeroom teacher. Hierarchical cluster analysis and *k*-means cluster analysis were further applied to refine profiles by optimising case assignment to profiles. The resulting eight profiles were labelled: *Enthusiastic Manager, Disengaged, Job-focused, Indifferent, Coach, Assured Coach, Transparent Manager,* and *Relationship-builder and Coach*. Finally, the associations between the identified factors and profiles with student connectedness were explored using ANOVA. Results are compared and contrasted with existing literature and discussed with regard to potential usefulness of teacher social-emotional factors and profiles for enhancing student well-being.

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Table of Contents

Abstract i
Acknowledgements ii
Table of Contents iii
List of Tables vi
List of Figures vii
List of Appendices viii
List of Appreviations ix
CHAPTER ONE - Introduction 10
1.1 Introduction 10
1.2 Research Aims and Two Studies 10
1.3 Research Collaboration 12
1.4 Structure of the Thesis 12
CHAPTER TWO - Literature Review 13
2.1 Teacher Social-Emotional Competence 13
2.2 Classroom Climate 15
2.2.1 Teachers' role in creating positive classroom climates 15
2.3 Emotional Classroom Climate 18
2.4 School Connectedness 21
2.5 Student-Teacher Relationships and Connectedness 23
2.6 Research Needed in the South Korean Context 25
2.7 Social-Emotional Characteristics of Korean Teachers 28
2.8 Chapter Summary 29
CHAPTER THREE - Studies One and Two: Overall Approach 31
3.1 Participant Recruitment 32
3.2 Ethical Considerations 32
3.3 Instrument Development 32
3.4 Translation Processes 34
CHAPTER FOUR - Study One: Method and Results 35
4.1 Introduction 35
4.2 Sample 36
4.3 Instrument Development 36

4.3.1 Data collection method 36
4.3.2 Data collection procedure 36
4.4 Data Analysis Procedures 37
4.4.1 Hierarchical cluster analysis 39
4.4.2 Multidimensional scaling 38
4.5 Results 39
4.5.1 Hierchical cluster analysis results 41
4.5.2 Multidimensional scaling results 43
4.5.2.1 Map Interpretation 45
4.6 Chapter Summary 48
CHAPTER FIVE - Study Two: Method and Results 49
5.1 Introduction 49
5.2 Measures 50
5.2.1 Teacher social-emotional behaviours 50
5.2.2 Student connectedness 50
5.2.2.1 Student-Teacher Relationship Scale (STRS) 50
5.2.2.2 School Connectedness Scale (SCS) 51
5.3 Data Collection Procedures 52
5.4 Data Analysis Procedures 53
5.4.1 Items are sorted into factors 54
5.4.2 Students are sorted into profiles based on factor scores 55
5.4.3 Associations with connectedness are examined 56
5.5 Results 57
5.6 Factors and Interpretation 57
5.7 Teacher Social-Emotional Behaviour Profiles and Interpretation 59
5.8 Connectedness 67
5.9 Chapter Summary 71
CHAPTER SIX - Discussion 72
6.1 What is the Structure of Korean Teacher Social-Emotional Practices? 73
6.2 What Social-Emotional Practices do Students Report Korean Teacher Engage in? 74
6.2.1 Factors of teacher social-emotional practices 74
6.2.1.1 Comparison of factors with past findings 76
6.2.2 Teacher profiles drawn from student responses 84

6.2.2.1 Comparison of profiles across studies 84
6.2.2.2 Gender effects across profiles 84
6.3 What is the Association between Teacher Social-Emotional Practices and Student Connectedness? 85
6.4 Implications of Findings 88
6.5 Limitations and Recommendations 88
6.7 Conclusion 90
References 91
Appendices 100

List of Figures

Figure 1.	Harvey and Evans' (2003) model of the emotional classroom climate from Harvey, Bimler, Evans, Kirkland, and Pechtel (2012, p. 629)	18
Figure 2.	Harvey et al. (2012, p. 638) revised model of the emotional classroom climate	19
Figure 3.	Dendrogram	42
Figure 4.	Three-dimensional map produced using multidimensional scaling	44
Figure 5.	Three-dimensional map flattened into two hemispheres for interpretation	45
Figure 6.	Flattened hemispheres for *Emotional-behavioural influence* dimension	46
Figure 7.	Flattened hemispheres for *Emotion management* dimension	47
Figure 8.	Flattened hemispheres for *Student-teacher interactions* dimension	48
Figure 9.	Eight profiles of perceived teacher social-emotional behaviour from 221 participants	60
Figure 10.	*Enthusiastic Manager* with its respective factor responses	62
Figure 11.	*Disengaged* with its respective factor responses	62
Figure 12.	*Job-focused* with its respective factor responses	63
Figure 13.	*Indifferent* with its respective factor responses	63
Figure 14.	*Coach* with its respective factor responses	64
Figure 15.	*Assured Coach* with its respective factor responses	64
Figure 16.	*Transparent Manager* with its respective factor responses	65
Figure 17.	*Relationship-builder and Coach* with its respective factor responses	65

List of Tables

Table 1.	Themes of teacher social-emotional practices identified in past studies	21
Table 2.	Colour Key for Multidimensional Scaling (MDS)-Dendrogram Comparison	44
Table 3.	Dimensions drawn from MDS Visual Map	46
Table 4.	Factor Names and Their Highest Loading Social-Emotional Behaviour Items	58
Table 5.	Average Factor Scores by Teacher Gender	59
Table 6.	Cluster numbers, descriptors, and number of students in each subgroup	60
Table 7.	Summary Characteristics and Description of Eight Profile Clusters	66
Table 8.	Summary of Analyses of Variance Results Comparing Mean Connectedness Scores by Eight Teacher Profiles	68
Table 9.	Correlations between factors and teacher & school connectedness	68
Table 10.	Mean connectedness scores for teacher and school connectedness for each profile	70
Table 11.	Average Student Connectedness Scores by Gender of Teacher	71
Table 12.	Comparison of themes	73
Table 13.	A comparison of themes of teacher social-emotional practices identified in current study and past relevant studies	
Table 14.	Factors of Present Study matched Hotspots identified in previous studies	80
Table 15.	Teacher Connectedness, School Connectedness and individual factor scores across eight profiles	86

List of Appendices

Appendix A. 88 item cards

Appendix B. GOPA sorting task instruction sheet

Appendix C. GOPA sorting task recording Sheet

Appendix D. Rating task instruction sheet

Appendix E. Rating task recording sheet

Appendix F. Connectedness questionnaire

Appendix G. Table of factor loadings for five factors

List of Abbreviations

ANOVA	Analysis of Variance
ECC	Emotional Classroom Climate
GOPA	Grouping, Opposites, Partitioning, Addition
SCS	School Connectedness Scale
STRS	Student-Teacher Relationship Scale

CHAPTER ONE

Introduction

1.1 Introduction

The present study explored the underlying structure of Korean teachers' social-emotional practices as perceived by middle school students, and the associations of teacher practices with student-reported feelings of connectedness.

Three key considerations were important in shaping the research conducted in this thesis. Firstly, limited studies have directly addressed the social-emotional practices of teachers. The majority of studies aimed at improving the classroom climate have focused on teaching social-emotional skills to students, with little emphasis on the impact that teachers' social-emotional behaviours may have on students. An alternative stream of thought has emerged in recent years that has focused specifically on teachers' social-emotional skills (Harvey, Bimler, Evans, Kirkland, & Pechtel, 2012). Important preliminary findings pertaining to profiles of teacher behaviour have been reported, and warrant further investigation.

Secondly, much of the research around social-emotional interactions has been conducted within Western contexts. The expression and effects of emotion in non-Western classrooms is much less understood. This is problematic, especially when the role of emotion in contributing to student well-being is considered alongside the disproportionate levels of stress experienced by many students in East Asian countries. Research is needed to explore emotional interactions in East Asian countries, with a view of opening possible avenues for improving student well-being.

To understand students' perspectives of their teachers' social-emotional practices, student voice is sought. Most Korean students receive 12 years of primary and secondary schooling, during which time they learn the content laid out in the South Korean Curriculum, under conditions set by their classroom teacher, school principal, and the Korean Ministry of Education requirements (Ministry of Education, 2016). Irwin (2007) observed that students are typically placed at the bottom of the hierarchy within the education system and are not included in decision-making processes, even though they have valuable insights regarding what they need within the education system. Fagan (2012) further argued that greater

attention should be given to young adults' perceptions, so they may be empowered to be "active contributors to the world they participate in" (p. 17).

The final consideration pertains to school connectedness. It is well-established in the literature that school connectedness is linked to positive student outcomes. It is also accepted that teacher practices influence school connectedness. However, the specific teacher social-emotional behaviours that may enhance student feelings of connectedness are yet to be defined. In light of these considerations, this thesis seeks to explore South Korean teachers' social-emotional behaviours and their associations with student feelings of school connectedness from the perspective of South Korean students.

1.2 Research Aims and Two Studies

The aims of this research were three-fold:

1. To explore the structure of Korean teachers' social-emotional behaviours as perceived by students
2. To establish the social-emotional practices that Korean teachers engage in through students' subjective ratings
3. To establish the associations between student-observed teacher social-emotional practices and student connectedness

Two cross-sectional observational studies were conducted to address the research questions. In Study 1, 30 students took part in a card sorting task, where they grouped different descriptions of social-emotional behaviours according to perceived similarity. Student responses were analysed to explore the underlying structure of Korean teachers' social-emotional behaviours as perceived by students.

In Study 2, 221 students rated their homeroom teachers' engagement in different social-emotional behaviours, and completed a school connectedness questionnaire. Data from these tasks were analysed to identify profiles of teacher social-emotional behaviour, and investigate how these profiles relate to student connectedness.

1.3 Research Collaboration

The present research involved advanced statistical analysis, and the application of these procedures was made possible by the help and expertise of statistical research supervisor Dr. David Bimler. The student researcher worked with the statistical research supervisor to conduct select analyses such as Horn's parallel analysis, rotated factor analysis, Q-factor analysis, hierarchical cluster analysis, and *k*-means cluster analysis. The statistical research supervisor further supported the student researcher to understand and interpret the findings. Multidimensional scaling, which was used to construct a three-dimensional conceptual map, involved computationally sophisticated statistical procedures that were beyond the scope of this thesis. Thus this analysis was initially carried out by the statistical research supervisor, who subsequently supported the student researcher to also run the analysis. Again, assistance in navigating the findings was provided by the statistical research supervisor.

1.4 Structure of the Thesis

This thesis is laid out in six chapters. Chapter One has provided an overview of the research carried out for this thesis. Chapter Two presents a review of the literature on teacher social-emotional behaviours and their impact on student well-being, with particular attention given to the classroom climate and student connectedness. Chapter Three provides a lead-in to the following two chapters, by presenting an overview of the methodologies used in Studies One and Two, and other aspects that the two studies share, including participant recruitment and ethical considerations. Chapters Four and Five detail the methodological steps and results of Studies One and Two respectively. The findings are then discussed in Chapter Six along with their implications, limitations of the research, and final conclusions.

CHAPTER TWO

Literature Review

Hargreaves (1998) argued that emotions are central to teaching. The importance of emotion in the classroom has gained increasing recognition in recent years, particularly as the experience and expression of emotion have been linked to classroom climate (La Paro & Pianta, 2003). Positive classroom climates have been demonstrated to foster an array of desired student outcomes, including improved academic performance, increased social-emotional competence, greater motivation and reduced behaviour disorders (Goh, Young, & Fraser, 1995; Haertel, Walberg, & Haertel, 1981; Jennings & Greenberg, 2009).

Much of the literature relating to student well-being explores student-teacher relationships. Teacher emotional skills are gaining increasing recognition as an important influence on students' well-being, including the development of problem-solving skills, judgment, and organisation (Isen, 2003). Yet, relatively few studies have focused on specific teacher social-emotional practice profiles and their influence on students, and even fewer studies have focused on Korean students and teachers.

The present chapter begins with a conceptualisation of teacher social-emotional competence. This is followed by an overview of the classroom climate literature, particularly the *Emotional Classroom Climate* (ECC), with focus on the impact teacher social-emotional practices may have on student well-being. Past research exploring the social-emotional practices of teachers conducted by Harvey et al. (2003, 2012) and others are presented in detail within this discussion. An overview of *student connectedness*, a well-established measure of student well-being, and its relation to student-teacher relationships is then provided with links to existing literature. Finally, the relevance of this research in the South Korean context is discussed.

2.1 Teacher Social-Emotional Competence

The term *social-emotional practice* is used throughout the thesis to refer to teacher attitudes and behaviours related to social interactions and emotions. It is closely linked to *social-emotional competence*, which refers to the ability to apply these attitudes and behaviours effectively. Three well-established concepts, emotional intelligence, emotional

competence, and social intelligence, form the foundation of what is referred throughout this thesis as social-emotional competence.

Emotion serves two key functions in the classroom. Harvey et al. (2012) stress that emotions are both used in teaching practices and taught through interactions that occur within the classroom. When social-emotional competence is taught, this facilitates the development of students who are emotionally intelligent, who are able to reason about emotions, learn from emotional experiences, and apply their knowledge to guide future behaviour (Malins, 2014).

Emotional intelligence has been conceptualised in a number of ways. According to Salovey and Mayer (1990), emotional intelligence is concerned with the ability to reason about emotions. Bar-On (2004) emphasises abilities that relate to managing emotions and social relationships. A related strand of research that emerged within developmental psychology is *emotional competence.* Emotional competence relates to emotional development and its manifestation in cognition and behaviour (Saarni, Mumme & Campos, 1998). Theorists of emotional competence were interested in the functional effects of emotion, and focused on the types of contexts that facilitate or inhibit the adaptive development of emotion. Another concept that this research draws on is *social competence*. Thorndike (1920) first distinguished social competence from other forms of competence, and defined it as "the ability to understand and manage men and women, boys and girls--to act wisely in human relations" (p. 228), which in essence describes "the ability to perceive one's own and others' internal states, motives, and behaviors, and to act toward them optimally on the basis of that information" (Mayor & Salovey, 1993; p. 435).

Taken together, emotional intelligence, emotional competence, and social competence focus on social and emotional behaviours manifest in interpersonal interactions (e.g., perceiving, reasoning, judgment, management), and contextual factors are seen to influence the development of these skills. Throughout this thesis, *social-emotional practices* will be used to describe teacher behaviours relating to the way they monitor, discriminate, regulate, and apply emotions in the classroom. Social-emotional practices refer not only to teachers' management of their own attitudes and behaviours, but also their ability to foster healthy social-emotional behaviours in their students.

2.2 Classroom Climate

For over a century, there has been a growing interest in school and classroom climate. Early educational reformers including Dewey (1916), Durkheim (1961), and Perry (1908) recognised that a school's distinctive culture can influence the learning and well-being of its students. Decades later, there was a surge in the systematic study of the school climate, which was driven by the recognition that school-specific processes account for substantial variation in student academic achievement (Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013). Research in the area has continued to grow since, and findings indicate that school and classroom climates have a profound impact on student well-being; so much so that the US State Departments of Education, UNICEF, and foreign educational ministries have focused on school climate reform as a strategy to create safer and more supportive schools (Thapa et al., 2013).

The *Classroom Climate* was first coined by Psychologist Rudolf Moos, who applied his observation that the atmosphere can affect patient well-being in hospitals to the classroom setting (Evans & Harvey, 2012). Learning is now recognised to be a complex interaction between the individual and their environment (Urdan & Schoenfelder, 2006) and the learning environment is seen to be as important as the content of a lesson (Evans & Harvey, 2012). As a result, the classroom environment has been studied extensively in regard to how it could better meet students' individual learning needs.

Jennings and Greenberg (2009) assert that healthy classroom climates directly contribute to students' social, academic, and emotional outcomes. This claim is supported by research that links positive classroom climates to better academic performance and greater social-emotional competence in students (Goh, Young, & Fraser, 1995; Haertel, Walberg, & Haertel, 1981; Jennings & Greenberg, 2009), as well as student self-esteem (Hoge, Smit, & Hanson, 1990) and self-concept (Reynolds, Jones, Leger, & Murgatroyd, 1980), lower rates of student absenteeism in middle and high schools (deJung & Duckworth, 1986; Purkey & Smith, 1983; Rumberger, 1987), as well as lower rates of suspension in high school (Lee, Cornell, Gregory, & Fan, 2011). In addition, a growing body of research indicates that positive school and classroom climates are critical for effective risk prevention. School climate has been shown to mitigate the harmful effects of self-criticism (Kuperminic, Leadbeater, & Blatt, 2001) and influence emotional and mental health outcomes (Payton et al., 2008; Schochet, Dadds, Ham, & Montague, 2006). Further, a positive social-emotional

climate is associated with lower psychiatric problems and substance abuse (LaRusso, Romer, & Selman, 2008; Schochet et al., 2006).

2.2.1 Teachers' role in creating positive classroom climates. Students' learning environments are seen to be largely shaped by the classroom teacher (Eccles & Roeser, 1999) as teachers set the tone for classroom interactions through their practices (Jennings & Greenberg, 2009). Harvey and Evans (2003) found that teachers who maintain positive classroom climates demonstrate high social-emotional competency. Thus teachers' social-emotional competence or lack thereof can greatly enhance or harm the quality of the classroom climate.

A well-recognised feature of classroom climate is *relationship* (Moos, 1979). *Relationship* has been linked to various constructs including cooperation, friendliness, support, competitiveness, positive peer interactions, and cohesiveness (Brand, Felner, Shim, Seitsinger, & Dumas, 2003; Matsumura, Slater, & Crosson, 2008; Wubbels, Brekelmans, & Hooymayers, 1991). Teachers who are socially and emotionally competent develop positive and supportive relationships with their students, and encourage supportive peer relationships (Jennings & Greenberg, 2009), which positively impacts students' experience of the classroom climate.

Another feature, originally termed *system maintenance* (Moos, 1979), has been linked with power and control, social system organisation, leadership, shared decision making, and responsibility/freedom (Adelman & Taylor, 2005; Brand et al. 2003; Pianta, La Paro, & Hamre, 2008). Another term to describe this feature, which relates to the extent the classroom environment is orderly (Dorman, 2003), is *classroom management* (Emmer, & Stough, 2001). Effective classroom management requires teachers to be aware of what is going on in the classroom, including students' emotional states and motives, and to act on this information in such a way that student involvement in the classroom is enhanced. Thus the ability to catch and understand emotions in the classroom appears to be an important component of teacher competency. Further, teachers report the necessity to regulate their own emotions when feelings such as frustration and anger arise from classroom management interactions (Sutton, 2004), highlighting emotional self-regulation as another important aspect of teacher social-emotional practice. The qualities mentioned above apply also to *behaviour management*, which is another identified feature of the classroom climate (Gillies, 2011; Pianta et al., 2008).

Evidence suggests teachers with high social-emotional competence create positive classroom climates. Their classrooms are characterised by low levels of disruptive behaviour, appropriate emotional expression, effective communication, interest in set task, and support and responsiveness to differing student needs (La Paro & Pianta, 2003).

Teaching through Interactions (Hamre & Pianta, 2007) is a framework that posits that student-teacher interactions are a fundamental driver for student learning. Under this framework, student-teacher interactions are organised into three key domains: *Classroom Organization*, *Instructional Support*, and *Emotional Support.* The inclusion of an Emotional Support domain highlights the significance of emotion in the classroom. The domain of interest for the purposes of this thesis is Emotional Support, and this is made up of four dimensions: Positive Climate, Negative Climate, Teacher Sensitivity, and Regard for Student Perspectives.

Teaching through Interaction's conceptualisation of student-teacher interactions draws from two major areas of developmental psychology. The first is self-determination theory (Connell & Wellborn, 1991), which posits that children learn best when they are supported by adults to feel autonomous, competent, and positively related to others. The second is attachment theory (Bowlby, 1969), according to which adult emotional support instils in children a sense of security that allows them to explore novel situations. According to this framework, teacher efforts towards supporting students' social-emotional functioning are crucial to effective practice, and are achieved through the facilitation of positive student-teacher and student-peer interactions.

Conversely, the classrooms of teachers who struggle to effectively manage social-emotional behaviour-related issues have greater off-task and disruptive behaviour problems (Marzano, Marzano, & Pickering, 2003). These teachers are more likely to experience emotional exhaustion, and may respond in reactive and excessively punitive ways that may contribute to a self-sustaining classroom disruption cycle (Osher et al., 2008). As teachers have a profound impact on the classroom climate and subsequently on student well-being, there is a need to explore teachers' social-emotional behaviour practices in more depth.

Considering Brackett et al.'s (2011) claim that academic goals cannot be satisfied unless they are addressed in a socially and emotionally positive environment, teacher competencies need to extend beyond just being experts in the content that they teach.

Understanding the *Emotional Classroom Climate* (Harvey & Evans, 2003) is therefore a crucial component of a teacher's role.

2.3 Emotional Classroom Climate

The Emotional Classroom Climate (ECC) literature examines the ways in which emotions are central to learning, and is grounded on the notion that to effectively accommodate academic learning, social and emotional needs must also be accommodated. Harvey and Evans (2003) developed a model of the ECC as depicted by teachers and students in primary and intermediate school contexts. In order to gain the perspective of individuals immersed in positive ECCs, the researchers conducted focus group interviews with teachers nominated for their ability to develop and maintain positive ECCs, and students who demonstrated a marked reduction of emotional or behavioural impairments over the course of a year. Thematic analysis of focus group discussions led to the development of a five-factor model. This model is shown in Figure 1.

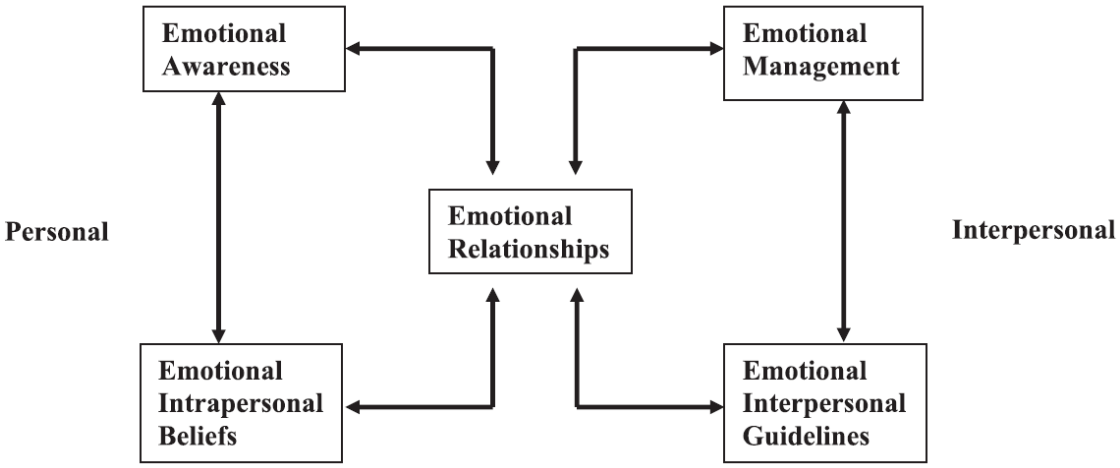

Figure 1. Harvey and Evans' (2003) model of the emotional classroom climate from Harvey, Bimler, Evans, Kirkland, and Pechtel (2012, p. 629)

Emotional relationships is positioned at the centre of the model and operates as the key component and communication channel, linking together the other components. On one side of *emotional relationships* is the personal axis, which includes *emotional awareness* and *emotional intrapersonal beliefs*. On the opposite side is the interpersonal axis, comprising of *emotional management* and *emotional interpersonal guidelines*. These components are seen to interact through the relationship that is maintained between teacher and student. Although the ECC model depicts teachers' social-emotional practices, the effect of the ECC is just as

relevant to students. Emotional awareness, which is teachers' personal recognition and understanding of their own and others' emotions, impacts students by determining whether or not emotion is effectively managed in the classroom. Similarly, the intrapersonal beliefs, philosophies and attitudes held by teachers influence their approach to interpersonal guidelines, including standards and boundaries they set in the classroom.

