

Teachers' Views of Teacher-Student Relationships in the Primary School

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Abstract

This study investigated teacher-student relationships from the teachers' point of view at Perth metropolitan schools in Western Australia. The study identified three key social and emotional aspects that affect teacher-student relationships, namely, Connectedness, Availability and Communication Skills. Data were collected by questionnaire (N=139) with stem-items answered in three perspectives: (1) Idealistic: this is what I would like to happen; (2) Capability: this is what I am capable of; and (3) Actual: this is what actually happens, using four ordered response categories: not at all (score 1), some of the time (score 2), most of the time (score 3), and almost always (score 4). Data were analysed with a Rasch measurement model and a uni-dimensional, linear scale with 24 items, ordered from easy to hard, was created. The data were shown to be highly reliable, so that valid inferences could be made from the scale. The Person Separation Index (akin to a reliability index) was 0.93; there was good global teacher and item fit to the measurement model; there was good item fit; the targeting of the item difficulties against the teacher measures was good, and the response categories were answered consistently and logically. The difficulties of the items supported the conceptual structure of the variable.

Background

Teaching is a people profession that demands a large proportion of time being devoted to personal interaction. Positive teacher-student relationships are believed to be necessary for effective teaching and learning to take place (Arthur, Gordon, & Butterfield, 2003; McInerney & McInerney, 2006; Sztejnberg, den Brok, & Hurek, 2004). Effective teachers are those who, in addition to being skilled at teaching, are attuned to the human dimension of classroom life and can foster positive relationships with their students (Good & Brophy, 2000; Larrivee, 2005). But what is meant by positive teacher-student relationships? Why are teacher-student relationships important and how are they to be measured? This paper begins with some discussion to these questions as a background to the present study.

Teacher-Student Relationships

Positive teacher-student relationships are characterised by mutual acceptance, understanding, warmth, closeness, trust, respect, care and cooperation (Good & Brophy, 2000; Krause, Bochner, & Duchesne, 2006; Larrivee, 2005; Noddings, 2005; Smeyers, 1999). The success of any interpersonal relationship is dependent to a large extent upon input from both parties (Pianta, 1999). In the classroom setting, it is the teacher who has the opportunity, and indeed, the responsibility, to initiate positive interpersonal relationships (Barry & King, 1993; Krause et al., 2006; McInerney & McInerney, 2006; Smeyers, 1999). The teacher who is pro-active in demonstrating acceptance, understanding, warmth, closeness, trust, respect, care and cooperation towards his or her students not only works at initiating positive teacher-student relationships, but also increases the likelihood of building strong relationships that will endure over time (Barry & King, 1993).

Teacher-student relationships are important for many reasons. Teacher-student relationships greatly influence a student's ability to adjust to school, to do well at school, and to relate to peers (Entwisle & Hayduk, 1988; Howes, Hamilton, & Matheson, 1994; Pianta, 1999; Sztejnberg et al., 2004). Teacher-student relationships have an impact on classroom management and affect learning progress (Klem & Connell, 2004; Sztejnberg et al., 2004). From a developmental perspective, the establishment of a positive teacher-student relationship aids a student's cognitive,

social and emotional growth and enhances their mental well-being (Brazelton & Greenspan, 2000; Lynch & Cicchetti, 1992; Pianta, 1999; Weare, 2000). Stable teacher-student relationships impact positively on a student's developing sense of self and promote resiliency in them (Pianta & Walsh, 1996; Rutter, 1979). Furthermore, the benefits of positive teacher-student relationships extend to teachers, contributing to an improved sense of job satisfaction (Goldstein & Lake, 2000).

Past research on teacher-student relationships has focused heavily on instructional aspects of the relationship, and largely ignored the social and emotional aspects of teacher-student relationships (Baker, 1999; Birch & Ladd, 1996; Pianta, 1999). As such, research into social and emotional aspects of teacher-student relationships is relatively new. This study, which takes place across Perth metropolitan schools in Western Australia, helps to address this gap in the research by identifying key social and emotional aspects of the teacher-student relationship from the literature and exploring these in more detail with data collected in Perth, Western Australia. The three key social and emotional aspects of the teacher-student relationship that have been identified for inclusion in the present study are connectedness, availability and communication. These are explained in more detail in the following section.

A Theoretical Model of Teachers' Relationships with Students

There are many aspects that influence the quality and nature of personal relationships and, specifically in this study, relationships between teachers and students in the primary school. A complete understanding of how these aspects influence teachers' relationships with students is likely to be very complex. To fully understand the interconnections between all possible aspects would be very involved, and is beyond the scope of this study. However, it is possible to simplify these connections by creating a theoretical model and building into it a selected number of aspects that are considered most important. This simplified model provides an understanding of the interconnections between the selected aspects, gives direction to the research in the collection of data, and provides guidelines for the analysis and interpretation of the data. A simplified model was created using three aspects that were found to be necessary for the development of strong, healthy relationships between teachers and students. The aspects identified as significant include

emotional safety and trust (Greenhalgh, 1994), positive emotional involvement (Pianta, Nimetz, & Bennet, 1997), a sense of closeness (Brazelton & Greenspan, 2000), teacher availability (Pianta, 1999; Weissberg, Caplan, & Harwood, 1991) and, open communication (Pianta, 1999). For the purpose of this study, these aspects from the literature have been grouped into three broad areas, namely Connectedness, Availability and Communication. Each of these three areas is seen to be a key aspect likely to impact on a teacher's ability to develop relationships with the students in their classroom. The model showing the three key aspects is depicted pictorially in Figure 1.