A sixth component, *emotion contagion*, was subsequently added to Harvey and Evans' original model, as shown in Figure 2. To validate the model, thirty three New Zealand university students undertaking teacher training and twenty six German teachers took part in card-sorting tasks wherein 81 item cards of teacher social-emotional behaviour (e.g. *Teacher is friendly*) were sorted according to perceived similarity. The participants' responses were analysed using multidimensional scaling. The results revealed the same five components of the original model, as well a new concept which was subsequently termed *emotion contagion* (Harvey et al., 2012).

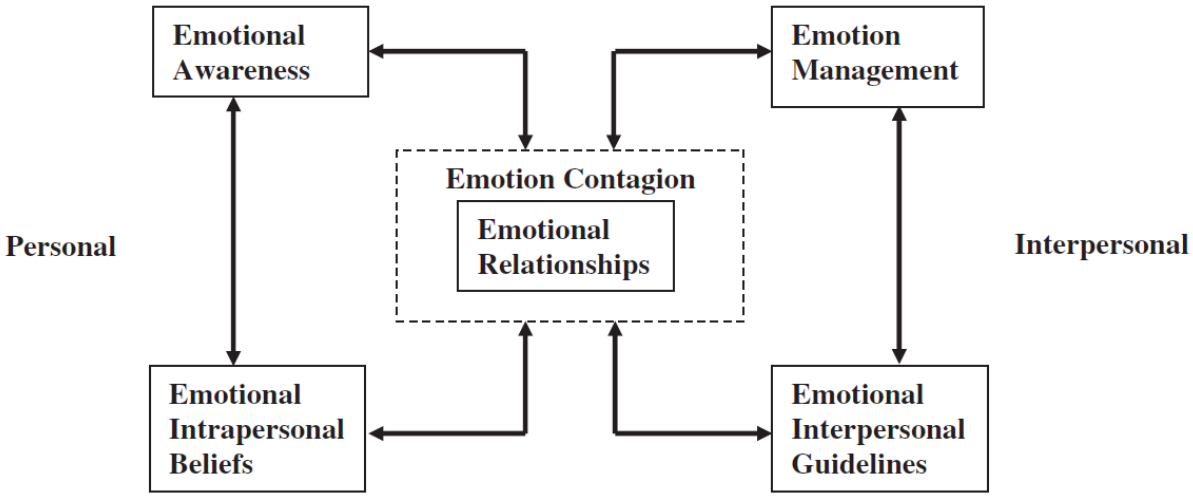

Figure 2. Harvey et al. (2012, p. 638) revised model of the emotional classroom climate

Schoenewolf (1990) defined emotion contagion as "a process in which a person or group influences the emotions or behaviour of another person or group through the conscious or unconscious induction of emotion states and behavioural attitudes" (p. 50). Emotion contagion occurs continuously in social interactions as individuals automatically and subconsciously mimic others' behaviours, and experience the emotion itself through physiological feedback (Barsade, 2002). Teachers therefore need to be able to regulate the way they display their emotions in the classroom. Not only this, they need to be able to

inoculate themselves from students' negative emotions so that they do not get caught in a self-perpetuating trap (Mottet & Beebe, 2000).

Teachers' social-emotional practices have been further explored in a few related studies, and their findings resonate with ECC Harvey and colleagues' model. Chia (2014) expanded on the work of Harvey et al. (2012) by conducting a similar study with adult polytechnic students in Singapore. In contrast with Harvey and colleagues, Chia explored teachers' social-emotional practices from the perspectives of students, recognising that students are important stakeholders in classroom interactions. Moreover, adolescents have been demonstrated to be acute observers of their teachers' emotions as reflected in their style of teaching, relationships with students, disciplinary practices, and overall emotional responsiveness (Anderson, Evans, & Harvey, 2012). The key themes of teacher social-emotional practices identified by Chia were mostly in line with Harvey et al.'s findings, as outlined below. Similarly, student perspectives on teacher social-emotional practices were also sought in an unpublished study by Harvey and Bimler, who gained insight into New Zealand and German highschool students' perspectives. Although there were some differences, key themes were found consistently found across all three studies. A comparison of findings for all three studies is presented in Table 1.

Table 1
Themes of Teacher Social-Emotional Practices Identified in Past Studies

Broad Themes	Harvey et al., 2012	Harvey & Bimler (unpublished)	Chia, 2014
Relationship-building	Emotional Relationship; Emotional Student-Acceptance; Emotional Availability	Emotional Relationship; Emotional Awareness	Personable/ Affective Tone; Caring and Relating
Coaching	Emotion Coaching	Emotion Coaching	Emotion Coaching
Student-Student Support	Student-Student Support	Student-student relationship	Supportive Relationships/ Interpersonal Skills
Attitude	Emotional Attitude; Emotional Self-Acceptance; Emotional Philosophy	Emotional Intrapersonal Beliefs: Attitude/ Enthusiasm	Emotional Attitude
Boundaries	Emotional Boundaries	Interpersonal Guidelines	Emotional Boundaries; Consequence Management/ Limit Setting
Emotion Regulation	Emotion Regulation	Emotion Dysregulation	
Emotion Contagion/ Transference		Emotional Transparency and Contagion	Emotional Contagion
Others		Emotion Expression; Ambivalent/ Inconsistent	

Themes pertaining to relationship-building, coaching, student-student support, attitude, and boundaries were found across all three studies. Emotion regulation and Emotion contagion/transference were identified as being salient themes in two of the three studies. Identification of the same themes across a range of contexts (New Zealand, Germany, and Singapore) and ages (high school to adult) indicate that teachers' social-emotional practices may be universal.

2.4 School Connectedness

An important and well-established measure of student well-being is *connectedness*. Goodenow (1993) defined school connectedness as "the extent to which students feel personally accepted, respected, included, and supported by others in the school social environment" (p. 80). Connectedness has received burgeoning interest following the

publication of Resnick et al.'s (1997) seminal research, which found school connectedness and family connectedness to be the strongest predictors of an array of indicators of adolescent maladjustment, including emotional distress, violence, substance use, and suicidal ideation (Jose, Ryan, & Pryor, 2012).

Subsequent studies have supported the notion that connectedness is an important factor for student well-being. Researchers posit that connectedness plays an important role in the development and adjustment of adolescents (Barber & Schluterman, 2008; Bernat & Resnick, 2009). Martin and Dowson (2009) suggested that connectedness may act as a mediating variable that influences student motivation when facing performance goals. School connectedness has been linked with better academic performance (Eisenberg, Neumark-Sztainer, & Perry, 2003) and lower likelihood of dropout, school suspension or grade retention (Hawkins, Guo, Hill, Battin-Pearson, & Abbott, 2001). Students who experience positive relationships may perceive performance-oriented environments in a more positive light, as vehicles of achievement and success.

Student feeling of connectedness appears to be a protective factor against emotional distress and harmful behaviours. In their study involving 513 Singaporean middle school students, Chong and colleagues (2006) found that perceived positive support from schools, peers, and parents were negatively associated with emotional distress. School connectedness has been associated with low levels of harmful behaviour, including substance abuse (Carter et al., 2007). In addition to school connectedness, feelings of connectedness with the teacher have also been shown to significantly influence student outcomes. This was demonstrated by McNeely and Falci (2004), who found that students who believed their teachers cared about them were less likely to start smoking or attempt suicide compared to those who did not.

Conversely, students who are not experiencing feelings of connectedness may perceive a performance-oriented environment as a "dog-eat-dog" context, which could impact student social-emotional well-being in a negative way. Students who lack feelings of connectedness suffer negative affect, and are more likely to engage in problem behaviour. Bond and colleagues (2007), for example, found that students who felt alienated from school engaged in more violent behaviours and showed greater depressive symptoms. Researchers link problems with adjustment and adaptation in school with the failure of learning environments in meeting student needs of belonging (Baumeister & Leary, 1995; Wentzel, Barry, &

Caldwell, 2004). Thus, evidence strongly suggests that a key priority for schools should be to create an environment that fosters student connection.

2.5 Student-Teacher Relationships and Connectedness

As students spend vast amounts of time at school with their teachers, evidence indicates that improving teacher-student relationships could benefit students' sense of well-being as well as their learning. The past two decades have seen an increase in research on the significance of affective student-teacher relationships for school adjustment (Roorda, Koomen, Spilt, & Oort, 2011). It is widely accepted that positive student-teacher relationships elicit feelings of connectedness and a sense of belonging, which is seen to drive positive, achievement-related behaviours.

Student teacher relationships have been considered under a number of theoretical perspectives, among them the *need to belong hypothesis* and *attachment theory*. The need to belong hypothesis posits 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). The fulfilment of the need for belongingness leads to positive emotional responses. Connell and Wellborn (1991) observed that positive emotional attachments to teachers and peers are positively associated with self-esteem and feelings of self-worth; both qualities that are related to long-term achievement motivation (Covington, 2000). In the school, positive interpersonal relationships are suggested to drive student achievement-related behaviours such as self-regulation, participation, strategy use, and responses to challenge (Meyer & Turner, 2002).

Student connectedness has also been considered from the perspective of attachment theory (Pianta et al., 2003). According to attachment theory, child-caregiver relationships characterised by responsiveness, involvement and trust encourages healthy social and emotional development in children through the development of well-functioning internalised working models. This gives children a sense of security that lets them explore situations that are novel to them (Bretherton & Munholland, 1999). Likewise, teachers who are warm and supportive give students a sense of security in the school environment. These students are able to take risks and explore new ideas, both of which are essential for learning (Mitchell-Copeland, Denham, & DeMulder, 1997; Murray & Greenberg, 2000; Watson, 2003).

Unsurprisingly, adolescents reported that they would learn better if teachers cared about them on a personal level (Johnson, 1997).

A key benefit of positive student-teacher relationships is its influence on student motivation for academic achievement by impacting motivation's constituent emotions and beliefs (Martin & Dowson, 2009); that is, students with positive relationships with their teachers are likely to have greater motivation compared to students who do not. Motivation, defined as a set of interrelated emotion and beliefs which direct and influence behaviour (Wentzel, 1998), is a key driver of academic success. Indeed, a close and supportive student-teacher relationship was found to be a key distinguishing variable between students who succeed in school and those who don't among children and adolescents that are at risk (Pianta, Steinberg, & Rollinns, 1995; Resnick et al., 1997).

Through positive interactions with the teacher, a student is likely to learn values, beliefs and orientations that help them to fit in with the social group. In the school environment, students learn values, beliefs and orientations through the relationships they form within the school. Further, in relationships that share a high connection, individuals may internalise the values held by the significant other (Wentzel, 1999). In the school, a student who has a good relationship with a teacher is likely to internalise the teacher's beliefs about school and academic achievement. Furthermore, these internalised values and beliefs can then be generalised to other academic settings (Ryan & Deci, 2000), and continue to benefit the student.

Evidence supports the notion that teachers' efforts to build positive relationships with their students are beneficial for student well-being. One study found that when teachers made modest efforts to form personal connections with adolescent students, this led to a notable improvement in student motivation, both in school and in outside-of-school emotional functioning (Roeser, Eccles, & Sameroff, 1998). Furthermore, another study found that when teachers spent more individual time with students they found challenging, these students' disruptive behaviours decreased, and the teachers reported more learning-oriented and harmonious interactions (Mashburn et al., 2008).

A longitudinal study involving 24 diverse elementary schools and over 550 classrooms (Battistich, Solomon, Watson, & Schaps, 1997) showed that increases in positive teacher social-emotional behaviours resulting from a prosocial intervention program (Caring School

Community) led to higher levels of students' self-reported academic engagement. Increases in positive teacher social-emotional behaviours included increased warmth, supportiveness, encouragement of cooperation, and emphasis on prosocial values. These were measured through classroom observations and questionnaires. Not only were positive teacher social-emotional behaviours associated with academic engagement, increases in positive teacher social-emotional behaviours also resulted in improvements in factors relating to connectedness with others; which included positive interpersonal behaviour, concern for others and conflict resolution skills. Additionally, many of these associations remained significant when controlled for school poverty level (Battistich, Solomon, Kim, Watson, & Schaps, 1995). Thus it appears that positive teacher social-emotional behaviours could create protective classroom environments. A follow-up study involving 1,246 students found that the positive effects continued into middle school years (Solomon et al., 2000).

Moreover, an *absence* of positive teacher social-emotional characteristics may be harmful to student well-being. In their study involving 140 elementary school students, Ryan and Grolnick (1986) found that students who felt their teachers were cold and uncaring had lower intrinsic motivation, suggesting that perceived teacher warmth may be necessary for positive student-teacher relationship effects to occur. In another study (Anderson, Manoogian, & Reznick, 1976), 72 children aged 4-5 worked on a freestyle drawing task in the presence of an adult stranger. A marked decline in motivation resulted in those children who were ignored by the adult, whereas positive verbal reinforcement increased motivation. A similar effect has been observed in the school environment. Specifically, a sense of isolation was found to significantly reduce student motivation for academic achievement, and this effect was found even in relatively highly motivated college students (Baumeister, Twenge, & Nuss, 2002).

Taken together, evidence strongly supports the notion that teacher social-emotional (in)competencies can have profound effects on student well-being. In order to take steps in affecting positive change through teacher social-emotional practices, it is important to first understand these practices.

2.6 Research Needed in the South Korean Context

Numerous studies indicate that while academic achievement is a main concern for adolescents internationally, the pressure to perform well is more acute in East Asian countries

like South Korea (Huan, Yeo, Ang, & Chong, 2006; Isralowitz & Ong, 1990). Students in South Korea seem to experience a disproportionate amount of stress, which raises concerns regarding their social-emotional well-being (Lee et al., 2010). Due to the centrality of academic achievement in Korean society, the school environment may be particularly important in promoting social-emotional well-being for Korean adolescents.

Findings from studies conducted with Asian adolescents (e.g. Korea, Hong Kong, Singapore) indicate that while academic achievement is high in these countries, so are associated negative consequences such as excessive stress and mental health problems (Shek 1995). Findings obtained from large scale national youth surveys and interviews in Singapore indicated that education and schoolwork pressure reflected the stress associated with achieving academic excellence (Isralowitz and Ong 1990; Ho and Yip 2003). Similar observations were made of Hong Kong adolescents (Sadler-Smith & Tsang, 1998); compared to their British counterparts, Hong Kong students were more likely to worry about their studies and to be overwhelmed by the amount of work given them, and were more anxious learners overall.

In South Korea, "Education fever" is prevalent; a neologism that refers to the intense competition for prestigious degrees, manifest in huge parental spending for supplementary tuition classes or "cram schools" (Anderson & Kohler, 2013). Highly sought-after companies such as Hyundai and Samsung tend to hire employees straight out of the most prestigious universities, making the competition for entrance into these universities fierce. For many students therefore, high academic achievement is of utmost importance, and it is not unusual for students to study at "cram schools" late into the night.

In a comparison study by Lee and Larson (2000), 56 Korean and 62 US high school students provided time-sampling data on the amount of time spent in daily activities and their emotional states during the activities. Compared to American students, Korean students spent twice as much time doing schoolwork, and only spent half the time in socialising and leisure activities.

South Korean students describe academic stress as the most stressful element of their lives (e.g. Kim et al., 2000; Hwang, 2006) and 56.5% of Korean adolescents reported experiencing academic-related stress according to the Korea National Statistical Office (2007). Unsurprisingly, Korean students experience more negative emotions regarding school

and education than adolescents from nearly all other Western countries (Diener, Suh, Smith, & Shao, 1995; Lee & Larson, 2000). In 2014, only half of Korean students reported that they were satisfied with their general school life (Korea National Statistical Office, 2015).

High levels of study-related stress may even place Korean students at greater risk of mental health problems, including depression and suicide ideation. In Lee and Larson's study (2000) 36% of Korean students were found to be clinically depressed; significantly more than the 16% of American students who fell under this category. Relatedly, Kim and colleagues (2008) conducted a cross-sectional observational study to evaluate the prevalence and risk factors related with suicidal ideation and suicide attempts in Korean university students. Questionnaire results of 368 students revealed that reduction of academic achievement scores was significantly associated with suicide ideation, severe depression and a high probability for bipolar disorder.

Although a number of strategies have been put in place in an effort to enhance student well-being, none have specifically targeted teacher social-emotional practices. For example, to ease academic pressure, the government has very recently introduced the Test Free Semester programme to Korean middle schools (Jung, 2014). As the name suggests, under the Test-Free Semester Programme, students take part in no assessments during an entire semester- equivalent to half of the school year. During this time, students are given 12 school hours each week to pursue their interests, which could manifest in activities such as a science club or a field trip to a company of interest. A limitation to this approach in improving student well-being, however, is that it would offer relief from academic pressure for the length of the programme only, and may even lead to more stress afterwards as students may feel compelled to catch up on lost study time.

In contrast, positive classroom climates that foster student well-being may buffer these negative pressures and make a consistent, positive difference. Research suggests teacher social emotional competence may be particularly imperative to this end. Importantly, research needs to be conducted in the Korean context in order to determine whether certain teacher social-emotional practices are particularly conducive to Korean students' well-being.

2.7 Social-Emotional Characteristics of Korean Teachers

Little research has been done to explore Korean teachers' social-emotional practices. Nevertheless, existing evidence indicates that teacher social-emotional practices may be a particularly effective avenue to enhancing Korean students' well-being. In a recent study, Kim and Kim (2013) found that Korean students' relationship with their teachers has a strong impact on their school life satisfaction. They examined 3,790 South Korean high school students' relationships with their teachers, parents and friends, and the way each predicted school life satisfaction. Of these relationships, all of which were found to have significant associations, a positive relationship with teacher was most strongly associated with student school life satisfaction. As much of a student's day is spent at school, addressing teacher social-emotional behaviours to improve student-teacher relationships is likely to improve students' overall sense of well-being.

Further research is needed to explore the socio-emotional behaviours that are characteristic of teachers in South Korea. Much of the existing literature has been conducted in Western societies, and while these provide useful points of reference, generalising to non-Western cultures is problematic in light of glaring differences between cultural and educational landscapes. An obvious difference is Confucianism. Key elements of Confucianism such as collectivism, centrality of education, and respect for authority are deeply embedded in Korean culture, and are likely to have significant effects on the interactions between students and teachers. Indeed, research exploring student-teacher interactions in Korean schools have shown that respect for authority, which is prevalent in wider Korean society, is found also in the classroom. Lee and colleagues (2003) conducted a questionnaire and interview study involving 439 Korean high school students to investigate student-teacher relationships in Korean classrooms, and results demonstrated that the expectation for teachers to direct and students to obey was strong and generally accepted.

Behavioural differences that may be reflective of socio-cultural norms were highlighted in other studies also. For example, in a study by Bang and Montgomery (2010), Q methodology was used to examine the emotional tendencies of American and Korean teachers. Four teacher profiles were generated from the results: *Thoughtful compassion, work-oriented compassion, sensitive compassion* and *undemanding compassion*. A notable finding was that most teachers in the *undemanding compassion* profile were Korean (six of seven teachers), possibly revealing some socio-cultural characteristics (Bang & Montgomery,

2010). Korean teachers who were *undemanding compassionate* reported being, among other things, more submissive and tranquil in attitude than others. They also preferred words such as rational, moderate and submissive than progressive, self-confident or assertive. Collective consciousness stereotypical of Asian cultures may play a role in Korean teachers' emotional behaviours in the classroom. This is consistent with the observation that people with higher levels of collectivism (as opposed to individualism) are more likely to compromise for the sake of keeping peace (LeFebvr & Franke, 2013).

It is important to consider the role of the cultural context in behaviour, as certain emotion-related behaviours that are widely functional in one culture may not be in another. For example, suppressing one's emotions is functional in Asian cultures and it is related to social acceptance and successful interpersonal interactions (Matsumoto, Yoo, & Nakagawa, 2008). Perceived lack of emotional regulation on the other hand may be considered inappropriate, and lead to social scorn (Beer & Lombardo, 2007).

Another factor that may impact on Korean student-teacher interactions is the emphasis on examination. The Korean education system is heavily influenced by *Keju*, which was the examination system whereby government officials were appointed in Imperial China (Kim, 2009). *Keju* required rote memorisation of large amounts of content and emphasis was placed on the systematic accumulation of knowledge, rather than critical thinking and problem-solving. The influence of *Keju* is evident in Korea's classrooms, where day-to-day classroom teaching in Korean middle and high schools centres on exam preparation, and is heavily content-oriented (Kim, 2009).

These and many other culture-specific factors may influence student-teacher interactions in Korea. Therefore, generalisation of research conducted in different cultural contexts has severe limitations. To examine teacher social-emotional practices with a view of enhancing Korean students' well-being, it is crucial that research is conducted within the Korean context.

2.8 Chapter Summary

While fostering students' well-being should be a central concern in all cultural contexts, research into enhancing the well-being of Korean students through teacher practices is especially relevant given that Korean students experience disproportionate levels of study-related stress. To this end, this research seeks to explore the underlying structure of Korean teachers' social-emotional practices and their expression in the classroom, and examine the

associations between these practices and students' feelings of connectedness. In recognising the importance of gaining insight into students' experiences, student perspectives are sought throughout the research.

CHAPTER THREE

Studies One and Two: Overall Approach

The aim of this research was to explore South Korean teachers' social-emotional behaviours and their associations with student reports of school connectedness. In order to address this aim and answer the research questions, two separate, interrelated studies were conducted. Study one explored the *structure* of Korean teachers' social-emotional practices as perceived by students, through administration of a card-sorting task. The purpose of this study was to develop a coherent structure of these practices through which to observe students' subjective data in Study two. Study two examined social-emotional practices Korean teachers *engage* in, as perceived by students. The purpose of this study was to establish central social-emotional skills in teaching, and profile and compare Korean teachers' ideographic social-emotional response patterns. Student ratings of their teachers' social-emotional behaviours in the classroom were gathered and analysed to this end. Information on student feelings of connectedness was also gathered in study two, in order to establish the associations between student-reported teacher social-emotional practices and student connectedness. Taken the together, the two studies offered a systematic way to address the following research questions:

1. What is the structure of Korean teachers' social-emotional behaviours as perceived by students? (Study one)

2. What social-emotional practices do Korean teachers engage in, as perceived by students? (Study two)

3. What are the associations between student-observed teacher social-emotional practices and student connectedness? (Study two)

The present studies build on the work of Harvey and colleagues (2012), who identified profiles of teacher social-emotional behaviour in New Zealand and Germany. The present studies seek to create similar profiles of Korean teachers' social-emotional behaviour, but from the perspective of students; thus methods identified in this chapter are adapted from Harvey and colleagues' work.

To address the multi-study nature of this research, this chapter will outline key commonalities between the two studies, and provide a lead-in to Chapters Four and Five, which detail methods and findings of Studies one and two respectively. By structuring the chapters in this way, it is hoped that unnecessary repetition of information will be minimised, and the two studies can be understood in a coherent way.

3.1 Participant Recruitment

The study was conducted in a girls' middle school in South Korea, where the researcher was employed as a guest English teacher. Students were recruited through ongoing consultation with English teachers at the school.

Thirty students participated in Study one, and 222 students participated in Study two. All participants were Korean, which is representative of the very homogenous Korean society. As participants for both studies were recruited from a girls' middle school, all participants were female. Participants in Study 1 were 13 years old, and participants in Study 2 were 14 years old.

3.2 Ethical Considerations

This research met the requirements of a low-risk study, as determined by the Massey University 'Screening Questionnaire,' and was conducted in line with the guidelines of Massey University's Code of Ethical Conduct for Research, Teaching and Evaluations involving Human Participants.

Participation was voluntary and participants were advised of their rights to withdraw from the study at any stage. As the participants were under 16 years old, informed and written consent was obtained not only from each participant, but also their parent/caregiver prior to their involvement. An important component of privacy and confidentiality is anonymity. This was preserved throughout the research by reminding students to omit their own as well as their teachers' names at the beginning of each task. In addition, anonymity was further ensured by reporting no identifying features of the school in the final write-up.

As the researcher was employed as a teacher in the school in which student participants were recruited, only those students who were not directly taught by the researcher took part in research. This was to minimise the possible effects of power dynamics

that may influence students' decision to participate. Finally, no deception or behavioural intervention was involved in either studies, and both studies were judged to be highly unlikely to expose participants or communities to physical or psychological harm.

3.3 Instrument Development

A list of 88 statements of teacher social-emotional behaviour (referred to as items) was drawn with permission from previous studies by Harvey and colleagues (2003, 2012) and Chia (2014). Items were short statements that described teachers' emotional behaviour such as "Our teacher is understanding and caring", "Our teacher expects us to behave", "Our teacher maintains clear teacher-student boundaries with us", and "Our teacher remains composed in difficult situations". As all participants in this study were Korean, the items were translated into Korean, and both English and Korean versions were provided in the task.

Harvey and Evans' (2003) original item pool included 76 social-emotional behaviour items, which were developed in New Zealand and sample responses were compared with German samples. These items were revised for contextual appropriateness and increased to 88 for the purposes of Chia's study (2014), which involved Singaporean participants. The items used in the present study were Chia's revised version of 88 items as participants in this study were also East Asian.

To ensure cultural appropriateness of items to the Korean context, a validation process was carried out with a small panel of teachers and a small panel of students within the school. Each individual was given a handout that contained the list of 88 items with translations, and some prompting questions. These questions were: 1) Are there items that don't make sense?; 2) Are there items that don't apply in the Korean context?; 3) Should other items be added?; and 4) Are there themes that should be added, such as themes that are important in and unique to the Korean context? Panel members were given at least one day to consider the items before meeting for discussion. This process created opportunity for the exclusion or addition of items depending on cultural appropriateness. All panel members reported that all items were applicable and relevant in the Korean education setting. All panel members felt that the list of items was comprehensive, and didn't feel that any more items needed to be added.

Some item meanings were seen to be difficult to grasp. Where needed, examples illustrating their meaning were modified or added to assist students' comprehension of these items. Modifications were made to five items as follows:

Item 8: "Shows me how I took part in an emotional situation (e.g. started an argument or reacted to it)" became "Our teacher shows me how I took part in an emotional situation (e.g. My teasing led to my friend reacting angrily)"

Item 18: "Adapts his/her emotions to suit the situation (e.g. caring with a sad student)" became "Our teacher controls his/her emotions to suit the situation (e.g. when caring for a sad student, or dealing with disrespectful students that provoke anger, he/she controls his/her emotions appropriately)"

Item 34:" Explains the best way to respond to things" became "Our teacher explains the best way to respond to things (e.g. how to respond to a fight with a friend, how to prepare for an upcoming test)"

Item 37: "I can talk to my teacher irrespective of his/her mood" became "Whether our teacher is in a good mood or bad mood, he/she is always open to talking with me"

Item 61: "Uses students to support other students (e.g. student mediators, class monitors)" became "Our teacher uses students to support other students (e.g. appoints student helpers to aid fellow students that need physical assistance)"

For items 8, 18 and 34, illustrating examples were added or expanded on to assist comprehension. The wording of item 37 was altered to cater for lack of a direct Korean translation for the word "irrespective". In addition, the illustrating example for item 61 was modified to apply to the Korean school context,

3.4 Translation Processes

To ensure fidelity, the items, instruction sheets, and all other information given to participants were translated from English to Korean, then back-translated into English by two different bilingual individuals. The final translations were checked by Korean teachers to ensure the translations were clear and sounded "natural". This process was repeated as needed.

CHAPTER FOUR

Study One: Method and Results

This study seeked to explore the underlying structure of Korean teachers' social-emotional practices within the classroom as perceived by students. First, student perspectives were obtained through a card-sorting task. Then, hierarchical cluster analysis and multidimensional scaling were applied to the resulting data to produce visual representations of the student-observed structure of teacher social-emotional practices.

4.1 Sample

The thirty participants were recruited through the suggestion of an English teacher at the school. The researcher approached each English teacher in the school individually, described the study, and asked teachers to recommend groups or classes of students who would be suited to this study. The inclusion criteria were that participants be over 13 years of age and be in a level A or B English class. This was to ensure that participants would have sufficiently high reading comprehension levels to complete the task. All participants were 13 years old and in a level A English class. Although participants were first grade students, they were seen to have a sufficiently high level of reading comprehension to engage in the task. Notably, the students were members of an afterschool class for "gifted" students. The research took place during the final afterschool class for the term. This was considered ideal as by then the students had covered the curriculum.

Participants were a convenience sample. Nevertheless, a convenience sample of 30 or greater has been shown to produce stable spatial maps and dendrograms with good face validity (Bimler & Kirkland, 1998). A major criterion for sample size for multidimensional scaling (MDS) is the stability of averaged sorting results, and literature indicates that 20 to 30 participants are usually sufficient to obtain a stable averaged model (Harloff & Coxon, 2005). The minimum number of participants recommended by Miller (1969) is 20, and Tullis and Wood (2004) suggest a sample size of 20 to 30. Further, Wood and Wood (2008) suggest that 25 to 30 participants are likely to yield similar results to several hundred participants, provided they are familiar with the domain and are representative of the target group. Thus according to the aforementioned recommendations, the sample would be considered to be a good size and likely to produce stable results.

Each of the thirty participating students received an information sheet, student consent form, and parent consent form; stapled together. The information sheet briefly explained the task, and explained participants' right to anonymity, right to ask questions about the study, and right to refuse to participate at any point. Students took part in a card-sorting procedure wherein they sorted 88 statements describing teacher social-emotional behaviour according to perceived similarity, as explained below. All thirty students produced usable data.

4.2 Instrument Development

A list of 88 statements of teacher social-emotional behaviour (referred to as items) was drawn with permission from previous studies by Harvey and colleagues (2003, 2012) and Chia (2014). Items were short statements that described teachers' emotional behaviour such as "Our teacher is understanding and caring", "Our teacher expects us to behave", "Our teacher maintains clear teacher-student boundaries with us", and "Our teacher remains composed in difficult situations". As all participants in this study were Korean, the items were translated into Korean, and both English and Korean versions were provided in the task (see Appendix A). As the tasks were carried out during English lesson times, providing English versions to which students can compare the Korean wording made the task more relevant to student learning.

Harvey and Evans' (2003) original item pool included 76 social-emotional behaviour items, which were developed in New Zealand and sample responses were compared with German samples. These items were revised for contextual appropriateness and increased to 88 for the purposes of Chia's study (2014), which involved Singaporean participants. The items used in the present study were Chia's revised version of 88 items as participants in this study were also East Asian.

The 88 items were made into a deck of item cards for use in the perceptual sorting task (see Appendix A). Each item, accompanied by a unique numerical tag, was printed onto a 86mm x 43mm (3.4 x 1.7 inches) white card (font Calibri). To minimise the risk of losing cards, each deck was held together with a rubber band and placed inside a small plastic Ziploc bag.

4.3 Data Collection

4.3.1 Data collection method. Students were instructed to sort items by perceived similarity using the 'GOPA-sorting' procedure (Coxon, 1999), a four-step sorting procedure that involves Grouping, Opposites, Partitioning and Addition (GOPA). GOPA sorting is a free perceptual sorting procedure, wherein the number, size, and meaning of categories are left to the participants, rather than specified by the researcher (Harloff & Coxon, 2005). A free-sorting approach is well-suited to this study, as the goal is to *explore* student perceptions of Korean teachers' social-emotional practices.

The sorting consisted of four phases as follows. The first was the grouping (G) phase, where participants were asked to arrange the item cards into groups of semantic similarity. In the second phase, participants were asked to identify pairs of opposite (O) groups, that is, groups that are seen to have opposite underlying themes. In the third, Partition (P) phase, the original groups (G) were subdivided into smaller subgroups using a higher similarity threshold. In the final addition (A) phase, participants were asked to combine the same original groups (G) to create larger groups using a lower similarity threshold. Specifically, students lowered the similarity threshold in several steps, merging groups each time. Throughout the sorting procedure, participants recorded their judgments in an anonymous recording sheet.

The GOPA method of sorting was chosen for several reasons. One advantage of the procedure is that it is relatively simple to carry out. GOPA asks participants to pair similar items together, which is much more straightforward and manageable compared to alternative approaches used to investigate similarity that require participants to assess the similarity of every pair of items (Harloff & Coxon, 2005). When using GOPA, a number of data sets are needed to extract meaningful results.

Further, GOPA is a well-suited method for exploring underlying constructs because it lends itself to the construction of both tree solutions (dendrograms) and spatial solutions (e.g. multidimensional scaling; Bimler & Kirkland, 1998). Both types of solutions illustrate the relations of items, but in different ways. The branches in a tree provide information on the level of similarity between clusters, but not the relationship between items of the same cluster. An advantage of the tree is that it provides a clear picture of the items (leaves) that are responsible for producing specific broader properties (branches). A spatial map, on the other

hand, shows the relationship between individual items, which are represented as points on the map. Proximity indicates similarity. The two visual models complement each other due to their slightly differing ways of presenting the underlying structure of raw data. Hence GOPA is well-suited to the study's aims of understanding the structure of Korean teachers' social-emotional behaviours.

4.3.2 Data collection procedure. The task was facilitated by the researcher and a Korean English teacher, who had received instructions and training from the researcher beforehand. Specifically, the task was piloted with the Korean English teacher. This allowed the teacher to become familiar with the task and items, consider any difficulties the students may face while completing the task, and consider the best way for facilitating the task. The teacher had no concerns regarding the task, and felt that it was at an acceptable level for the students.

The study took place in a classroom after school. Each participant completed the task individually. Participants were given a deck of the 88 items (Appendix A), an instruction sheet (Appendix B) and a recording sheet (Appendix C). The Korean teacher read aloud the instructions in Korean, and allowed opportunity for participants to ask any questions before asking them to begin. The researcher and Korean English teacher were available throughout the duration of the task to answer questions regarding the task.

Each participant received a deck of cards with an item statement printed on each card, and was asked to sort them into piles based on perceived relationships between items. Students were asked to arrange the item cards into groups of semantic similarity (G), identify pairs of opposite (O) groups, subdivide original groups (G) into smaller subgroups using a higher similarity threshold (P), and combine the same original groups (G) to create larger groups using a lower similarity threshold (A). Throughout the sorting procedure, participants recorded their judgments in an anonymous recording sheet.

GOPA data were collected over two separate sittings, and each sitting lasted approximately one hour. Thirty students participated in the first sitting. However, many of these students were unable to complete all four steps of the procedure within the given time, and the same students were invited to return for a second round. Twenty-one of the original thirty students returned for the second round of sorting.

Five of the second round sortings were recognisably based on first-round sortings, but the remaining second-round GOPAs could not be matched with the first, so were treated as new data. The MDS was repeated with both versions of the recognisable sortings, or only the second version, and no noticeable effect was found from the repetition.

4.4 Data Analysis Procedures

The data from the GOPA recording sheets were entered by hand on to a personal computer using Data Organiser (Graybill, 2009). This software application facilitates faster and simpler data entry and performs simple consistency checks, such as ensuring items have not been entered twice. Each participant's sorting data was converted to a matrix of item-pair values. These values were averaged across participants and entered into a proximity matrix based on how frequently each item was grouped with every other item across GOPA's four steps. This produced estimates of mean similarity between each pair of items, which would be used in producing a three-dimensional model of teacher social-emotional behaviours through multidimensional scaling. Both hierarchical cluster analysis and multidimensional scaling were used to produce visual representations of the data.

4.4.1 Hierarchical cluster analysis. Hierarchical cluster analysis was used to convert the sorting response data into a dendrogram. The UPGMA (Unweighted Pair Group Method with Arithmetic Mean) algorithm was used for convenience. Hierarchical clustering is a widely-used data analysis tool that allows researchers to build a binary tree of data which successively merges similar groups of points. The resulting visual organisation provides a useful summary of the data. In a dendrogram, items are arranged like the leaves on a tree, and the branches represent the conceptual distance between items (Kirkland et al., 2004).

While the visual map produced through multidimensional scaling has the advantage of visually presenting the distance between individual items, an advantage of the dendrogram over the 3D map is that it demonstrates how clusters were combined in each step of the procedure until all the items form a single cluster (Hair, Black, Babin, & Anderson, 2010). That is, average levels of students' groupings of items at different stages of the GOPA sorting procedure are reflected in the levels of branching. Closeness of items is indicated by the length of "branching" needed to join items or groups of items together. That is, the connecting lines of items or groups of items perceived as similar appear closer to the branches of the dendrogram.

4.4.2 Multidimensional scaling. In addition, multidimensional scaling was used to produce a visually representative three-dimensional "map" of teacher social-emotional behaviour items, with a view of exploring the underlying structure of teacher behaviour as perceived by students.

To construct the map, student-reported similarity scores of items were converted to proximity (inter-item distance) values. Specifically, the results from each phase of the GOPA sorting procedure were separately collapsed across participants and entered into a proximity matrix based on how frequently each item was grouped with each of the other items across the sorting steps. This produced estimates of mean similarity for each item-pair. Results were entered into a Euclidean space and dimensionality was determined by the goodness-of-fit, or stress function (Kruskal & Wish, 1978).

The stress function reveals how well the distances within a spatial map match the data set in a dimensional solution. It is an iterative process whereby successive approximations to the map are applied until the stress is minimised (Jaworska & Chupetlovska-Anastasova, 2009). The aim is to maximise the goodness-of-fit and minimise the number of dimensions (which is pre-specified) to arrive at a valid yet coherent configuration. The degree to which the data fit the configuration is indicated by a number generated by the stress function, which falls between 0 and 1; 0 being a "perfect" fit. The Kruskal stress function (1964) was applied to the data using a multidimensional scaling application. The formula is presented as:

$$s1 = \sqrt{\sum_{ij}(d_{ij} - d_{ij}^{*})^2 / \sum_{ij} d_{ij}^2}$$

This determines the goodness-of-fit between the distances and disparities in the multidimensional map (Schiffman et al., 1981). In addition, an elbow test plotting Stress1 by dimension was prepared to help in finding the optimal level of dimensionality (Bimler & Kirkland, 2007).

Map interpretation consists mainly of identifying and naming meaningful groupings and orderings of items (Davison & Skay, 1991). A meaningful *grouping* refers to a cluster of items in an area of the map, and each cluster is seen to reflect an underlying theme. A meaningful *ordering* is the arrangement of items along a specific attribute or dimension. The position of items along the dimensions (axes) of the three dimensional shape allows the

viewer to examine the shape for continuums of concepts. Items on one side of the "sphere" are seen to be conceptually opposite to items that are diametrically opposite on the other side of the sphere.

Naming of the groupings and orderings can be subjective, however can also be transparent due to the way the data are presented. The approach for interpreting the data was simple inspection (Davison, 1983), whereby key clusters of items seen to share the same underlying concept were identified.

4.5 Results

Two methods of analysis, hierarchical cluster analysis and multidimensional scaling, were applied to produce separate but complementary information (Carter, Enyedy, Goodyear, Arcinue & Puri, 2009) to explore the structure of Korean teacher social-emotional practices as perceived by students. The results of Study One will be discussed in two parts. First, findings from the hierarchical cluster analysis will be presented, and this will be followed by the results drawn from multidimensional scaling. This chapter will conclude with a brief summary of the methods and findings.

4.5.1 Hierarchical cluster analysis results. Hierarchical cluster analysis was used to convert the sorting response data into a dendrogram (see Figure 3). The dendrogram provides a supplementary visual representation of the data, and has the benefit of demonstrating how the clusters were combined in each step of the sorting procedure (Hair, Black, Babin, & Anderson, 2010). Like the multidimensional map, the dendrogram solution facilitates the identification of item clusters which represent underlying themes.

Six preliminary clusters were identified. They were *relationship-building*, *attitude to teaching*, *fostering supportive relationships/environment*, *classroom management*, *emotion coaching* and *emotion contagion*. The dendrogram solution with labels for each cluster is shown in Figure 3.

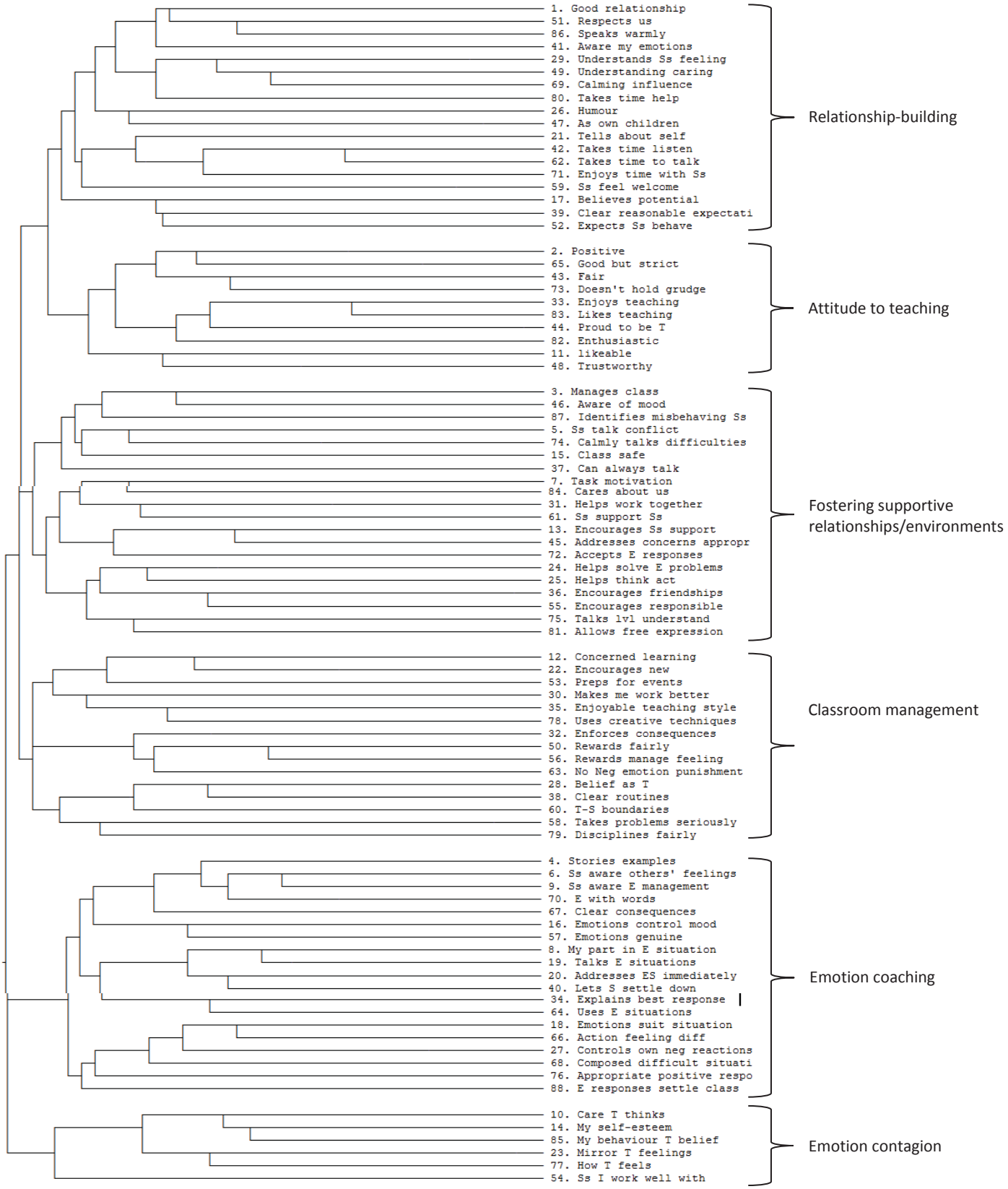

Figure 1. Dendrogram

4.5.2 Multidimensional scaling results. Multidimensional scaling was used to produce a visually representative three-dimensional "map" of teacher social-emotional behaviour items, with a view of exploring the underlying structure of teacher behaviour as perceived by students. As explained in more detail in 4.7.1, the stress function reveals how well the distances within a spatial map match the data set in a dimensional solution (Jaworska & Chupetlovska-Anastasova, 2009).

The stress indices for two-dimensional (0.101), three-dimensional (0.054), four-dimensional (0.034) and five-dimensional (0.256) solutions indicated the three-dimensional solution to best fit the data. Increasing the number of dimensions from two to three caused a greater drop in stress than further increases. The decision to make here was whether to increase the dimensions to decrease the map stress and cause a slight increase in map accuracy, or retain a three-dimensional structure, and by doing so enhance the map's interpretability, ease of use, and clarity (Kruskal & Wish, 1978). As increasing dimensionality would cause only a minimal decrease in stress, the three-dimensional solution was considered the best option and was retained. The stress index for this solution (0.054) was well below Sturrock and Rocha's (2000) recommended ceiling of 0.304 (suggested for a 100-object model), further providing validity to the three-dimensional model.

The visual map solution produced with multidimensional scaling is a three-dimensional cloud of points (Figure 4). Each point represents a social-emotional behaviour item, and proximity between points reflects the (perceived) similarity of items. No holes[1] were found within the map, suggesting that the item pool is comprehensive, and not missing any key constructs.

[1] In a multidimensional scaling map solution, a "hole" indicates a region of the conceptual map that isn't sampled by the item set. The absence of holes demonstrates sufficient content coverage by the existing items.

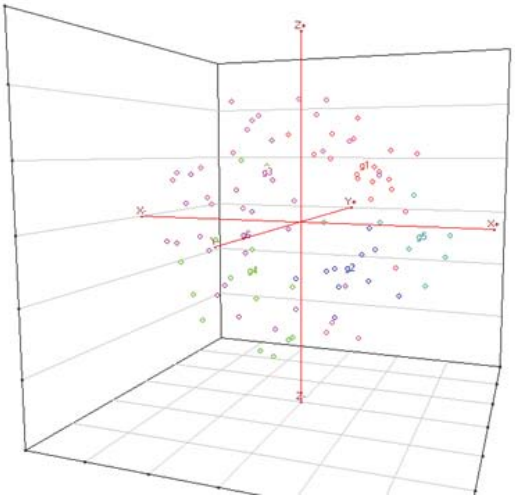

Figure 4. Three-dimensional map produced using multidimensional scaling

In order to compare the dendrogram and multidimensional scaling solutions, the item points on the multidimensional scaling solution were assigned different colours according to how they were grouped in the dendrogram solution. The colour key is provided in Table 2.

Table 2

Colour Key for Multidimensional Scaling (MDS)-Dendrogram Comparison

Colour in MDS map	Corresponding dendrogram cluster
Purple	Emotion coaching
Red	Relationship-building
Green	Classroom management
Indigo	Attitude to teaching
Teal	Emotion Contagion
Gray	Fosters supportive relationships/environment

To facilitate map reading, the three-dimensional map is presented as pairs of flattened hemispheres (see Figure 5). The sphere is split down the centre, and one hemisphere is centred on the positive end of the D1 dimension (D1+) while the other is centred on the negative end (D1-). Each flattened hemisphere becomes a circle and the edges of the two circles are the equator where the two hemispheres meet.

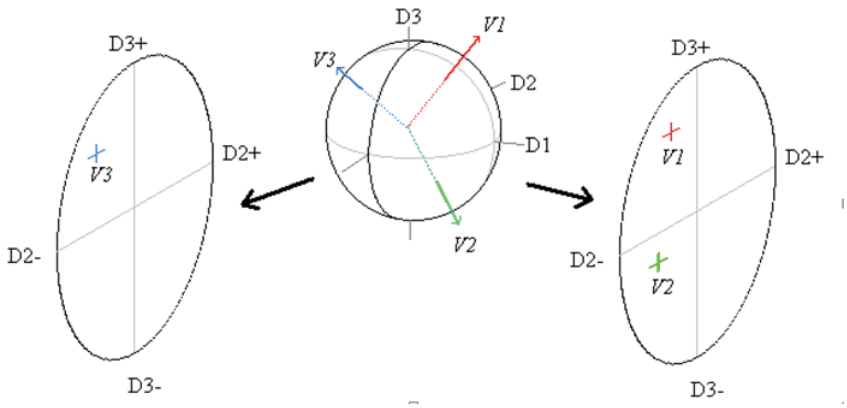

Figure 5. Three-dimensional map flattened into two hemispheres for interpretation

4.5.2.1 Map Interpretation. Map interpretation consisted of the identification and naming of meaningful groupings (clusters) and orderings (dimensions) of items (Davison & Skay, 1991). When the item points on the multidimensional scaling solution were coloured according to dendrogram clusters, this revealed that they were largely grouped in the same way in the multidimensional scaling map. That is, items placed in the same dendrogram cluster were also in close proximity to one another in the map, which further indicated the presence of underlying themes. The same six underlying themes of teacher social-emotional practices were identified: *relationship-building, attitude to teaching, fostering supportive relationships/environment, classroom management, emotion coaching* and *emotion contagion.*

In addition, three underlying dimensions (concepts) of teacher social-emotional behaviour were identified. Dimensions are manifest as cluster pairs positioned diametrically opposite to each other in the sphere, and each cluster pair is seen to represent opposite ends of the dimension's continuum. The three dimensions were labelled: *Emotional-behavioural influence, Student-teacher interaction* and *Emotion management*. Each dimension and their polar meanings (opposite clusters from the dendogram) are presented in Table 3.

Table 3

Dimensions Drawn from MDS Visual Map

Dimensions	Poles	Polar Meanings
D1: Emotional influence	+	Emotion contagion
	-	Fosters supportive relationships/environment
D2: Emotion management	+	Attitude to teaching
	-	Emotion coaching
D3: Student-teacher interactions	+	Relationship-building
	-	Classroom management

The first dimension identified was *Emotional-behavioural influence*. As shown in Figure 6, the *Emotion contagion* cluster (teal; positive axis) is diametrically opposite to *Fosters supportive relationships/environment* (gray; negative axis). Items on this dimension describe teachers' influence on students' emotions and behaviour and range from passive, possibly unintentional transference of teacher emotion to students (*Emotion contagion*; e.g. *We mirror how our teacher feels*), to active, intentional teacher actions that influence student emotions and behaviours (*Fosters supportive relationships/environment*; e.g. *Our teacher helps us to solve emotional problems, Our teacher helps us to work together*).

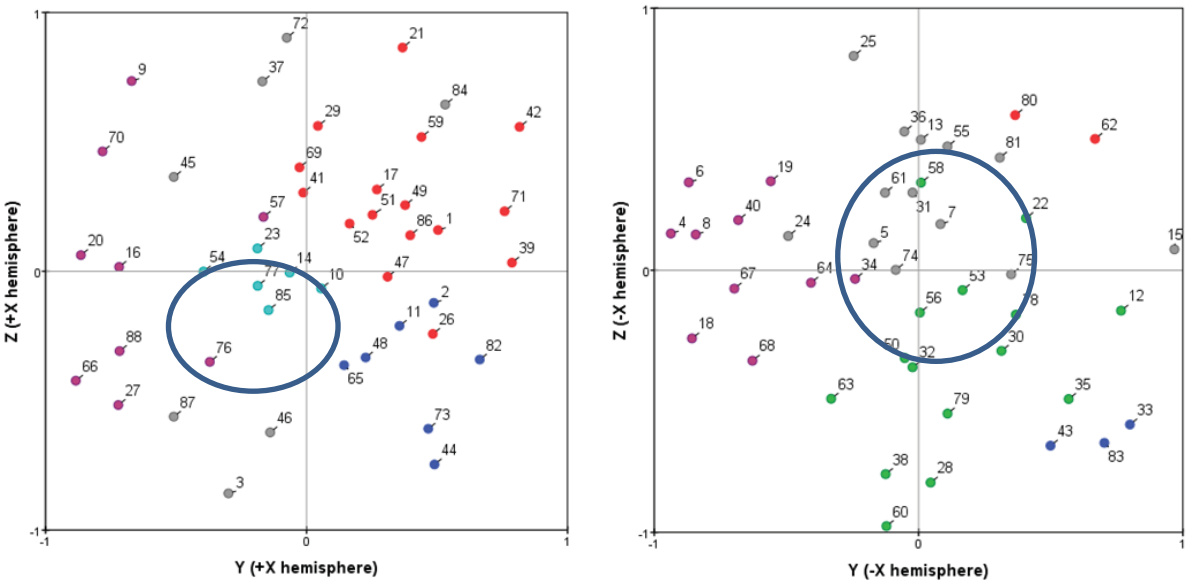

Figure 6. Flattened hemispheres for *Emotional-behavioural influence* dimension

The second dimension is *Emotion management*. The polar ends of dimension 2 are presented in Figure 7. At one end of the dimension is *Attitude to teaching* (indigo; positive axis) and at the opposite end is *Emotion coaching* (purple; negative axis). Items along this dimension describe teacher attitudes and behaviours associated with the management of emotions, where *Attitude to teaching* relates to teachers' management of own emotions (e.g. *Our teacher enjoys teaching, Our teacher is enthusiastic*) and *Emotion coaching* focuses on teachers' explicit management of student emotions and emotional situations in the classroom (e.g., *Our teacher teaches us how to express our emotions with words, Our teacher makes us aware of how others feel*).

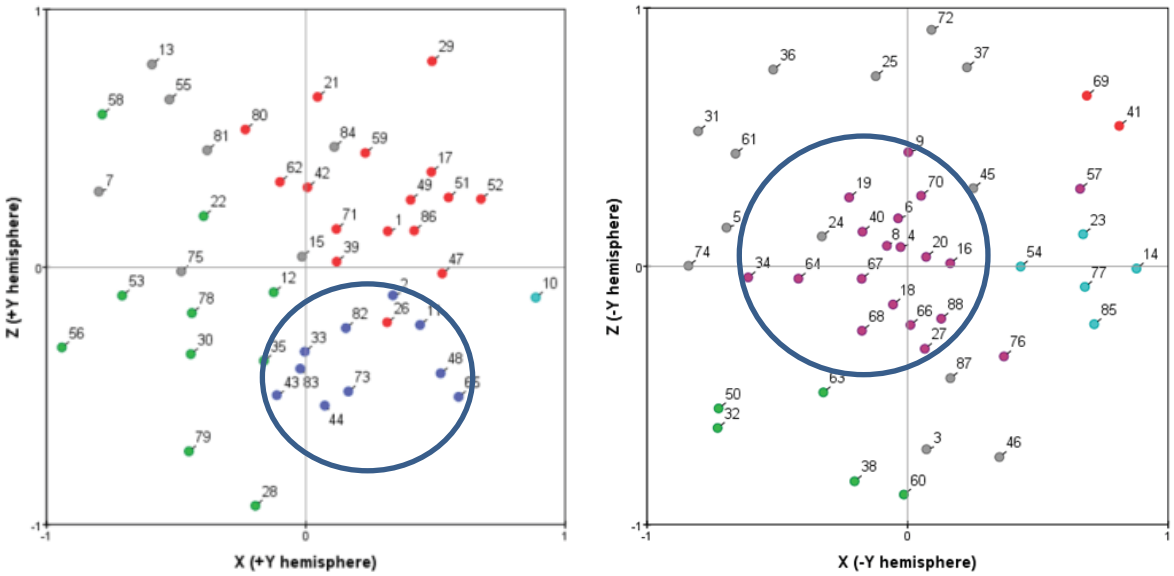

Figure 7. Flattened hemispheres for *Emotion management* dimension

The third dimension is *Student-teacher interactions* (Figure 8). At one end of the dimension is *Relationship-building* (red; positive axis) and at the opposite end is *Classroom management* (green; negative axis). Along this dimension are student-teacher interactions that range from being warm and relationship-focused (*Relationship-building*; e.g. *Our teacher takes time to help us, Enjoys spending time with us*) to being more managerial and whole-class oriented (*Classroom management*; e.g. *Our teacher remains composed in difficult situations, Is fair, Is good but strict*).

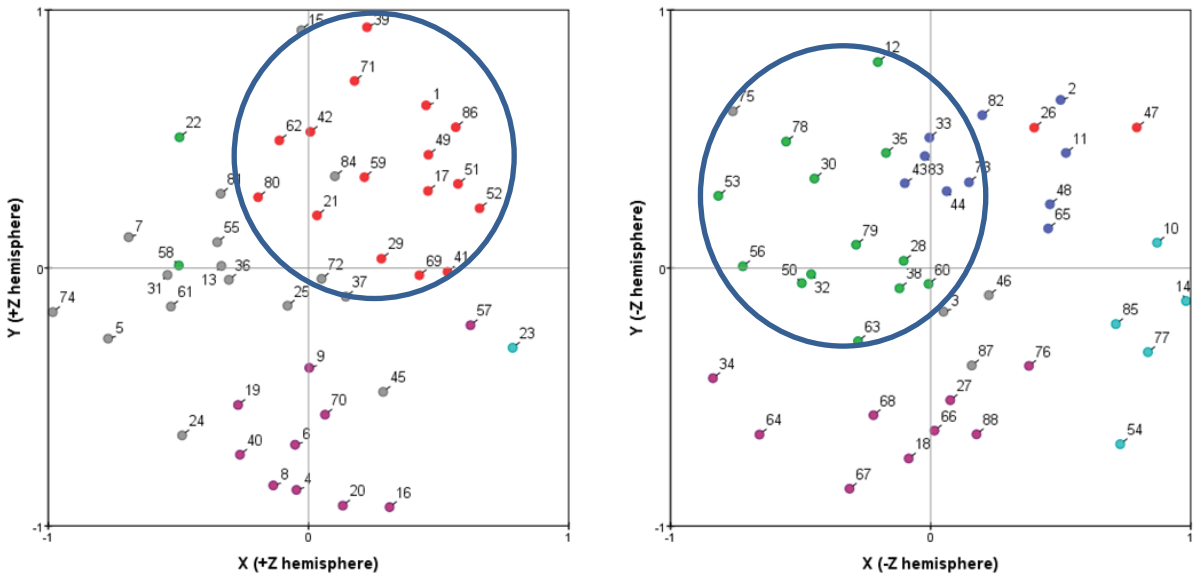

Figure 8. Flattened hemispheres for *Student-teacher interactions* dimension

4.6 Chapter Summary

The purpose of Study One was to explore Korean student perspectives of teacher social-emotional practices. By applying hierarchical cluster analysis and multidimensional scaling to student sorting data, six themes seen to make up the underlying structure of Korean teachers' social-emotional practices were identified. These were labelled *relationship-building, attitude to teaching, fostering supportive relationships/environment, classroom management, emotion coaching* and *emotion contagion*.

CHAPTER FIVE

Study Two: Method and Results

Study one explored the structure of Korean teachers' social-emotional practices as perceived by students. Study two builds on the findings from Study one, and seeks to (a) establish the social-emotional practices that Korean teachers engage in through students' subjective ratings; and (b) establish the associations between student-observed teacher social-emotional practices and student connectedness.

5.1 Sample

The 222 participating students consented for the study from a possible 240 students in eight second-year English classes who were invited to participate. All participants were 14-year-old female students. In this school, students were placed in a level A, B, C or D English class according to their performance in a previous exam, A being the highest level. The participants of this study were students in A and B level classes. Upon consultation, it was suggested by Korean teachers that students in A and B classes would be best suited for the task as some vocabulary and expressions in the 88 teacher social-emotional behaviour items could be difficult to understand. Of the 222 students who consented, all but one successfully completed the task to produce usable data. Therefore, data were analysed for 221 students.

The 221 participating students were a convenience sample. A sample size of 221 was seen to be sufficiently large to produce valid results for planned analyses. Specifically, sample size met Guilford's (1954) criterion. Guilford recommended that a factor analysis sample size should be at least 200 cases, and noted that "factor loadings from samples near 200 have been fairly consistent with loadings in the same factors and tests from samples above 1,000" (p. 533). Other researchers posit that the subject-to-variable ratio is more important than the absolute number of cases. Cattell (1978, p. 508) recommended a sample size to item ratio of 3:1, which would call for 264 participants for the 88 items in the present study. However, this is a very cautious, conservative criterion as it was designed to confirm that factors are valid, which in this study is confirmed by the parallel analysis results.

5.2 Measures

5.2.1 Teacher social-emotional behaviours. The aforementioned list of 88 items (refer to Chapter Three; Appendix A) was used for the rating task (described in detail in the data collection section). Items were short statements that described teachers' social-emotional behaviours (e.g. "Our teacher maintains clear teacher-student boundaries with us"). The items were presented on a screen in a powerpoint presentation, wherein each slide contained a single item (font Calibri, size 32), its Korean translation, and corresponding number.

5.2.2 Student connectedness. In addition to the main rating task, a questionnaire measuring student-teacher connectedness, student-peer connectedness, and student-school connectedness was administered. The questionnaire was divided into three sections containing statements regarding student-teacher (e.g. If upset, I can seek comfort from my teacher), student-peer (e.g. If upset, I can seek comfort from my peers), and student-school (e.g. I feel like I am part of this school) connectedness. Participants were asked to rate each statement on a scale of 1 (definitely does not apply) to 5 (definitely applies) as it applies to them.

Items for the questionnaire were taken from two different instruments: An adapted version of the *Student-Teacher Relationship Scale* (STRS; Pianta, 2001) was used to measure students' perceived connectedness to their teacher and peers, and the *National Longitudinal Study of Adolescent Health's School Connectedness Scale (SCS)* was used to measure their feelings of connectedness to the school.

In accordance with the translation process for the rating items, the connectedness items were translated from English to Korean, then back-translated to ensure fidelity of the translation to the original.

5.2.2.1 Student-Teacher Relationship Scale (STRS). Over the past decade, almost all research on student-teacher relationships has, in some way, used the Student-Teacher Relationship Scale (STRS). Items of the STRS were derived from attachment theory, the attachment Q-set (an item-sorting method for assessing child attachment; Waters & Dean, 1985), and from a review of the literature on student-teacher interactions (Harvey et al., 2012).

The original STRS evaluates three dimensions which define behaviour patterns characterising student-teacher relationships: Closeness, Dependency and Conflict (Pianta, 1994). In light of the frequent administration of STRS along with other assessment tools (e.g., Baker, 2006; Howes, Philipsen & Peisner-Feinberg, 2000; Pianta & Stuhlman, 2004). Pianta and colleagues developed a shortened, less time-demanding version, called the *Student-Teacher Relationship Scale-Short Form* (STRS-SF). The STRS-SF is made up of 15 items (down from the original scale's 28 items) that are rated on a 5-point Likert-type scale (Pianta, 2001). Items fall under two categories, namely Closeness and Conflict.

As the present study specifically focuses on connectedness, only those items relating to closeness were used. Specifically, these were the 7 closeness items from the STRS-SF. The Closeness subscale assesses the extent to which a teacher perceives the student-teacher relationship is characterised by open communication, affection, and warmth.

The original STRS had been designed to be completed by teachers. Items were reworded to capture students' perspectives of their relationship to their teacher and peers. For example, the original item "I share an affectionate, warm relationship with this child" became "I share an affectionate, warm relationship with this teacher" and "I share an affectionate, warm relationship with my peers" respectively. Permission to make adaptations to the scales was gained through email correspondence with the researcher.

5.2.2.2 School Connectedness Scale (SCS). In addition to student-teacher connectedness and student-peer connectedness, a third measure of connectedness was *student-school connectedness*, which is the student's perceived connectedness with the school. For this measure, the *School Connectedness* Scale *(SCS)* was used. It is made up of five items, and is the school connectedness scale used most frequently in research (e.g. Bonny, Britto, Klostermann, Hornung, & Slap, 2000; McNeely, Nonnemaker, & Blum, 2002; Rice, Kang, Weaver, & Howell, 2008). The five items were originally taken from the National Longitudinal Study of Adolescent Health (McNeely et al., 2002; Resnick et al., 1997). A previous study found this scale to have acceptable reliability (a= .82 to .88) and validity (r= .44 to .55) across eighteen different sociocultural groups, including Koreans (Furlong, O'brennan & You, 2011). As the present study also focused on connectedness, all items from the SCS were used.

5.3 Data Collection Procedures

Data were collected through two different tasks. The first was a rating task, wherein students rated short statements of teacher social-emotional behaviour according to how they were seen to relate to their homeroom teacher. The list of 88 items used in Study one was applied again in this task. The second task was a questionnaire that asked students to rate, on a 5-point Likert-type scale, their subjective feelings of connectedness to their homeroom teacher, peers, and the school. Items from the *Student-Teacher Relationship Scale (*STRS; Pianta, 2001) and *National Longitudinal Study of Adolescent Health's School Connectedness Scale (SCS)* were adapted and used for this task.

Eight classes took part, four A classes and four B classes. From a total of 240 students within these classes, 222 completed the rating task and questionnaire, and 221 produced usable data. The task was administered in each individual class during the course of one day, by the Korean English teacher who taught the class. Four of the eight classes were taught by one Korean English teacher, and the other four by another. The task was administered by these teachers in their respective classes, thus each teacher administered the task four times.

Prior to the task, the teachers were individually given instructions and training**.** The teachers were asked to remind the students of their anonymity and right to refuse to participate in the study. The students were also allowed to ask questions during the task.

As the task was to be administered using powerpoint slides presented on a screen, the researcher demonstrated the procedure using the same powerpoint slides on each teacher's laptop. It was estimated that due to the amount of time available, students would need to rate approximately three items per minute. After reading through the items, and considering their students' usual pace in completing tasks in class, both teachers believed this would be sufficient time. The researcher went through each item with the teachers to make sure they understood them, and minimise ambiguity. This was especially important as the researcher would not be accompanying some of the administrations due to teaching timetable clashes, and the teachers needed to be able to answer any questions arising during the task.

The researcher was present for the first administration session of each teacher. This time was an opportunity to gauge whether the time allocated to tasks was sufficient and address any questions or issues that may arise. For both administration sittings wherein the researcher was present, students completed the tasks within the given time, and had no

apparent difficulty with the tasks. The students asked questions regarding item content on several occasions, and these were directed at the Korean teachers, who were able to answer with confidence on each occasion.

Participants took part in the tasks in their English class. Tasks were completed individually. Each participant was given an instruction sheet (Appendix D) and a recording sheet (Appendix E). The teacher read aloud the instructions as written in the powerpoint presentation, and allowed opportunity for participants to ask any questions before asking the participants to begin.

Although participants performed the tasks in the presence of their English class teachers and peers, they were asked to respond to the questionnaire items according to their perceptions of their *homeroom* teacher and peers. This was because the students in this school typically spent the most time with their homeroom teacher and peers, and these relationships were likely to have the most impact on students in their day-to-day lives.

Items were presented on a screen one by one, and the teacher clicked to the next slide when all participants were ready. Participants were asked to read the item on the screen and rate their teacher according to how often they engaged in said item, as perceived by the participant. The recording sheet contained five boxes labelled “always seen”, “often seen”, “sometimes seen”, “rarely seen” and “never seen”. If for example a participant perceived her teacher to *always* expect students to behave (item 52), she would write “52” in the box labelled “always seen”. As the participants recorded the numbers in the boxes, they were asked to separate item numbers with commas.

After completing the rating task, participants completed the connectedness questionnaire (see Appendix F). The purpose of this task was to later allow investigation into associations between teacher behaviours as perceived by students, and students’ subjective feelings of connectedness. Taken together, the instructions, rating task and questionnaire took approximately 40 minutes.

5.4 Data Analysis Procedures

All information gathered from the tasks was electronically recorded and stored using Data Organiser (Graybill, 2009). It should be noted that factor analysis was used as the principal method of analysis in this study because the data was unexpectedly found to be

unsuitable for "hotspot-modelling" (Kirkland et al., 2000). That is, the MDS solution drawn from GOPA sorts in Study 1 was not sufficiently similar to the factor analysis results drawn from the rating data (Study two). Had there been sufficient overlap, hotspot-modelling would have been used to "embed" the rating data with the MDS map and identify highly salient groups of items that had both high within-case similarity and high co-variation. These groups, called "hotspots," are considered to be key themes of teacher social-emotional behaviour. Factor analysis is also well-suited to the purposes of this study as this method of analysis effectively identifies central themes, or "factors," of teacher social-emotional practices. Factors are groups of regularly co-occurring items, and each factor is seen to represent a unique theme or construct. Thus the main difference between hotspot-modelling and factor analysis is that in factor analysis the themes are drawn solely from the rating data (Study two) whereas in hotspot-modelling, solutions from both studies would have informed the results.

The data analysis procedures are broadly divided into three sections: *1) Sorting items into factors*, wherein Horn's parallel analysis and rotated factor analysis were conducted on the rating data in order to determine the optimal number of factors for the 88 items; *2) Sorting students into groups based on factor scores*, which outlines the steps whereby factor analysis was conducted to identify groups of students who responded in similar ways, Q-factor and hierarchical cluster analyses were used to determine the optimal number of profiles, and *k*-means cluster analysis used to optimise case assignment to profile. Finally, *3) Examining associations with connectedness* describes how the resulting factors and profiles were compared with student reports of connectedness through ANOVA and Pearson's correlation on SPSS.

5.4.1 Items are sorted into factors. The first step for establishing factors (themes) of teachers' social-emotional practices was to determine the number of factors to retain by applying Horn's parallel analysis to the rating data. Horn's parallel analysis is a Monte-Carlo based simulation method that compares the observed eigenvalues with those obtained from uncorrelated normal variables. Specifically, the observed eigenvalues are compared with a distribution of eigenvalues obtained from multiple trials with data that is random, unstructured and uncorrelated, but otherwise matches the observed data, to see what apparent structures may emerge by random chance. To be considered significant, the observed eigenvalues should stand outside this randomised distribution. A factor is retained if the associated eigenvalue is larger than the 95th percentile of the distribution of eigenvalues

derived from the random data (Ledesma & Valero-Mora, 2007). From the rating data, *five* factors were found to have sufficiently large eigenvalues, and were retained.

Following Horn's parallel analysis, rotated factor analysis was applied using the principal components analysis to determine the ideal placement of items across the five factors; that is, to identify which factor each social-emotional behaviour item fits best under. Rotated factor analysis produces a "Simple Structure" of loadings, where each item loads strongly on just one of the factors, and more weakly on others; while the unrotated factor analysis output in contrast maximises variance accounted for by the early factors (e.g. first, second) by forcing the factors to be orthogonal, often resulting in having most items load on the early factors and many items load strongly on more than one factor. The rotation method used in this study was Varimax. Varimax rotation maximises the variance of squared loadings of a factor on all variables in a factor matrix through orthogonal rotation of the factor axes, which leads to the differentiation of original variables by the extracted factors (Russell, 2002). The result is that each factor has a small or large loading on each item, allowing easy identification of meaningful relationships between items and factors.

The next step was to name each factor according to its underlying theme or concept. An advisory panel of individual experts consisting of three New Zealand-based academics and two Korean teachers were consulted in naming these factors. Each individual was given a list of items that had factor loadings of .40 and higher for each of the five factors. When naming the factors, they were asked to consider the size of factor loading of each item (higher loadings were given more weight). Some suggestions for factor names were provided by the researcher to aid the panel members in the process. Each member of the advisory panel provided suggestions for factor names, and these were taken into consideration in arriving at the final factor names.

5.4.2 Students are sorted into profiles based on factor scores. Once the factors of teacher social-emotional practices were established, the next step was to establish profiles. A profile is a group of students who share the same pattern of responding to the factors, thus each profile represents a sub-group of students who reported the same pattern of behaviours about their homeroom teachers.

First, factor analysis was applied to correlations among participants to identify groups of students who responded in similar ways. The original data matrix was transposed,

and used to conduct Q-factor analysis (Bang & Montgomery, 2010). While factor analysis examines item similarity, Q-factor analysis examines patterns of scores across participants or cases (Coxon, 1982). In this analysis, 10 principal components were retained in the Q domain and a 221-by-10 (students-by-components) table of loadings was produced. Each component is an exaggerated or prototypal pattern of responses and each participant's loading on a given component shows how closely the student's reporting of teacher social-emotional behaviour matched that particular prototypal pattern.

Both hierarchical and non-hierarchical clustering methods were employed to explore patterns of scores across the 221 students based on factor scores calculated for each student. First, hierarchical cluster analysis was applied to the table of loadings obtained through Q-factor analysis to establish the optimal number of profiles. Ward's (1963) method was used as the clustering algorithm. Ward's algorithm aggregates clusters based on comparisons of each cluster's sum of squares. Once a case (participant) is assigned to a cluster, however, it does not remove it again; even if a subsequent agglomeration may cause a different cluster to be a better match. Therefore, after the Ward's method was used to determine the number of clusters, profile cluster centres and identify outliers, a non-hierarchical method was used to ensure the cases were assigned to the closest or best cluster (Hair et al., 2010).

The non-hierarchical algorithm used to optimise the assignment of cases to profile clusters was *k*-Means cluster analysis. The mean scores on each factor for each Ward's derived cluster were used to seed the *k*-Means cluster analysis. The result was the fine-tuning of individual case assignment to cluster, achieved through maximising both within-cluster homogeneity and distance between clusters (Hair et al., 2010).

Multicollinearity between factor scores was examined by correlating factor scores using Pearson's *r*. Multicollinearity within a cluster analysis signals that correlated variables could unduly affect the cluster solution (Meyers, Gamst, & Guarino, 2013). No correlation was found between any of the factors, indicating that other factors don't significantly influence a given factor score.

5.4.3 Associations with connectedness are examined. The final step was to explore the resulting student groups' (profiles') distinguishing characteristics by comparing their average connectedness scores and factor scores. SPSS was used to investigate the associations between teacher profiles and student-reports of connectedness. First, ANOVA

was conducted to assess whether between-groups variance was significant for teacher, peer, and school connectedness. Significant between-group variance would indicate that differences in mean connectedness scores across profiles are large enough that correlations with factor scores would be meaningful. In addition, a correlation matrix of connectedness measures and the five factors was produced using Pearson's *r* correlation on SPSS to assess the associations between connectedness and individual factors.

5.5 Results

Through a number of analyses, factors of student-reported teacher social-emotional practices and profiles of students who share the same pattern of responding to said factors were identified, and these were compared with student reported feelings of connectedness. Results will be presented in three sections: 1) Factors and Interpretation; 2) Student Reported Teacher Social-Emotional Behaviour Profiles and Interpretation; and 3) Connectedness.

5.6 Factors and Interpretation

Horn's parallel analysis and rotated factor analysis were conducted on the rating data in order to determine the optimal number of factors for the 88 items. From the rating data, five factors were found to have sufficiently large eigenvalues, and were retained.

Following Horn's parallel analysis, rotated factor analysis was applied to determine the ideal placement of items across the five factors; that is, to identify which factor each item fits best under. As noted previously, factors are groups of regularly co-occurring items, and each factor is seen to represent a unique theme or construct. There were no distinct central items (i.e. an item seen to sufficiently represent the factor on its own) in the factors. See Appendix G for Table of factor loading scores.

As this study was exploratory in nature and relied considerably on researcher interpretation of data, measures were taken to minimise subjective bias in naming the factors. Specifically, a consultation process was undertaken with a validation panel of individual experts consisting of three New-Zealand based academics and two Korean teachers. For each of the five factors, panel members were given a list of items with a .40 or higher factor loading, and asked to suggest names for each of the five factors. The returned suggestions were summarised by the researcher. Similar or same names were suggested for some of the

factors, while there were discrepancies for others. Where there were discrepancies, they were discussed in subsequent consultations with supervisors to arrive at final factor names.

The five factors were named as follows: *Social-emotional coaching; Relationship-building; Classroom and emotion management; Attitude to teaching*; and *Emotional transference.* Table 4 defines each of the five factors by identifying items that are most relevant to them.

Table 4

Factor Names and Their Highest Loading Social-Emotional Behaviour Items

Factor name	Item descriptor
Social-emotional coaching	*Our teacher makes us aware of how others feel*, Tells stories using examples of how others have responded emotionally, Helps me to think before I act, Makes us aware of how we are managing emotion, Shows me how I took part in an emotional situation (e.g., My teasing led to my friend reacting angrily)
Relationship-building	*Our teacher takes time to help us*, Enjoys spending time with us, Allows us to freely express ourselves, Calmly talks with students having difficulties, Is accepting of our emotional responses
Classroom and emotion management	*Our teacher remains composed in difficult situations*, Is fair, Is good but strict, Maintains clear teacher-student boundaries with us, Doesn't use negative emotion (e.g., Shame, guilt-trip) as punishment
Engaged attitude to teaching	*Our teacher enjoys teaching*, *Likes teaching*, Is enthusiastic, Prepares us to face upcoming events (e.g., exams), Is actively concerned with our learning
Emotional transference	*Our teacher's emotions are genuine*, We mirror how our teacher feels, We can always tell how our teacher feels (e.g., angry, happy), Our teacher uses his/her own emotions to control the mood of the class

Note. Highest weighted items for the associated factor are italicised.

Teacher gender differences were found across student's rating of their teacher on the five factors, when examined using an independent samples t-test. With the exception of

Engaged attitude to teaching, gender differences across all factors were statistically significant. Students who had female teachers rated their teachers significantly higher than students who had male teachers in *relationship-building*, *classroom and emotion management*, and *emotional transference*. Students whose teachers were male reported higher *social-emotional coaching* for their teachers than those who had female teachers. Male and female teacher scores across the five factors are presented in Table 5.

Table 5

Average Student Factor Scores by Gender of Teacher

Factor name	Male		Female		
	M	SD	M	SD	*P* value
Social-emotional coaching	2.27	.98	-.08	1.00	.041
Relationship-building	-.40	.98	.15	.97	.000
Classroom and emotion management	-.63	1.27	.23	.77	.000
Engaged attitude to teaching	-.30	.98	.01	1.01	.787
Emotional transference	-.47	1.03	.17	.94	.000

5.7 Teacher Social-Emotional Behaviour Profiles and Interpretation

Once factor scores for each student had been determined, the next step was to establish profiles of factor scores. Each profile represents a group of students who share the same pattern of responding to the five factors (described above), thus a profile represents a sub-group of students who have reported the same pattern of social-emotional behaviours about their homeroom teachers. Each profile has a mean value of each of the five factors. As a reminder, a high positive value on a factor reflects the *presence* of the particular parameter, and a high negative value on a factor signifies the *absence* of the particular parameter, and a factor value of zero suggests that the parameter was unnoticed. More specifically, a factor value of zero represents the mean score on the factor across all clusters, +1 is one standard deviation above the mean, and -1 is one standard deviation below the mean.

Hierarchical cluster analysis was applied to the table of loadings (obtained through Q-factor analysis, as explained in 5.4.2) to establish the optimal number of profiles of factor

scores found across the 221 students. This produced heterogeneity coefficient values (variance within clusters), which were converted to a line graph for eyeballing of the data. The number that corresponds to the point at which the line becomes rapidly steeper indicates the number of clusters to retain. Eight to eleven profiles were shown to fit the data. In addition to statistical analyses, informal criteria such as interpretability of the solution were relevant in deciding on the final number of profiles. The need to balance a statistical framework with practical application to produce meaningful results is discussed in various publications (e.g. Carter et al., 2009; Harvey et al., 2012). In the interest of interpretation value, the eight cluster solution was chosen over larger cluster solutions. Eight clusters were statistically defensible, and cluster validity checks showed the eight cluster solution to be stable.

To optimise the assignment of profiles to the eight clusters, *k*-means cluster analysis was conducted with *k*=8. The final solution showed some variation in the number of cases (students) assigned to each cluster. Table 6 shows the cluster numbers, descriptors, and number of students in each subgroup.

Table 6

Cluster Numbers, Descriptors, and Number of Students in Each Subgroup

Cluster Number	Cluster Descriptor	No. of Students (Total = 221)	Male Teachers	Female Teachers
1	Enthusiastic Manager	23	12	11
2	Disengaged	21	15	6
3	Job-focused	24	3	21
4	Indifferent	36	2	34
5	Coach	35	20	15
6	Assured Coach	25	4	21
7	Transparent Manager	31	0	31
8	Relationship-builder and Coach	26	3	23

The profiles are plotted in Figures 9 to 17. All eight profiles are plotted in Figure 9 to demonstrate the way profiles differ in their engagement in the five factors. The five factors

are shown on the x-axis, and levels of engagement are indicated by characteristic scores shown on the y-axis. A characteristic score of 0 represents the mean score across all eight profiles. A high score indicates high engagement in the factor, and a negative score indicates low engagement. Individual profiles and their engagement in the five factors are shown in Figures 10 to 17.

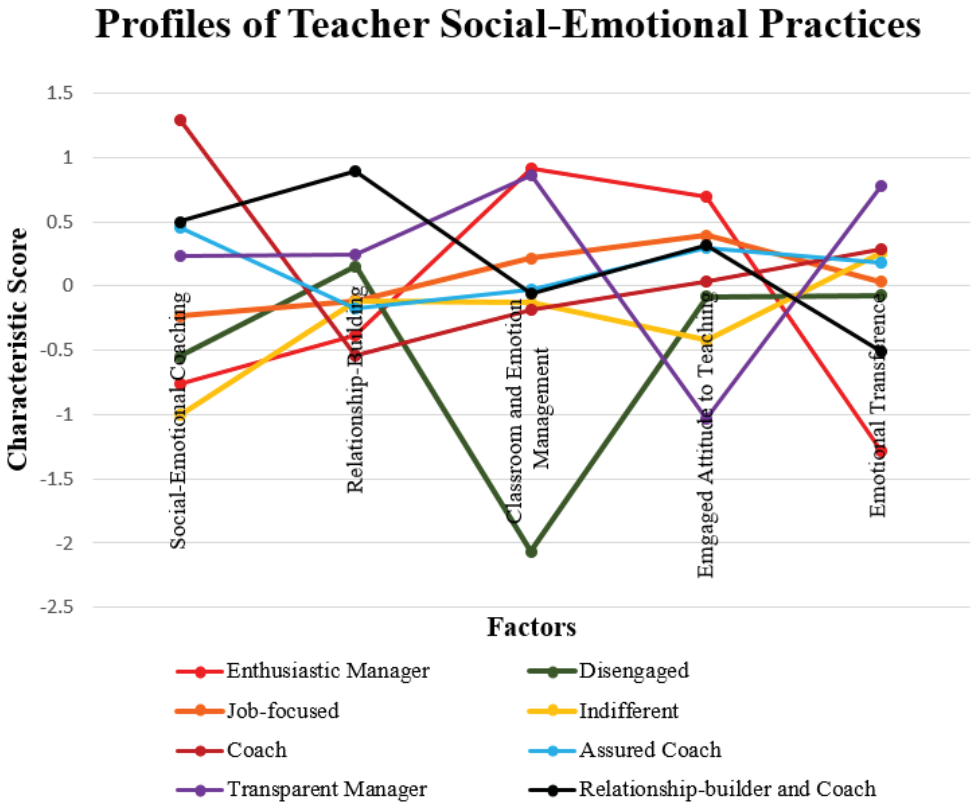

Figure 9. Eight profiles of student-perceived teacher social-emotional practices from 221 participants

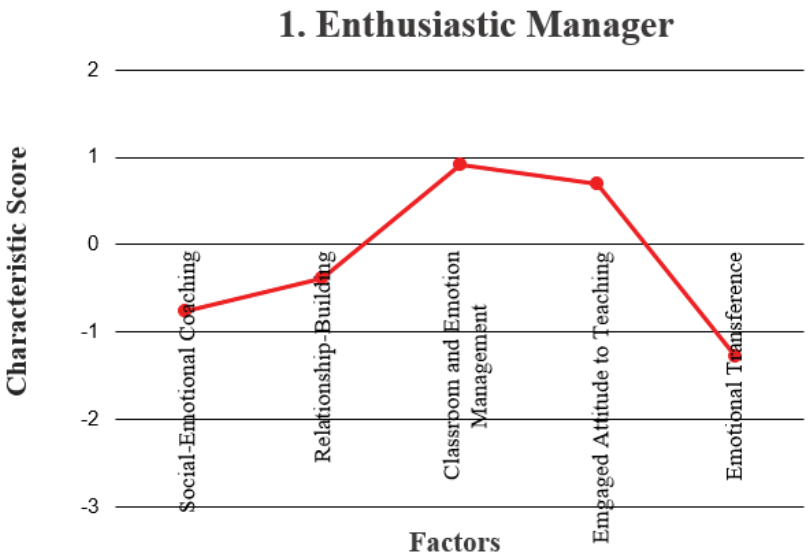

Figure 10. *Enthusiastic Manager* with its respective factor responses

Students in the *Enthusiastic Manager* group had teachers who they reported to engages in classroom and emotion management and demonstrates a positive attitude to teaching. Students with male and female teachers are evenly represented in this profile.

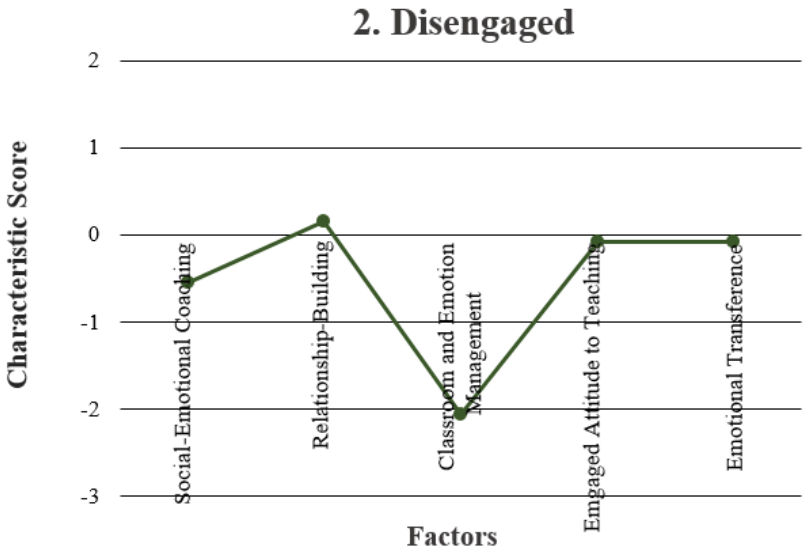

Figure 11. *Disengaged* with its respective factor responses

Students in the *Disengaged* profile had teachers who they reported to have poor classroom management skills and don't tend to engage in social-emotional coaching. Students with male teachers are overrepresented in this profile (71%).

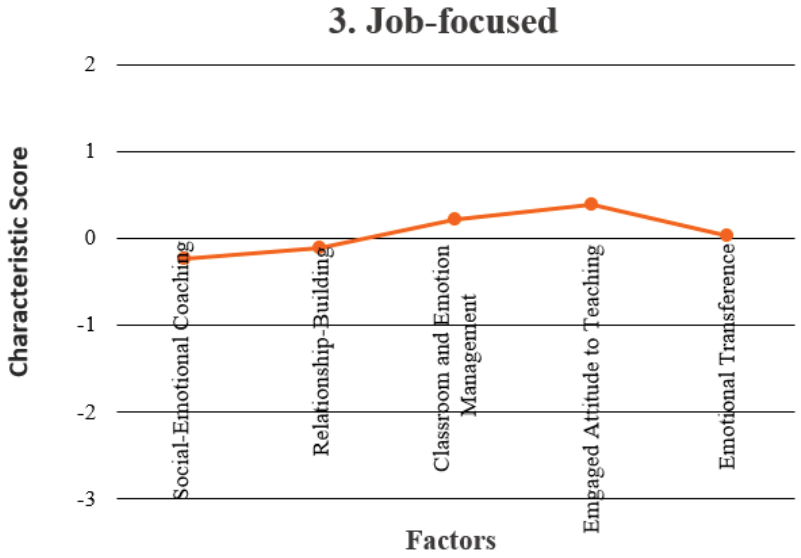

Figure 12. Job-focused with its respective factor responses

Students in the *Job-focused* profile had teachers who they reported to have a moderately positive attitude towards teaching and not tend to engage in social-emotional coaching. The majority of students in this profile had female teachers (88%).

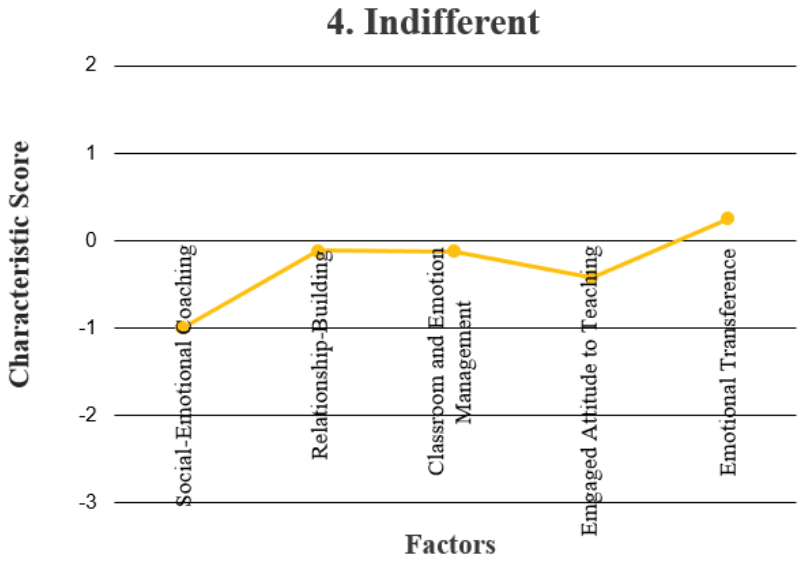

Figure 13. Indifferent with its respective factor responses

Students in the *Indifferent* profile had teachers who reportedly did not tend to engage in social-emotional coaching nor demonstrate an engaged attitude towards teaching, and whose emotions were somewhat transparent. The majority of students in this profile had female teachers (94%).

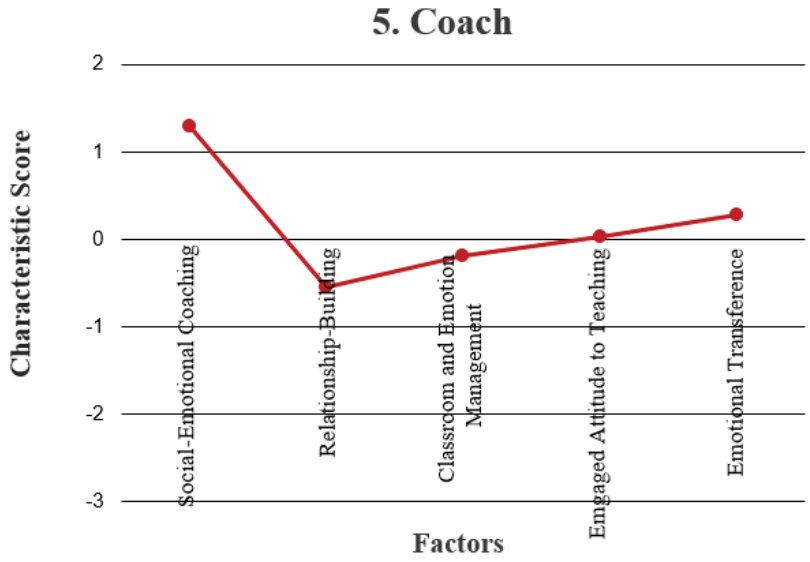

Figure 14. *Coach* with its respective factor responses

Students in the *Coach* profile had teachers who were perceived to be actively engaged in social-emotional coaching and did not tend to engage in relationship-building behaviours. More students had male teachers than female teachers in this profile (57%).

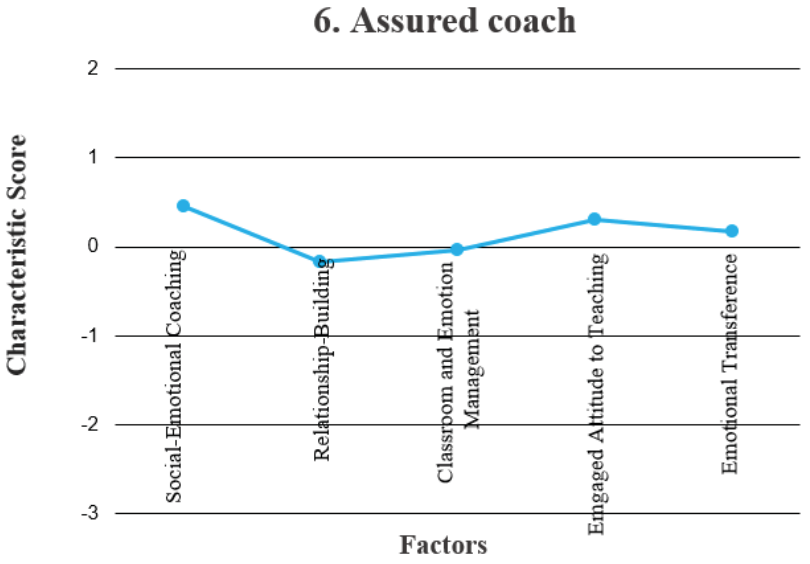

Figure 15. *Assured Coach* with its respective factor responses

Students in the *Assured Coach* profile had teachers who they reported to engage in social-emotional coaching to a small degree, and demonstrate a slightly engaged attitude to teaching. The majority of students in this profile had female teachers (85%).

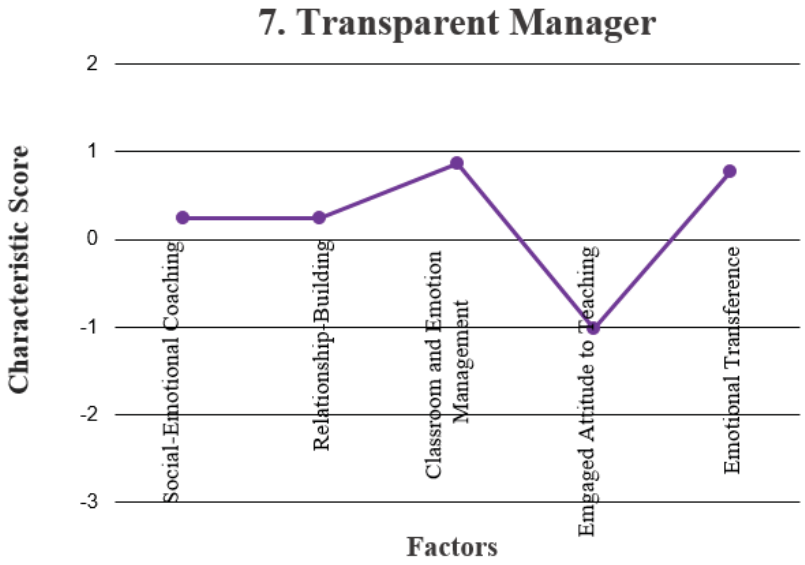

Figure 16. Transparent Manager with its respective factor responses

Students in the *Transparent Manager* profile had teachers who were seen to have good classroom management skills, to be transparent in interactions with students, and not demonstrate an engaged attitude towards teaching. All students in this profile were female.

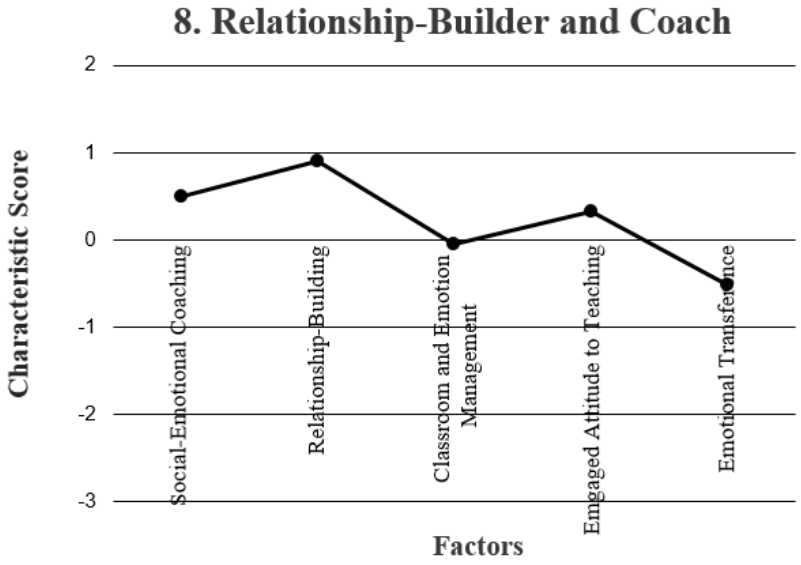

Figure 17. Relationship-builder and Coach with its respective factor responses

Students in the *Relationship-builder and Coach* profile reported that their teachers engage in student-teacher relationship-building actions and social-emotional coaching, and do not tend to be transparent in their interactions with students. The majority of students in this profile had female teachers (88%).

Table 7 outlines the characteristics and summary descriptions of each profile, based on its mean score on each factor. In interpreting the profiles, attention was given to notable differences between profiles in mean factor scores. Specifically, ANOVAs were used to assess differences in each profile's mean factor scores, and points of difference were identified by factor scores which significantly differed from other profiles. It should be noted that ANOVA was used here for exploratory purposes only. It did not test the significance of these differences, which would be invalid as the variables were not independent of the data used to create the profiles. Interpretations of profiles and their differences were based on careful eyeballing of the data resulting from statistical analysis. As a result, they are influenced by an individual's perceptions.

Table 7

Summary Characteristics and Description of Eight Profile Clusters

Profile	Profile characteristics	Description
Enthusiastic Manager	Characterised by a high positive score on *Classroom and emotion management* (*M* = 1.00, *SD* = .99) and a moderate positive score on *Engaged attitude to teaching* (*M* = .66, *SD* = .91). Scores on both these factors are the highest among all profiles. Also notable for a high negative score for *Emotional transference* (*M* = -1.20, *SD* = .98) and a moderate negative score on *Social-emotional coaching* (*M* = -.56, *SD* = .61).	Students in this profile perceived their teachers to have good classroom management skills and a positive attitude towards teaching (e.g. enjoys teaching, is enthusiastic), to not be transparent in interactions with students, and not tend to engage in social-emotional coaching.
Disengaged	Characterised by a very high negative score on *Classroom and emotion management* (*M* = -1.86, *SD* = .69) and a moderate negative score on *Social-emotional coaching* (*M* = -.41, *SD* = .76).	Students in this profile perceived their teachers to have very poor classroom management skills, and not tend to engage in social-emotional coaching.
Job-Focused	Notable for the absence of any extreme scores. Has a moderate positive score on *Engaged attitude to teaching* (*M* = .54, *SD* = .93) and a weak negative score for *Social-emotional coaching* (*M* = -.37, *SD* = .56).	Students in this profile perceived their teachers to have no strong attributes or teaching style, have a moderately positive attitude towards teaching, and not tend to engage in social-emotional coaching.
Indifferent	Characterised by a high negative score on *Social-emotional Coaching* (*M* = -1.27, *SD* = .69), a low	Students in this profile perceived their teachers to not engage in social-

	positive score on *Emotional transference* (*M* = -.37, *SD* = 1.15), and a low negative score on Engaged attitude to teaching (*M* = -.28, *SD* = .93).	emotional coaching, and not demonstrate an engaged attitude towards teaching (e.g. doesn't enjoy teaching).
Coach	Characterised by a high positive score on *Social-emotional coaching* (*M* = 1.30, *SD* = .43), and a moderate negative score on *Relationship-building* (*M* = -.60, *SD* = .96).	Students in this profile perceived their teachers to actively engage in social-emotional coaching, and not make active effort to build student-teacher relationship (e.g. taking time to help, listening).
Assured Coach	Notable for an absence of extreme scores. Has weak positive scores for *Social-emotional coaching* (*M* = .40, *SD* = .48) and *Engaged attitude to teaching* (*M* = .26, *SD* = .88).	Students in this profile perceived their teachers to have no strong attributes or teaching style, to a small degree engage in social-emotional coaching, and have a slightly positive attitude towards teaching.
Transparent Manager	Notable for its extreme values. Characterised by high positive scores for *Classroom and emotion management* (*M* = .78 *SD* = .52), moderately positive scores for *Emotional transference* (*M* = .64, *SD* = .72), and a high negative score for *Engaged attitude to teaching* (*M* = -.98, *SD* = .76).	Students in this profile perceived their teachers to have good classroom management skills, to be transparent in interactions with students, and not demonstrate an engaged attitude towards teaching (e.g. doesn't enjoy teaching).
Relationship-Builder and Coach	Characterised by a high positive score for *Relationship-building* (*M* = 1.10, *SD* = .67), a moderate positive score for *Social-emotional coaching* (*M* = .53, *SD* = .51), and a weak negative score for *Emotional transference* (*M* = -.47, *SD* = .74).	Students in this profile perceived their teachers to actively engage in student-teacher relationship-building actions (e.g. taking time to help, listening), engage somewhat in social-emotional coaching, and not tend to be transparent in interactions with students.

5.8 Connectedness

Significant between-group variance was found for teacher and school connectedness, but not for peer connectedness (See Table 8). This suggests that, overall, teachers' social-

emotional behaviours may be important for students' feelings of connectedness with their teacher and school, but not peers.

Table 8

Summary of Analyses of Variance Results Comparing Mean Connectedness Scores by Eight Teacher Profiles

Connectedness measures		Sum of Squares	Df	Mean Square	F	Sig.
Teacher connectedness	Between Groups	1080.95	7	154.42	6.96	.000
	Within Groups	4726.30	213	22.19		
	Total	5907.25	220			
School connectedness	Between Groups	189.78	7	27.11	2.22	.034
	Within Groups	2597.34	213	12.19		
	Total	2787.11	220			
Peer connectedness	Between Groups	85.16	7	12.17	.70	.675
	Within Groups	3722.09	213	17.48		
	Total	3807.25	220			

Next, the associations between the five factors and those connectedness measures that had significant between-group variance were examined. A correlation matrix of the factors and teacher and school connectedness was produced using Pearson's *r* correlation on SPSS, as shown in Table 9.

Table 9

Correlations Between Factors and Teacher & School Connectedness

Factor	Teacher Connectedness	School Connectedness
Social-emotional coaching	.34**	.22**
Relationship-building	.44**	.26**
Classroom and emotion management	.34**	.10
Engaged attitude to teaching	.40**	.18**
Emotional transference	.17*	.26**

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

All five factors were significantly correlated to teacher connectedness. This finding was unsurprising, as both measures draw on student perceptions of their teacher. Results showed that *Relationship-building* was most strongly associated with teacher connectedness among all factors. This was followed by *Engaged attitude to teaching*, then Social-emotional coaching and Classroom and emotion management. *Emotional transference* had the weakest correlation with teacher connectedness.

Four out of five factors were significantly correlated to school connectedness. These were *Social-emotional coaching*, *Relationship-building*, *Engaged attitude to teaching*, and *Emotional transference*. *Relationship-building* and *Emotional transference* were most strongly correlated with school connectedness. Notably, *relationship-building* was the most strongly associated factor with both teacher and school connectedness (equal to *emotion transference*), indicating that teachers' relationship-building actions such as spending time with them and talking through difficulties may be particularly important in fostering connectedness. *Classroom management* was not found to have a significant effect on school connectedness.

Although factor associations to school connectedness were generally weaker than associations with teacher connectedness (with the exception of *emotional transference*), results indicated that teacher social-emotional behaviours may have a significant effect on students' feelings of connectedness with the school.

An independent samples t-test was conducted to compare the mean connectedness scores for teacher and school connectedness for each profile, shown in Table 10. It is important to note that the possible score ranges differed between the two connectedness measures. The mean scores for *Teacher Connectedness* are out of a possible score of 35 while the mean scores for *School Connectedness* are out of 25. This difference was considered when interpreting the results.

Table 10

Mean Connectedness Scores for Teacher and School Connectedness for Each Profile

Profile	Teacher Connectedness*		School Connectedness**	
	Mean	SD	Mean	SD
Enthusiastic Manager	23.38	4.78	16.95	3.57
Disengaged	18.13	4.16	17.38	3.44
Job-Focused	23.30	4.27	16.89	3.36
Indifferent	21.33	5.75	17.19	4.04
Coach	24.13	4.77	18.30	2.93
Assured Coach	24.82	4.89	19.71	3.63
Transparent Manager	24.88	3.03	18.76	3.27
Relationship-Builder and Coach	26.44	4.72	19.06	3.14

*Possible score range is from 7 to 35. **Possible score range is from 5 to 25.

Results showed that feelings of connectedness with their teacher was greatest for those students in the *Relationship-Builder and Coach* profile (mean = 26.44, SD = 4.72), and lowest for *Disengaged* (mean = 18.13, SD = 4.16). Feelings of connectedness with the school was greatest for those students in the *Assured Coach* profile (mean = 19.71, SD = 3.63), and for the *Job-focused* profile (mean = 18.13, SD = 4.16).

The *Relationship-Builder and Coach* profile was notable for high mean scores for both teacher (mean = 26.44, SD = 4.72) and school connectedness (mean = 19.06, SD = 3.14). Importantly, *Relationship-builder and Coach* was the only profile characterised by a high relationship-building score, and results suggest that teacher efforts to build student-teacher relationships may have a positive effect in students' feelings of connectedness.

The profile with the lowest combined teacher and school connectedness scores was the *Disengaged* profile. This profile was characterised by notably low engagement in classroom and emotion management and low engagement in social-emotional coaching.

Student reports of connectedness were compared by teacher gender, and results are shown in Table 11. Students with female teachers reported significantly more connectedness to their teachers compared to students whose teachers were male. No teacher gender effect was found for school connectedness and peer connectedness.

Table 11

Average Student Connectedness Scores by Gender of Teacher

Connectedness measure	Male		Female		
	M	SD	M	SD	F
Teacher Connectedness	21.10	5.21	24.37	4.84	.609***
School Connectedness	17.69	3.28	18.20	3.66	.876
Peer Connectedness	28.63	3.97	29.50	4.21	.837

*$p < .05$. **$p < .01$. ***$p < .001$. *Note.* Possible score range for teacher and peer connectedness measures is 7 to 35, and 5 to 25 for school connectedness.

5.9 Chapter Summary

There were two key objectives of this study. The first was to establish Korean teachers' social-emotional practices as observed by students. Analysis of student-ratings of their classroom teachers' social-emotional behaviours led to the identification of five key factors of salient teacher practices, and eight profiles representing subgroups of students who reported the same pattern of behaviours for their teachers. The second objective was to establish the association between these factors and profiles with student reported feelings of connectedness with their teacher, school, and peers. Students completed a connectedness questionnaire in addition to the rating task, and resulting data were analysed to make links between these different features of student-teacher interactions. Results highlighted key features and patterns of teacher practices that may be important for student connectedness, and these are discussed in the following chapter.

CHAPTER SIX

Discussion

In recent years, there has been an increase in research on the significance of affective student-teacher relationships for school adjustment (Roorda, Koomen, Spilt, & Oort, 2011). Positive student-teacher relationships elicit feelings of connectedness, which is seen to drive positive, achievement-related behaviours (Eisenberg, Neumark-Sztainer, & Perry, 2003) and act as a buffer against undesired outcomes, such as dropout, suspension, and grade retention (Hawkins, Guo, Hill, Battin-Pearson, & Abbott, 2001).

Given that teacher social-emotional practices have been shown to be significantly associated with student well-being, research is needed to understand the structure of teacher social-emotional practices and their effects on specific measures of student well-being; a well-established measure being school connectedness. Furthermore, research is particularly needed in East Asian countries such as South Korea, where students experience disproportionate levels of stress.

The purpose of this research was to explore South Korean teachers' social-emotional behaviours and their associations with student reports of school connectedness. It was conducted as two studies. In Study 1, the structure of Korean teachers' social-emotional practices was explored using a sorting task whereby students sorted social-emotional items according to perceived similarity. The data gathered from this task were used to create a visual map and dendrogram which provided information on the key underlying themes of teacher social-emotional behaviour. The aims of Study 2 were to a) establish the social-emotional practices Korean teachers engage in, and b) establish the associations between student-observed teacher social-emotional practices and student connectedness. In this study, students rated their homeroom teachers according to how often they were perceived to engage in different social-emotional behaviours. A school connectedness questionnaire was also completed. Data gathered from these tasks were analysed to answer the research questions.

6.1 What is the Structure of Korean Teacher Social-Emotional Practices?

Study results suggested up to six emergent themes of teacher social-eomotional practices as identified by their students: *relationship-building*, *attitude to teaching*, *fostering supportive relationships/environment*, *classroom management*, *emotion coaching* and *emotion contagion*. The same themes were consistently identified in both the MDS map and dendrogram solutions in Study 1, but only five of the six themes were identified through factor analysis in Study 2, as shown in Table 12.

Table 12

Comparison of Teacher Social-Emotional Practice Themes Identified in Study One and Study Two

Multidimensional scaling map (Study 1)	Dendrogram (Study one)	Factors (Study two)
Relationship-building	Relationship-building	Relationship-building
Attitude to teaching	Attitude to teaching	Engaged attitude to teaching
Fostering supportive relationships/environment	Fostering supportive relationships/environment	
Classroom management	Classroom management	Classroom and emotion management
Emotion coaching	Emotion coaching	Social-emotional coaching
Emotion contagion	Emotion contagion	Emotional transference

The information provided by the visual map and dendrogram was useful as a) clear groupings of items in the map and dendrogram indicated the presence of underlying themes; and b) an absence of holes in the map suggested an appropriate content coverage.

As mentioned in Chapter Five, these themes were not directly applied in Study 2 as the MDS map solution drawn from the GOPA sorting task was not sufficiently similar to the factor anlaysis solution produced using student ratings. This was an unexpected finding, as in previous studies (Harvey et al., 2012; Chia, 2014), solutions of teacher social-emotional practices produced using grouping and rating data had overlapped and had led to the identification of “hotspots” of salient teacher behaviours. In the current study, factor analysis was used instead of hotspot modelling to identify key themes of observed teacher practices, presented as “factors”.

Although the solutions didn't align as expected, note that different groups of students and different methods of analysis were used in the two studies, which may account for some variation of results. In spite of this, the themes drawn from the two studies largely overlapped and provided some confidence of a general underlying structure of teacher social-emotional practices.

A notable difference between the two studies was that although the theme *Fostering supportive relationships/environment* was identified in both multidimensional scaling and dendrogram solutions (Study 1), it was absent in the rating task results. While identification of this factor in Study 1 suggests students regard *Fostering supportive relationships/environment* as an important component of teacher social-emotional practice, the fact that it was not identified through student ratings (Study 2) suggests students did not identify it as being a salient part of real-life classroom interactions; such that behaviours falling under this dimension were subsumed under other factors of teacher social-emotional practice.

Overall, findings supported Harvey and colleagues' (2012) revised model of the emotional classroom climate. The themes identified in both Studies one and two appeared to include all the components that make up the ECC model, though there may be slight differences in the structure. Moreover, findings supported Harvey and colleagues' addition of Emotion Contagion to the revised ECC model. *Emotional transference,* seen to largely parallel emotion contagion, was identified as a distinct theme through both the GOPA card sorts and student rating data.

6.2 What Social-Emotional Practices do Students Report Korean Teachers Engage in?

6.2.1 Factors of teacher social-emotional practices. Five factors were identified from the student rating data in study two: *Social-emotional coaching, Relationship-building, Classroom and emotional management, Engaged attitude to teaching,* and *Emotional transference*. These factor domains can be seen to encompass the significant areas of teacher social-emotional behaviours that emerged from the GOPA sorting data.

Items that loaded highly on the *social-emotional coaching* factor described teacher behaviours that explicitly addressed students' social (e.g. *Our teacher tells stories using*

examples of how others have responded emotionally) and emotional skills (e.g. *Our teacher helps me to think before I act*).

Items under *relationship-building* described teacher behaviours and qualities seen to foster positive student-teacher relationships (e.g. Our teacher takes time to help us, Our teacher is accepting of our emotional responses).

The *Classroom and emotion management* factor contained two key concepts. These were 1) classroom management (*e.g. Our teacher maintains clear teacher-student boundaries with us, Our teacher accurately identifies the misbehaving students*) and 2) teacher's regulation of own emotions (e.g. *Our teacher remains composed in difficult situations, Our teacher controls his/her own negative reactions well*). Previous studies have presented these same concepts as two separate constructs (e.g. Harvey et al., 2012). The discrepancy may be attributed in part to sample differences. Harvey et al.'s study was conducted with teachers, to whom the difference between outward classroom management actions and internal emotion management would be more salient. It is possible conducting the same study with South Korean teachers or older students may lead to two separate themes.

Items under *Engaged attitude towards teaching* described attitudes and behaviours that reflected teacher engagement, enthusiasm and enjoyment of teaching (e.g. *Our teacher enjoys teaching, Our teacher prepares us to face upcoming events (e.g. exams), Our teacher is enthusiastic*).

Emotional transference contained two key concepts. The first pertained to the transparency and genuineness of teacher emotions (e.g. *Our teacher's emotions are genuine*, *We can always tell how our teacher feels (e.g. angry, happy)*) and the second concerned the transference of teacher emotion to students, or emotion contagion, and its effects (e.g. *We mirror how our teacher feels, Our teacher uses his/her own emotions to control the mood of the class*). The identification of this factor resonates with past studies which alluded to the presence of emotion contagion in the classroom (Mottet & Beebe, 2000). Researchers found that student and teacher emotions were related, indicating that not only are emotions "caught", they may also be internalised. Thus, by demonstrating positive social-emotional responses, teachers may foster social-emotional competency in their students.

Judging from the factors that were identified, students seem to see emotions as functional. This is in line with the functionalist perspective of emotion, according to which

emotion regulates behaviour in the given environment to achieve desired results (Campos, Mumme, Kermoian, & Campos, 1994). Specifically, teachers are able to use their own emotions and emotional situations to increase awareness in students and teach explicit skills pertaining to emotions (emotional and behavioural coaching). Emotions also appear to be important in building relationships (relationship-building) and managing student-teacher boundaries and behavioural expectations (classroom management). In addition, emotions were used to demonstrate teachers' experience of and approach to their role, in terms of enjoyment, passion, preparedness (engaged attitude to teaching).

6.2.1.1 Comparison of factors with past findings. The factors identified in the present study were generally consistent with the themes of teacher social-emotional behaviours (hotspots) found in past related studies conducted by Harvey et al. (2012), Harvey and Bimler (unpublished) and Chia (2014). Recall that each of these studies similarly explored teachers' social-emotional practices, but from the perspectives of different demographic group samples. Harvey et al. (2012) conducted their study with New Zealand and German teachers, while Harvey and Bimler explored the perspectives of New Zealand and German high school students, and Chia (2014) sought insight into the social-emotional practices of teachers in Singapore as perceived by polytechnic students. In each study, several salient groups of teacher behaviours were identified, where each group was seen to represent a theme (referred to as *factors* in present study, and *hotspots* in the other studies) pertaining to teacher social-emotional practice.

As shown in Chapter Two, it was found that key themes found across the different studies largely overlapped. The current study built on these findings and provided a unique insight into teacher practices in South Korea, as perceived by middle school students. Table 13 presents key themes of teacher social-emotional practice found across the four studies. To provide a clearer comparison of findings, each identified theme (factor or hotspot) is placed under a "broad theme". Both factor/hotspot labels and their highly loading items were considered in coming up with the broad theme labels. The hotspots that fall under "others" are those that were found in only one of the four studies, thus not considered a universally pertinent theme.

Table 13

A Comparison of Teacher Social-Emotional Practice Themes Identified in Current Study and Past Relevant Studies

Broad Themes	Current Study	Harvey et al., 2012	Harvey & Bimler (unpublished)	Chia, 2014
Relationship-building	Relationship-building	Emotional Relationship; Emotional Student-Acceptance; Emotional Availability	Emotional Relationship; Emotional Awareness	Personable/ Affective Tone; Caring and Relating
Coaching	Social-Emotional Coaching	Emotion Coaching	Emotion Coaching	Emotion Coaching
Student-Student Support		Student-Student Support	Student-student relationship	Supportive Relationships/ Interpersonal Skills
Attitude	Engaged Attitude to Teaching	Emotional Attitude; Emotional Philosophy	Emotional Intrapersonal Beliefs: Attitude/ Enthusiasm	Emotional Attitude
Boundaries	Classroom and Emotion Management	Emotional Boundaries	Interpersonal Guidelines	Emotional Boundaries; Consequence Management/ Limit Setting
Emotion Regulation		Emotion Regulation	Emotion Dysregulation	
Emotion Contagion/ Transference	Emotion Transference		Emotional Transparency and Contagion	Emotional Contagion
Others		Emotional Self-Acceptance	Emotion Expression; Ambivalent/ Inconsistent	

As shown in the above table, a general overlap of themes could be observed across the four studies. For each factor identified in the present study, a near-identical hotspot or pair of

hotspots was found by Harvey et al. (2012), Harvey and Bimler, and Chia (2014). For example, a hotspot labelled *Emotion Coaching* was identified in each of the previous studies, seen to correspond to the current study's *Emotional and Behavioural Coaching* factor. Thus the main elements of student-teacher interactions in New Zealand, German and South Korean classrooms appear to be largely paralleled. This is an interesting finding, as the Korean educational context markedly contrasts to New Zealand, Germany, and even Singapore in its strong affiliations with Confucian values (Lee et al., 2003). The persistence of themes across different cultural contexts suggest that key teacher social-emotional practices may be universal.

Of all the key "broad themes" found across the past studies, only one was *not* identified in Korean students' teacher ratings; a theme pertaining to student-student support. As the label implies, this theme represents teacher actions that encourage students to support one another. Its essence is captured in the theme's highest loading item in both Harvey et al. (2012) and Harvey and Bimler's studies: "Teacher encourages students to support each other". Although New Zealand and German teachers and students perceived teachers to engage in student-student support behaviours in a prominent way, this was not the case for Korean teachers as indicated by Korean student reports. As mentioned above, even though Korean students may regard student-student support (represented by *fostering supportive relationships/environment* in MDS and dendrogram solutions) as an important part of teachers' social-emotional practice in theory, they did not seem to observe this as a salient part of their teachers' social-emotional practices in day to day life.

Intriguingly, a similar pattern was observed by Chia (2014) in her research with Singaporean students. She also found that while student-student support was a pertinent and unique stand-alone construct in her dendrogram and MDS solutions ("Encourages building enjoyable friendships with others", "Encourages us to support each other"), this was not emphasised in student reports of actual teacher practices. Although Chia identified a hotspot alluding to student-student support (*Supportive relationships/ interpersonal skill*), the items pertaining to student-student support (e.g. "Helps us work together", "Encourages us to support each other") were preceded by higher-loading items that appeared to have a more academic rather than relationship focus, e.g. "Prepares us to face upcoming events (e.g. exams)", "Motivates us to take on the task at hand", "Encourages us to learn new things". Thus, similarly to Korean students' reports, Singaporean students' reports suggest student-

student support was not a salient theme of teacher social-emotional practice in real-life classroom contexts.

Caution should be taken in interpreting the results of the present study as they reflect the responses of only a small percentage of the Korean student population and indeed the school population; thus, there are obvious limitations to generalising findings. With this caveat in place, a possible partial explanation for the observed effect is tentatively explored. The implied lack of student-student support behaviours possibly reflect the style and structure of teaching that is characteristic of Korean classrooms, which may differ significantly to classrooms in Western and European contexts. Items pertinent to the student-student support theme such as "Helps us work together" and "Encourages us to support each other" arguably describes actions that are suited to contexts where students work together in pairs or groups. This may not necessarily be the case in South Korea.

Pianta and colleagues (2003) delineated the need to "recognize the vertical as well as lateral interactions across and within levels and associated systems" (p. 202), acknowledging that influences outside of the immediate student-teacher relationship may impact on their interaction. An important feature of the Korean education system that may impact on student-teacher interactions is its heavy emphasis on examinations (Kim, 2009). Students are required to learn large amounts of content, often through rote memorisation, and much of the day-to-day classroom learning is exam-oriented (Kim, 2009). Therefore, less attention may be given to group work and collaboration compared to Western classrooms, which may to some extent account for Korean teachers' lack of student-student support actions, as perceived by students. In support of this, Korean and other East Asian students have been found to prefer working individually rather than in a group (Wong, 2004; Park, 2002), and this was attributed to the competitive spirit found in Korean and other East Asian classrooms and students' desire to have full control of the final product.

Another contrast of the present findings to past studies relates to the *Classroom and Emotion Management* factor. As described earlier, this factor is made up of items relating to 1) classroom management actions, and 2) emotional self-regulation. The fact that these two elements formed a single factor in the present study contrasted to other studies, where they formed two separate hotspots i.e., *Interpersonal guidelines* and *Emotion dysregulation* (Harvey & Bimler, unpublished), *Emotional boundaries* and *Emotion regulation* (Harvey et

al., 2012). This can be seen more clearly in Table 14, where the factor-hotspot matches and their highest loading items are presented.

Table 14

Factors of Present Study Shown Alongside Corresponding Hotspots Identified in Past Studies, with Highest Loading Items

	Present study	Chia, 2014	Harvey & Bimler (unpublished)	Harvey et al., 2012
1	Emotional and behavioural coaching Our teacher takes time to help us, Enjoys spending time with us, Allows us to freely express ourselves, Calmly talks with students having difficulties	Emotion coaching Helps me/us to solve emotional problems, Talks us through emotional situations that have affected us (e.g. student death/bullying), makes us aware of how others feel	Emotion coaching T. uses emotional situations to teach students how to cope, T. makes students aware of how others feel, T. helps students solve emotional difficulties	Emotion coaching Teacher remains calm when talking with emotional students, Teacher assists students to think about emotional situations so as to make things better next time
2	Relationship-Building Our teacher takes time to help us, Enjoys spending time with us, Allows us to freely express ourselves, Calmly talks with students having difficulties	Caring and relating Talks to us on a level we understand, Takes time to help us, Takes time to listen, Takes our problems seriously, Addresses our concerns, Takes time to talk	Emotional awareness T. understands how students feel, T. is aware of students' emotions, T. calmly talks with students having "difficulties", T. takes time to talk and listen with students	Emotional availability Students can share with teacher how they feel, Teacher is interested in students, Teacher listens to students' concerns
3	Classroom and emotion management Our teacher remains composed in difficult situations, Is fair, Is good but strict, Maintains clear teacher-student boundaries with us, Doesn't use negative emotion (eg. Shame, guilt-trip) as punishment	Emotional boundaries Clear and reasonable expectations of us, has clear class routines and structures Consequence management/limit setting Uses rewards to manage how we feel, doesn't use negative emotion (e.g. same, guilt trip) as punishment	Interpersonal guidelines T. has clear teacher-student boundaries, T. explains appropriateness of students' behaviour, T. has clear and reasonable expectations of students Emotion Dysregulation T. fails to control own negative reactions, T.'s emotional responses make the class worse	Emotional boundaries Teacher manages class with little effort (e.g. "the look", a single word), Teacher calms over-excited students down, Teacher keeps the class under control Emotion Regulation Teacher remains calm in difficult situations, Teacher takes "time out" to calm self down
4	Engaged attitude to teaching Our teacher enjoys teaching, Likes teaching, Is enthusiastic, Prepares us to face upcoming events (e.g. exams), Is actively concerned with our learning	Emotional attitude Proud to be a teacher, Enjoys teaching, Believes in what they do as teachers, Has enjoyable teaching style, Likes teaching	Emotional intrapersonal beliefs: attitude/enthusiasm T. has sense of humour, T. enjoys teaching, T. is proud to be a teacher, T. has enjoyable and creative teaching style	Emotional attitude Teacher is fair, Teacher develops an interesting curriculum, Teacher has passion for teachingg

5	Emotional transference	Emotional contagion	Emotional transparency and contagion	-
	Our teacher's emotions are genuine, We mirror how our teacher feels, We can always tell how our teacher feels (e.g. angry, happy)	We mirror how our teacher feels, My self-esteem is related to how this teacher feels about me, I care what this teacher thinks about me	T.'s emotions influence whether a student talks with them or not, Student is aware of how teacher feels	-

A hotspot relating to the transference or contagion of emotion was also found by Chia and in Harvey and Bimler's study, but not by Harvey et al. (2012). Interestingly, Harvey and colleagues' study was unique in that it was conducted with teachers, and this may in part explain the discrepancy. The transference of teacher emotion to students are students' felt experiences, and it is possible that teachers are less aware of how their emotions may influence students (Harvey et al., 2012). Additional, possibly qualitative research into the perspectives of teachers would be helpful in clarifying this.

This research is unique in that it offers South Korean students' perspectives of their teachers' classroom practices. Despite cultural differences between the countries explored, results seem to suggest that social-emotional behaviours of Korean teachers may not be so different to that of New Zealand, German, and Singaporean teachers (Harvey et al., 2012; Chia, 2014) and provide support to the notion that the broad themes of teacher social-emotional practices may be, to some extent, universal.

The fact that many of the themes of teacher behaviour reported by participants in the current study overlapped with teacher self-reports (Harvey et al., 2012) further supports the view that adolescents are acute observers of their teachers' emotions (Anderson, Evans, & Harvey, 2012). What's more, considering the themes of teacher social-emotional practices identified through student reports were largely consistent for middle school students (ages 13 and 14; current study), high school students (Harvey & Bimler, unpublished), and polytechnic students (Chia, 2014), the same key elements of teacher social-emotional practices appear to be expressed not only across different cultural contexts but also across levels of schooling.

There were significant gender differences in teachers' engagement in four of the five factors, as observed by students. Students rated female teachers significantly higher than male teachers on *relationship-building*, *classroom and emotion management*, and *emotional transference* while students rated male teachers higher than female teachers on *social-*

emotional coaching. Students rated female teachers higher than male teachers on *emotional transference*, suggesting that female teachers tend to express their emotions more openly. This is consistent with findings from the US and Western European countries, where several studies and meta-analyses demonstrated small yet significant gender differences in emotional expression (Chaplin, 2015). Women demonstrated greater overall emotional expression (Brody & Hall, 1993; Kring & Gordon, 1998), especially for positive emotions (e.g. LaFrance, Hecht, & Levy Paluck, 2003), while men expressed higher levels of anger and aggression than women in certain contexts (Archer, 2004). Although women are more emotionally expressive, studies indicated men experience equal or higher levels of physiological arousal (e.g. higher blood pressure) in response to emotionally-arousing stressors (Chaplin, Hong, Bergquist, & Sinha, 2008; Stroud, Salovey, & Epel, 2002). This suggests men are more likely to "keep in" felt emotions than women, as hypothesised by Buck and other theorists (Buck, 1984; Levenson, Carstensen, & Gottman, 1994).

Students rated female teachers significantly higher than male teachers on *Classroom and emotion management*. At face value, results appear to contrast with existing evidence. Some studies found no gender differences in teachers' classroom management (Clunies-Ross, Little, & Kienhuis, 2008; Martin, Yin, & Mayall, 2006), while others found male teachers to engage in more classroom management behaviours (e.g. Martin & Yin, 1997) and place greater emphasis on the need for strict discipline than female teachers (Chudgar & Sankar, 2008). It is important to highlight that in contrast with classroom management constructs in these studies, *Classroom and emotion management* includes teachers' emotion self-regulation behaviours (e.g. *Our teacher remains composed in difficult situations*). Past research have shown that women tend to use emotion regulation strategies more than men (Feingold, 1994; Nolen-Hoeksema & Aldao, 2011). This is likely to translate to the classroom context, which may in part explain the present finding.

As all participants were female, the influence of student gender on teacher classroom management behaviours also should be considered in interpreting results. It is possible that female teachers feel more comfortable engaging in classroom management behaviours than male students when engaging with female students.

6.2.2 Teacher Profiles Drawn from Student Responses. Eight teacher profiles were identified based on students' ratings. As a reminder, each profile was made up of a group of students who share the same pattern of responding to the five factors, and therefore

represented a sub-group of students who have reported the same pattern of social-emotional behaviours about their homeroom teachers. As summarised in Table 2 in Chapter Five, each profile was described by using weighted scores attributed by participants of that profile (students) to each factor. In summary:

1. The *Enthusiastic Manager* profile was characterised by high engagement in classroom management and a strongly engaged attitude to teaching. It was also notable for relatively low emotional transference and emotional-behavioural coaching.

2. The *Disengaged* profile was characterised by an absence of classroom management and moderately low emotional-behavioural coaching.

3. The *Job-Focused profile* reflected no strong attributes, and a slightly positive attitude towards teaching.

4. The *Indifferent* profile was characterised by an absence of emotional and behavioural coaching and low relationship-building.

5. The *Coach* profile was characterised by high engagement in emotional and behavioural coaching and a relatively low engagement in relationship-building.

6. The *Assured Coach* profile reflected modest engagement in emotional and behavioural coaching, and a slightly engaged attitude toward teaching.

7. The *Transparent Manager* profile was notable for its extreme values. It was characterised by high engagement in classroom management and high emotional transference, and a markedly negative attitude towards teaching (e.g. doesn't enjoy teaching).

8. The *Relationship-builder and Coach* profile was characterised by high engagement in relationship-building, a moderately high engagement in emotional and behavioural coaching, and relatively low emotional transference.

As seen in these brief descriptions, findings overwhelmingly emphasised the *diversity* of teacher social-emotional behaviour patterns and this was accentuated by a fairly even distribution of students across profiles. Further, no profiles scored consistently high across all factors, implying that teachers were likely to have distinctive styles of interacting, regardless

of overall teacher competency. In other words, even the most socially-emotionally competent teachers were likely to engage less in some factors than others, although they would be expected to demonstrate high overall engagement in social-emotional behaviours.

6.2.2.1 Comparison of profiles across studies. Profiles of student-reported Korean teacher behaviours were compared with profiles similarly drawn by Harvey and colleagues (2012), and Chia (2014) through eyeballing. In contrast to factors, profiles did not appear to neatly align across studies. This suggests that while there may be key universal themes of teacher social-emotional practices, the patterns of teacher engagement in these practices are more varied.

Despite this, a few visibly similar profiles were identified across studies. The first was a profile characterised by high scores on classroom management and attitude toward teaching, paired with low engagement in social-emotional coaching. Profiles with these characteristics were identified in the current study (*Enthusiastic Manager*), by Harvey et al. (2012; profiles 3 and 5) and Chia (2014; profile 3). Another profile identified across contexts was characterised by high scores in social-emotional coaching and low engagement in relationship-building actions. Profiles matching this description were identified in the present study (*Coach*) and by Harvey and colleagues (2012; profiles 2 and 4), but not by Chia (2014). While these are only tentative links that need to be verified with additional research, it makes intuitive sense that teachers would engage in coaching behaviour with school-age students more than with adults.

6.2.2.2 Gender effects across profiles. Student distribution across profiles appeared to be linked to teacher gender. Of the 8 profiles, Students whose teachers were male were overrepresented in the *Disengaged* and *Coach* profiles; 71% and 57% respectively. Students with male and those with female teachers were equally represented in the *Enthusiastic manager* profile, and the remaining 5 profiles were mostly made up of students with female teachers.

A similarity between the *Disengaged* and *Coach* profiles, where students with male teachers were overrepresented, was a negative score on classroom management. These profiles had the lowest classroom management scores across all profiles, and the *Disengaged* profile was particularly notable for its markedly high negative score. This is interesting as past research did not find gender differences in teachers' attitudes and styles relating to

classroom management (Clunies-Ross, Little, & Kienhuis, 2008; Martin, Yin, & Mayall, 2006). Further, Harvey and colleagues had found that male teachers were associated with high boundary-setting (2012). Results may possibly point to tendencies specific to the Korean culture, although interpretations should be made with caution due to modest sample sizes, especially for the *Disengaged* profile (16 cases). It is also worth noting that all students that took part in this research were female, which may have an effect on male teachers' classroom management behaviours as perceived by students.

In addition, *Disengaged* and *Coach* profiles had the most "neutral" attitudes toward teaching out of all 8 profiles, indicated by scores closest to the overall mean. Other profiles tended to have either positive or negative attitudes toward teaching.

6.3 What is the Association between Teacher Social-Emotional Practices and Student Connectedness?

The current research sought answers to how student-perceived teacher social-emotional practices were associated with student reported feelings of connectedness with their teacher, school and peers. Student-perceived teacher social-emotional practices were positively associated with teacher connectedness and school connectedness, resonating with past observations that affective student-teacher relationships meaningfully impact student school adjustment (Roorda, Koomen, Spilt, & Oort, 2011).

Findings further suggested certain factor combinations may be particularly associated with connectedness. From eyeballing Korean students' responses, the combination of high emotional and behavioural coaching and relationship-building actions may be linked with teacher connectedness. Two profiles that had these characteristics were *Relationship-Builder and Coach* and *Transparent Manager*, and these profiles had the highest student ratings of teacher connectedness across all profiles (mean = 26.44 and 24.88 respectively, compared to the overall mean of 23.30 out of a possible score of 35 across all profiles).

Patterns of student-reported teacher behaviour associated with school connectedness were also identified. Specifically, the combination of emotional and behavioural coaching and engaged attitude to teaching was positively associated with student feelings of connectedness with the school. This pattern was found in the *Assured Coach* and *Relationship-Builder and Coach* profiles, which had the highest and second-highest scores of school connectedness (mean = 19.71 and 19.06 respectively, compared to overall mean of

18.06 out of a possible score of 25 across all profiles). Students whose teachers demonstrated high engagement both in emotional and behavioural coaching and an engaged attitude to teaching may experience greater school connectedness.

Furthermore, it appears that emotional and behavioural coaching may also have a positive, albeit smaller association with teacher connectedness even in the absence of relationship-building (i.e. *Coach, Transparent Manager*). Four of the eight profiles were characterised by positive scores for social-emotional coaching (*Relationship-Builder and Coach, Transparent Manager, Assured Coach, Coach*). These profiles were associated with greater connectedness with both teacher and school than the other four profiles, which had negative scores for social-emotional coaching. To illustrate, connectedness and factor scores for all profiles are presented in Table 15, and the areas of interest (teacher connectedness, school connectedness, social-emotional coaching) are circled in red.

Table 15

Teacher Connectedness, School Connectedness and Individual Factor Scores Across Eight Profiles

	Connectedness Measures		Factors***				
Profile	Teacher*	School**	Social-Emotional Coaching	Relationship-building	Classroom and Emotion Management	Engaged Attitude to Teaching	Emotional Transference
Enthusiastic manager	23.38	16.95	-.56	-.33	1.00	.66	-1.20
Disengaged	18.13	17.38	-.41	.20	-1.86	-.20	-.07
Job-focused	23.30	16.89	-.37	-.12	.05	.54	-.07
Indifferent	21.33	17.19	-1.27	-.17	-.02	-.28	.37
Coach	24.13	18.30	1.30	-.60	-.23	-.01	.21
Assured coach	24.82	19.71	.40	-.21	-.01	.26	.08
Transparent Manager	24.88	18.76	.21	.32	.78	-.98	.64
Relationship-Builder and Coach	26.44	19.06	.53	1.10	-.001	.40	-.46

*Possible score range is from 7 to 35. **Possible score range is from 5 to 25. *** A score of zero represents the overall average social-emotional coaching score across all cases. A high positive score reflects high engagement in the factor whereas a high negative score indicates its perceived absence.

It may be that teachers' emotional and behavioural coaching behaviours in the classroom enhance students' social-emotional competencies, thereby equipping them to build and maintain positive relationships both in and outside the classroom environment. This resonates with attachment theory (Bowlby, 1969), according to which adult emotional support instils in children a sense of security that allows them to explore novel situations. Just as child-caregiver relationships characterised by trust, involvement and responsiveness encourages positive social and emotional development in children (Pianta et al., 2003), findings suggest socially and emotionally supportive teachers are likely to positively impact students' ability to navigate the school environment. As this research was novel in its examination of the association between specific teacher social-emotional practice themes and Korean student reports of connectedness, subsequent research is needed to further explore this relationship.

This factor was consistently positively associated with both teacher connectedness and school connectedness, regardless of teacher engagement in other factors. Furthermore, four of the eight profiles scored positively in emotional and behavioural coaching (*Relationship-builder and coach, Assured coach, Transparent manager, Coach*), and each of these profiles had higher scores of both teacher and school connectedness than the remaining four profiles that scored negatively in emotional and behavioural coaching (*Indifferent, Job-focused, Disengaged, Enthusiastic Manager*).

Results demonstrated a link between teacher gender on student connectedness. The average teacher connectedness score for female teachers was significantly higher than male teachers, indicating that female students in the present study felt more connected to female teachers. This is consistent with Harvey et al.'s (2012) observations that the profiles wherein male teachers were well represented scored low on relationships.

Taken together, preliminary findings suggested teachers' social-emotional practices are significantly associated with students' feelings of connectedness to their teacher and the school. Findings further indicate different expressions of teachers' social-emotional behaviours are likely to have differential effects on connectedness.

6.4 Implications of Findings

There are several key implications of this study. Firstly, findings delineate the importance of teacher social-emotional competencies for student well-being. This study was unique in that it not only explored the themes and patterns of teacher practices, it provided empirical evidence for the association of teacher practices to student connectedness. Hamre and colleagues (2013) expressed concern that current teacher education programmes do little to equip teachers to be emotionally competent (Hamre et al., 2013), even though this is crucial not only for teachers' success in managing the pressures of the job, but also to foster student well-being by creating positive emotional classroom climates. Observed links between social-emotional practices and student connectedness may assist in gaining teachers' and education policy makers' buy-in to the notion that emotion is a fundamental component of teaching. Importantly, as this study was conducted with Korean students, findings indicated that Korean students' well-being may be fostered through positive student-teacher relationships.

To this end, the identified themes of Korean teachers' social-emotional practices may be practically applied in teacher training and evaluations. Factors may act as foci for assessing and providing feedback for teachers' social-emotional competencies (Harvey et al., 2012), which would help teachers identify areas for professional development. By identifying strengths as well as areas for improvement in their social-emotional practices, teachers may be encouraged to be more mindful and self-reflective of their practices.

Another important implication of this research is that teacher social-emotional practices may be universal across cultures and ages. Themes identified in the current study were to a large extent consistent with those observed with New Zealand, German and Singaporean samples. While further research is needed to validate these findings with larger samples and from the perspective of other sample groups (e.g. Korean teachers, Korean students in lower level classes), the present study is an encouraging step towards understanding teacher social-emotional behaviours to enhance student well-being, particularly in the South Korean context.

6.5 Limitations and Recommendations

Interpretations of results need to be made with caution due to some limitations of this research. Firstly, while the sample size is appropriate for this methodology, it is not a

representative sample of the Korean population. Thus, interpretation of results should take account of this limitation. Thirty students participated in Study one, and 221 students in Study two. While a sample of 30 has been shown to produce reliable results for the GOPA sorting procedure, a larger sample would have produced more statistically robust results. Further, the 221 students in Study two were distributed across eight different profiles, and the smallest profile size was 21. A goal of future research should be the replication of this study with a larger sample size, as this would increase the generalisability of results, in addition to validating the research findings.

Another limitation is that is that labelling (factors, profiles) and interpreting results relied on eyeballing and thus could be subjective. Steps were taken to minimise subjective bias through consultation with supervisors and other individual experts, nevertheless this is a feature of this research which should be considered when looking at the results.

The decision to seek student perspectives was intentional and considered a strength of this study. However, it is also a limitation that no insight into teacher perspectives was gained. While this was beyond the scope of this research, it would have been interesting to compare the perspectives of teachers and students of the same school population. Further, teacher reports may give rise to factors that are internal processes and not readily observed by students, such as emotional philosophy and teacher self-acceptance. These themes were identified through teacher reports by Harvey et al., (2012) but not in studies by Harvey and Bimler, Chia, and the present study; all of which explored student perspectives. These factors may also impact student well-being. This is suggested by Shoji and colleagues' (2016) whose research linked a lack of teacher self-acceptance to burnout, which is seen to negatively affect student well-being (Jennings & Greenberg, 2009). Future research therefore should explore both teacher and student perspectives, with a view of providing greater insight into their interaction effects and how they may impact student well-being.

In addition, and as mentioned earlier, studies with samples of different demographic characteristics need to be conducted to determine whether teacher social-emotional practices are truly universal, and explore differences. The current study provided an insight into the experiences of a very specific demographic group, as all participants were Korean, female, mid- to high-achieving middle school students. Replication of this study with male as well as female students is recommended, to explore possible student gender differences as well as student-teacher interaction differences by gender. Female teachers were linked with greater

connectedness for students in the present study, and it would be interesting to also explore male Korean students' perspectives. It is also feasible that there may be gender preferences for teacher social-emotional practices. In addition, future research should also be conducted with students who are not high-achievers, with a view of understanding teacher practices that may enhance these students' learning and well-being.

A worthy goal of future research would be to explore teacher acquisition and retainment of social-emotional skills, with a view of identifying effective strategies to enhance social-emotional competence. When Malmberg and colleagues (2011) followed teacher trainees in their last year of teaching into their first two years of teaching over the course of four years, they found that the teachers' emotional support behaviours initially increased but then decreased over time; in contrast with organisation and management skills, which increased over time. Researchers suggested this may reflect the stress that beginning teachers experience as they move from teacher training into their own jobs. Notably, it also indicates that social-emotional practices may be more fluid than other classroom skills. Future research may further examine the characteristics of key social-emotional practice themes. A deeper understanding of how these competencies could be effectively acquired and retained would be valuable in informing teacher training and professional development programmes.

6.6 Conclusion

This research has contributed to understandings of Korean teachers' social-emotional practices as seen from the perspective of students. Up to six key areas of teacher social-emotional practices and eight profiles of students with teachers who had different student-perceived patterns of social-emotional behaviours were identified in this research. Findings supported the notion that teachers have different styles of social-emotional behaviour, and demonstrated that these behaviours as perceived by students can be organised and measured systematically. This research builds on Harvey et al.'s (2012) investigation of New Zealand and German teachers' social-emotional practices. While there were some interesting contrasts, findings indicated that key features of student-teacher interactions may be similar across cultures. In addition, preliminary links were made between patterns of teacher social-emotional behaviours with student connectedness. The findings of this research not only support Hargreaves' (1998) argument that emotions are central to teaching, but expands on this to position teachers' social-emotional practices as an important influencer of student

well-being. Further research is needed to verify the findings of these studies and to explore how they can be optimally applied in classroom contexts to enhance the well-being of students.

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Appendix A

88 item cards

1. 우리 선생님은 우리와 좋은 관계를 유지한다 Our teacher has a good relationship with us	2. 우리 선생님은 긍정적이다 Our teacher is positive
3. 우리 선생님은 학급을 잘 통제하고 다룬다 Our teacher controls and manages the class well	4. 우리 선생님은 다른 사람들이 감정으로 어떤 반응을 보였는지 예를 들어 이야기 한다 Our teacher tells stories using examples of how others have responded emotionally
5. 우리 선생님은 학생들끼리의 갈등 상황에서 그들이 그 일에 대해 털어놓고 이야기 하도록 그들을 모아 중재한다 In conflict situations between students, our teacher brings them together to talk it through	6. 우리 선생님은 우리가 다른 사람들의 감정을 알 수 있도록 해준다 Our teacher makes us aware of how others feel
7. 우리 선생님은 우리에게 처해있는 일을 맡아서 하도록 동기부여 해준다 Our teacher motivates us to take on the task at hand	8. 우리 선생님은 내가 어떤 감정적인 상황에 어떻게 참여했는지 보여준다 (예: 내가 친구를 놀려서 친구가 화를 냈다 Our teacher shows me how I took part in an emotional situation (e.g. My teasing led to my friend reacting angrily)
9. 우리 선생님은 우리가 어떻게 감정을 다루고 있는지 알게 해준다 Our teacher makes us aware of how we are managing emotion	10. 난 우리 선생님이 나를 어떻게 생각하는지 신경쓰인다 I care what our teacher thinks about me

11. 우리 선생님은 학생들이 좋아하는 선생님이다 Our teacher is a teacher that students like	12. 우리 서생님은우리가 배울 수 있도록 적극적으로 신경써준다 Our teacher is actively concerned with our learning
13. 우리 선생님은 우리가 서로를 돕도록 격려해준다 Our teacher encourages us to support each other	14. 내 자신에 대한 존중감은 우리 선생님이 나에 대해 어떻게 느끼시는지와 관련이 있다 My self-esteem is related to how our teacher feels about me
15. 우리 선생님은 교실이 안전한 곳이 되도록 해준다 Our teacher makes our class a safe place to be	16. 우리 선생님은 학급 분위기를 조절하기 위해 자신의 감정을 사용한다 Our teacher uses his/her own emotions to control the mood of the class
17. 우리 선생님은 우리의 잠재력을 믿어준다 Our teacher believes in our potential	18. 우리 선생님은 여러 가지 상황에 따라 본인의 감정을 통제를 한다 (예: 슬퍼하는 학생을 돌봐줄 때, 선생님을 화나게 행동하는 무례한 학생을 지도할 때 본인 감정을 적절하게 통제한다) Our teacher controls his/her emotions to suit the situation (e.g. when caring for a sad student, or dealing with disrespectful students that provoke anger, he/she controls his/her emotions appropriately)
19. 우리 선생님은 우리에게 감정적 영향을 주는 상황이 발생 했을 때, 그것에 대해 함께 대화를 나눈다 (예: 반 친구의 죽음 또는 반에서 발생한 학교폭력에 대해 학생들과 대화를 나눈다) Our teacher talks us through emotional situations that have affected us (e.g. talks with students about student death or bullying)	20. 우리 선생님은 감정적인 상황에 즉각 대처한다 Our teacher addresses emotional situation immediately

21.선생님 자신의 이야기를 우리에게 해준다 Our teacher tells us about himself/herself	22. 우리 선생님은 우리가 새로운 것을 배우도록 격려한다 Our teacher encourages us to learn new things
23.우리는 우리 선생님의 감정을 그대로 느낀다 We mirror how our teacher feels	24. 우리 선생님은 우리가 우리의 감정적 문제를 해결하도록 도와준다 Our teacher helps us to solve emotional problems
25. 우리 선생님은 내가 행동하기 전에 생각하도록 도와준다 Our teacher helps me to think before I act	26.유머감각이 있다 Our teacher has a sense of humour
27. 우리 선생님은 자신의 부정적인 반응을 잘 통제 한다 Our teacher controls his/her own negative reactions well	28.우리 선생님은 본인 스스로가 교사로서 하는 일에 대해 확신이 있다 Our teacher believes in what he/she does as a teacher
29.우리 선생님은 우리의 기분을 이해한다 Our teacher understands how we feel	30.우리 선생님의 반응하는 방식이 내가 더욱 열심히 하게 만든다 The way our teacher responds makes me work better

31. 우리 선생님은 우리가 함께 협력하도록 도와준다 Our teacher helps us to work together	32. 우리 선생님은 일의 결과에 대한 칭찬과 벌을 꾸준하게 준다 Our teacher consistently enforces positive and negative consequences
33. 우리 선생님은 가르치는걸 즐긴다 Our teacher enjoys teaching	34. 우리 선생님은 어떤 것에 대해서 반응하는 가장 좋은 방법을 설명해준다 (예: 친구와 싸웠을 때 대처 방법, 다가오는 시험을 준비하는 방법) Our teacher explains the best way to respond to things (e.g. how to respond to a fight with a friend, how to prepare for an upcoming test)
35. 우리 선생님의 수업 방식이 재미있다 Our teacher has an enjoyable teaching style	36. 우리 선생님은 우리가 다른 학생들과 즐거운 친구관계를 쌓도록 격려한다 Our teacher encourages us to build enjoyable friendships with other students
37. 우리 선생님은 본인 기분이 좋을 때나 나쁠 때나 나와 항상 상담해주실 준비가 되어있다 Whether our teacher is in a good mood or bad mood, he/she is always open to talking with me	38. 우리 선생님은 수업의 명확한 틀과 체계가 있다 Our teacher has clear class routines and structures
39. 우리 선생님은 우리를 향한 분명하고 적절한 기대감을 가지고 계신다 Our teacher has clear and reasonable expectations of us	40. 학생이 화가 나면, 우리 선생님은 그들에게 가서 진정할 수 있도록 해준다 If a student is upset, our teacher lets them go and settle down

41. 우리 선생님은 내 감정을 잘 알아챈다 Our teacher is aware of my emotions	42.우리 선생님은 시간을 내어 말을 들어준다 Our teacher takes time to listen
43. 우리 선생님은 공평하다 Our teacher is fair	44. 우리 선생님은 교사라는걸 자랑스러워 한다 Our teacher is proud to be a teacher
45. 우리 선생님은 우리의 염려. 걱정을 적절히 다룬다 Our teacher addresses our concerns appropriately	46.우리 선생님은 반 분위기를 잘 알아챈다 Our teacher is aware of the class mood
47.우리 선생님은 우리를 친자식처럼 대한다 Our teacher treats us like his/her own children	48.우리는 우리 선생님을 신뢰할 수 있다 We can trust our teacher
49. 우리 선생님은 이해하고 배려한다 Our teacher is understanding and caring	50. 우리 선생님은 학생들이 잘했을때 공정하게 보답한다 Our teacher rewards Fairly

51. 우리 선생님은 우리를 존중해준다 Our teacher respects us	52. 우리 선생님은 우리가 올바르게 행동하기를 기대한다 Our teacher expects us to behave
53. 우리 선생님은 다가오는 일들을 미리 준비시키신다 (예: 시험 준비를 하도록 지도한다) Our teacher prepares us to face upcoming events (e.g. exams)	54. 내가 어떤 학생들과 모둠 활동을 잘 할 수 있는지 안다 Our teacher knows which other students I work well with
55. 우리 선생님은 우리가 책임감을 가지도록 격려한다 Our teacher encourages us to be responsible	56. 우리 선생님은 상을 이용하여 우리에게 동기부여 해준다 (예: 발표를 했을 때 칭찬카드를 준다) Our teacher uses rewards to manage how we feel (e.g. gives us reward cards when we present in front of the class)
57. 우리 선생님은 감정 표현이 솔직하다 Our teacher's emotions are genuine	58. 우리 선생님은 우리 문제를 심중하게 받아들여 준다 Our teacher takes our problems seriously
59. 우리 선생님은 우리가 환영받고 있다는 느낌을 가지게 해준다 Our teacher makes us feel welcome	60. 우리 선생님은 선생님과 학생 사이 명확한 선을 지킨다 Our teacher maintains clear teacher-student boundaries with us

61. 우리 선생님은 학생들이 서로를 도와주도록 한다 (예: 몸이 불편한 반 친구를 돠와주는 학급 도우미를 선정한다) Our teacher uses students to support other students (e.g. appoints student helpers to aid fellow students that need physical assistance)	62. 우리 선생님은 대화 하기 위해 시간을 내준다 Our teacher takes time to talk
63. 우리 선생님은 벌 주는데 있어서 부정적인 감정을 사용하지 않는다 (예: 모욕감과 같은 부정적인 감정이 느껴지지 않도록 훈계한다) Our teacher doesn't use negative emotion (eg. Shame, guilt-trip) as punishment	64. 감정적인 상황이 발생했을때 기회로 삼아 문제를 대처하는 방법을 가르쳐 준다 (예: 다틈이 있을때 대화로 해결하는 방법을 가르쳐 준다) Our teacher uses emotional situations as teaching opportunities (e.g. uses a conflict situation to teach about negotiation)
65. 우리 선생님은 좋지만 엄격하다 Our teacher is good but strict	66. 우리 선생님은 자신의 실제 감정과 다르게 행동한다 (예: 화가 나도 화가 안 난 것처럼 감정을 숨길 수 있다) Our teacher acts as if he/she is feeling something different to what he/she is (e.g. could conceal his/her anger)
67. 우리 선생님은 특정 행동이나 감정에 대한 발생 할 수 있는 결과에 대해 명확하게 말해준다 Our teacher clearly states consequences for certain behaviours or emotion	68. 우리 선생님은 어려운 상황에서도 침착한 상태를 유지한다 Our teacher remains composed in difficult situations
69. 우리 선생님은 마음을 진정시켜주시는 분이다 Our teacher has a calming influence	70. 우리 선생님은 감정을 말로 표현하는 법을 가르쳐준다 Our teacher teaches us how to express our emotions with words

71. 우리 선생님은 우라와 시간 보내는걸 즐긴다 Our teacher enjoys spending time with us	72. 우리 선생님은 우리의 감정적인 반응들을 받아준다 Our teacher is accepting of our emotional responses
73. 우리 선생님은 뒤끝이 없다 Our teacher doesn't hold a grudge	74. 우리 선생님은 어려움이 있는 학생들과 차분하게 이야기 한다 Our teacher calmly talks with students having difficulties
75. 우리 선생님은 우리가 이해할 수 있는 수준에서 말해준다 Our teacher talks to us on a level we understand	76. 우리 선생님의 긍정적인 반응은 그 상황에 적절하다 Our teacher's positive responses are appropriate to the situation
77. 난 우리 선생님의 감정 상태를 파악할 수 있다 (예: 화가 나셨다, 기분이 좋으시다) We can always tell how our teacher feels (e.g. angry, happy)	78. 우리 선생님은 가르칠 때 창의적인 방법들을 사용한다 Our teacher uses creative techniques to teach
79. 우리 선생님은 공정하게 훈계한다 Our teacher disciplines fairly	80. 우리 선생님은 시간을 내서 우리를 도와준다 Our teacher takes time to help us

81. 우리 선생님은 우리가 우리 자신을 자유롭게 표현하도록 해준다 Our teacher allows us to freely express ourselves	82. 우리 선생님은 열의가 넘치신다 Our teacher is enthusiastic
83. 우리 선생님은 가르치는걸 좋아한다 Our teacher likes teaching	84. 우리 선생님은 진심으로 우리에게 관심을 갖는다 Our teacher genuinely cares about us
85. 우리 선생님이 내가 어떤 사람이라고 생각하시는지에 따라 나의 행동이 달라진다 (예: 내가 모범적인 학생이라고 생각 하시면 더욱 모범적인 행동을 하게 된다) My behaviour is affected by what our teacher believes about me (e.g. if my teacher believes/thinks I am an exemplary student, I engage in more exemplary behaviour)	86. 우리 선생님은 우리에게 따뜻하게 말해준다 Our teacher speaks warmly to us
87. 우리 선생님은 문제를 일으키는 학생들을 정확하게 파악하고 있다 Our teacher accurately identifies the misbehaving students	88. 우리 선생님의 감성적인 반응들이 학급분위기를 차분하게 만든다 Our teacher's emotional responses settle the class down

Appendix B

GOPA sorting task instruction sheet

The Relationship between Korean Teacher Social Emotional Behaviour and Student Connectedness

Card Sort Instruction Sheet

What is social-emotional behaviour?

The management and regulation of emotions in social situations are important for meeting goals and successful interpersonal interactions. **Social-emotional behaviour** is an umbrella term that includes teacher behaviours, beliefs and characteristics that influence the way teachers manage their own emotions in social situations, as well as the way they teach students to regulate their emotions.

Emotions include but are not limited to anger, anxiety, sadness, excitement, confusion and frustration. **Emotion regulation** may take the form of self-motivation, controlling impulses, regulating one's mood, delaying gratification etc. An **emotional situation** is a situation that involves emotional arousal; these could be conflict situations such as bullying or an argument, situations when students are excited such as during or immediately following a game or a competitive sports match etc.

Instructions

Before you is a deck of up to 90 cards and a recording sheet. Each card contains a statement that describes a social-emotional behaviour, and each has its own identification number. When you record your answers in the recording sheet, please write down the identification numbers.

There are four steps to this task. Please complete them one by one, and record your groupings in the recording sheet before moving on to the next step.

1) Sort the cards into (#) or more different groups. Group similar cards together; use your own judgment in determining which cards are similar. Groups do not need to be equal sizes, and a group can be as big or small as you like.

2) Of the groups you have made in Step 1, find the most different pair of groups. Write down any one item number from each group in 'Opposite set 1'. Find the next most different pair and record in 'Opposite set 2'. Continue the process until no more groups join up. Each group can be recorded only once.

3) Divide the groups created in (1) into (#) subgroups, where similar cards are grouped together. Reorder and copy all the item numbers from Step 1 on to the same line. Use brackets to group those items that are most similar. A subgroup can have a single number

4) Combine the groups created in (1) to make larger groups, according to similarity. Of the groups you have made in Step 1, find the most similar pair of groups. Write down any one item number from each group in ‘Similar set 1’. Find the next most similar pair and record in ‘Similar set 2‘. Continue the process until no more groups join up. Each group can be recorded only once.

Appendix C

GOPA sorting task recording Sheet

Participant #: _____

The Relationship between Korean Teacher Social Emotional Behaviour and Student Connectedness

Card Sort Task Recording Sheet

STEP ONE: GROUPING Make (#) or more different groups of similar items. A group may have a single item. Please keep each group's items on the same line, and do not number the groups.
Example: 3, 16, 4, 77, 52

STEP THREE: SUBDIVIDING Reorder and copy all the item numbers from Step 1 on to the same line. Use brackets to group those items that are most similar. A subgroup can have a single number.
Example: (77, 3) (16, 4, 52)

STEP TWO: OPPOSITES Of the groups you have made in Step 1, find the most different pair of groups. Write down any one item number from each group in 'Opposite set 1'. Find the next most different pair and record in 'Opposite set 2'. Continue the process until no more groups join up. Each group can be recorded only once.
Opposite set 1: ___/___
Opposite set 2: ___/___
Opposite set 3: ___/___
Opposite set 4: ___/___
Opposite set 5: ___/___
Opposite set 6: ___/___
Opposite set 7: ___/___
Opposite set 8: ___/___
Opposite set 9: ___/___

STEP FOUR: ADDING Of the groups you have made in Step 1, find the most similar pair of groups. Write down any one item number from each group in 'Similar set 1'. Find the next most similar pair and record in 'Similar set 2'. Continue the process until no more groups join up. Each group can be recorded only once.
Similar Set 1: ___/___
Similar Set 2: ___/___
Similar Set 3: ___/___
Similar Set 4: ___/___
Similar Set 5: ___/___
Similar Set 6: ___/___
Similar Set 7: ___/___
Similar Set 8: ___/___
Similar Set 9: ___/___

Rating task instruction sheet

The Relationship between Korean Teacher Social Emotional Behaviour and Student Connectedness

Rating Task Instruction Sheet

What is social-emotional behaviour?

The management and regulation of emotions in social situations are important for meeting goals and successful interpersonal interactions. **Social-emotional behaviour** is an umbrella term that includes teacher behaviours, beliefs and characteristics that influence the way teachers manage their own emotions in social situations, as well as the way they teach students to regulate their emotions.

Emotions include but are not limited to anger, anxiety, sadness, excitement, confusion and frustration. **Emotion regulation** may take the form of self-motivation, controlling impulses, regulating one's mood, delaying gratification etc. An **emotional situation** is a situation that involves emotional arousal; these could be conflict situations such as bullying or an argument, situations when students are excited such as during or immediately following a game or a competitive sports match etc.

Instructions

On a screen, you will be shown up to 90 different items that describe a social-emotional behaviour. These will be shown one by one, and each will have a corresponding number.

In front of you is a recording sheet containing 5 different boxes labelled 'always seen', 'often seen', 'sometimes seen' 'rarely seen' and 'never seen'.

When you see each item, please write down the corresponding number in one of the four boxes according to how you feel it applies to your homeroom teacher.

Please do not write your teacher's name on the sheet. Remember there are no right or wrong answers.

Appendix E

Rating task recording sheet

The Relationship between Korean Teacher Social Emotional Behaviour and Student Connectedness

Rating Task Recording Sheet

Please write each item number in one of the 5 boxes below. Put a comma after each item number
e.g. 6, 23, 24, 30, 35…

Group 1: Always seen

Group 2: Often seen

Group 3: Sometimes seen

Group 4: Rarely seen

Group 5: Never seen

Appendix F

Connectedness questionnaire

Participant #: _____

Connectedness questionnaire

Age: _____ Grade: _____ Date: _____

(Please circle) Student's gender: M / F Teacher's gender: M / F

Using the scale below, please circle the appropriate number for each item as it applies to you.

Definitely does not apply 1	Not really 2	Neutral, not sure 3	Applies somewhat 4	Definitely applies 5

Connectedness with Teacher

1.	I share an affectionate, warm relationship with this teacher.	1	2	3	4	5
2.	If upset, I can seek comfort from my teacher	1	2	3	4	5
3.	My teacher values his/her relationship with me	1	2	3	4	5
4.	When my teacher praises me, I feel proud of myself	1	2	3	4	5
5.	I share information about myself with my teacher	1	2	3	4	5
6.	It is easy to be in tune with what my teacher is feeling	1	2	3	4	5
7.	My teacher openly shares his/her feelings and experiences with me	1	2	3	4	5

Connectedness with Peers

1.	I share an affectionate, warm relationship with my peers.	1	2	3	4	5
2.	If upset, I can seek comfort from my peers	1	2	3	4	5
3.	My peers value their relationship with me	1	2	3	4	5
4.	When my peers speak well of me, I feel proud of myself	1	2	3	4	5
5.	I share information about myself with my peers	1	2	3	4	5
6.	It is easy to be in tune with what my peers are feeling	1	2	3	4	5
7.	My peers openly share their feelings and experiences with me	1	2	3	4	5

Connectedness with School

1.	I feel close to people at this school	1	2	3	4	5
2.	I am happy to be at this school	1	2	3	4	5
3.	I feel like I am part of this school	1	2	3	4	5
4.	The teachers at this school treat students fairly	1	2	3	4	5
5.	I feel safe in my school	1	2	3	4	5

Appendix G

Table of factor loadings for five factors

Items	Factors				
	Social-emotional coaching	Relationship-building	Classroom and emotion management	Engaged attitude to teaching	Emotional transference
1. Good relationship	.414	.439	.247	.201	-.267
2. Positive	.314	.450	.200	.353	-.288
3. Manages class	.463	.131	.356	.405	-.177
4. Stories examples	.684	.136	.142	.164	-.138
5. Ss talk conflict	.439	.304	.040	.020	.072
6. Ss aware others' feelings	.695	.155	.178	.081	.015
7. Task motivation	.500	.142	.320	.311	-.116
8. My part in E situation	.636	.173	.152	.206	.148
9. Ss aware E management	.673	.135	.098	.092	.080
10. Care T thinks	.178	.191	.345	.241	.208
11. likeable	.397	.372	.343	.376	-.259
12. Concerned learning	.397	.189	.258	.608	-.042
13. Encourages Ss support	.460	.363	.262	.318	-.039
14. My self-esteem	.180	.203	.425	.149	.089
15. Class safe	.216	.208	.476	.075	.078
16. Emotions control mood	.164	-.212	.094	.202	.486
17. Believes potential	.443	.288	.431	.313	-.046
18. Emotions suit situation	.339	.306	.451	.214	-.243
19. Talks E situations	.448	.307	.132	.136	.117
20. Addresses ES immediately	.510	.049	.240	.244	.238
21. Tells about self	.307	.148	-.003	.608	.052

22. Encourages new	.420	.201	.187	.472	-.002
23. Mirror T feelings	.133	.045	.116	.056	.602
24. Helps solve E problems	.572	.395	.215	.057	.088
25. Helps think act	.683	.168	.231	.283	-.029
26. Humour	.331	.040	.323	.532	.032
27. Controls own neg reactions	.243	.285	.512	.387	-.334
28. Belief as T	.278	.125	.478	.528	-.014
29. Understands Ss feeling	.372	.506	.268	.259	-.147
30. Makes me work better	.373	.279	.458	.386	.001
31. Helps work together	.422	.323	.388	.337	.125
32. Enforces consequences	.300	.108	.324	.486	.173
33. Enjoys teaching	.117	.260	.203	.709	.050
34. Explains best response	.368	.330	.140	.471	-.015
35. Enjoyable teaching style	.416	.142	.298	.502	.011
36. Encourages friendships	.586	.409	.090	.232	.087
37. Can always talk	.359	.416	.256	.170	-.011
38. Clear routines	.205	.030	.459	.534	.073
39. Clear reasonable expectations	.079	.392	.153	.382	.173
40. Lets S settle down	.450	.418	.332	.233	.063
41. Aware my emotions	.398	.439	.295	.249	.205
42. Takes time listen	.366	.565	.199	.250	.130
43. Fair	.294	.252	.600	.107	-.165
44. Proud to be T	.189	.228	.186	.543	.187
45. Addresses concerns appropriately	.453	.494	.311	.208	.098
46. Aware of mood	.338	.276	.269	.265	.190
47. As own children	.347	.430	.316	.328	-.052

48. Trustworthy	.334	.406	.531	.304	-.121
49. Understanding caring	.387	.473	.480	.309	-.179
50. Rewards fairly	.228	.406	.368	.276	-.028
51. Respects us	.309	.531	.494	.193	-.055
52. Expects Ss behave	-.009	.262	.220	.317	.321
53. Preps for events	.132	.098	.040	.609	.195
54. Ss I work well with	.361	.411	-.020	.214	.133
55. Encourages responsible	.487	.361	.275	.292	-.011
56. Rewards manage feeling	.247	.337	.076	.353	.300
57. Emotions genuine	.000	.053	-.099	.275	.634
58. Takes problems seriously	.456	.457	.184	.195	.114
59. Ss feel welcome	.370	.502	.230	.146	-.062
60. T-S boundaries	.038	-.091	.579	.018	.130
61. Ss support Ss	.186	.372	.242	.363	.364
62. Takes time to talk	.302	.560	.121	.322	.204
63. No Neg emotion punishment	.064	.389	.536	.259	-.213
64. Uses E situations	.515	.262	.290	.087	.035
65. Good but strict	.424	-.021	.589	.303	.146
66. Action feeling diff	.213	.168	.518	.168	-.226
67. Clear consequences	.521	.087	.182	.113	.048
68. Composed difficult situations	.199	.111	.638	.134	.068
69. Calming influence	.415	.443	.480	.241	-.005
70. E with words	.472	.233	.280	.196	.156
71. Enjoys time with Ss	.163	.657	.009	.440	.050
72. Accepts E responses	.285	.571	.195	.180	-.052
73. Doesn't hold grudge	.202	.276	.492	.201	-.275

74. Calmly talks difficulties	.232	.572	.279	-.041	.306
75. Talks lvl understand	.135	.138	.489	.229	.135
76. Appropriate positive responses	.231	.321	.416	.403	-.069
77. How T feels	-.026	.331	-.087	-.006	.503
78. Uses creative techniques	.330	.297	.184	.457	.024
79. Disciplines fairly	.179	.428	.479	.129	-.163
80. Takes time help	.213	.702	.142	.271	.140
81. Allows free expression	.193	.602	.277	.151	.030
82. Enthusiastic	.076	.360	.138	.704	.093
83. Likes teaching	-.023	.334	.157	.709	.119
84. Cares about us	.165	.558	.197	.448	.026
85. My behaviour T belief	.117	.271	.415	.212	.181
86. Speaks warmly	.285	.464	.474	.325	-.154
87. Identifies misbehaving Ss	.055	.093	.523	-.060	.247
88. E responses settle class	.406	.283	.365	.272	.037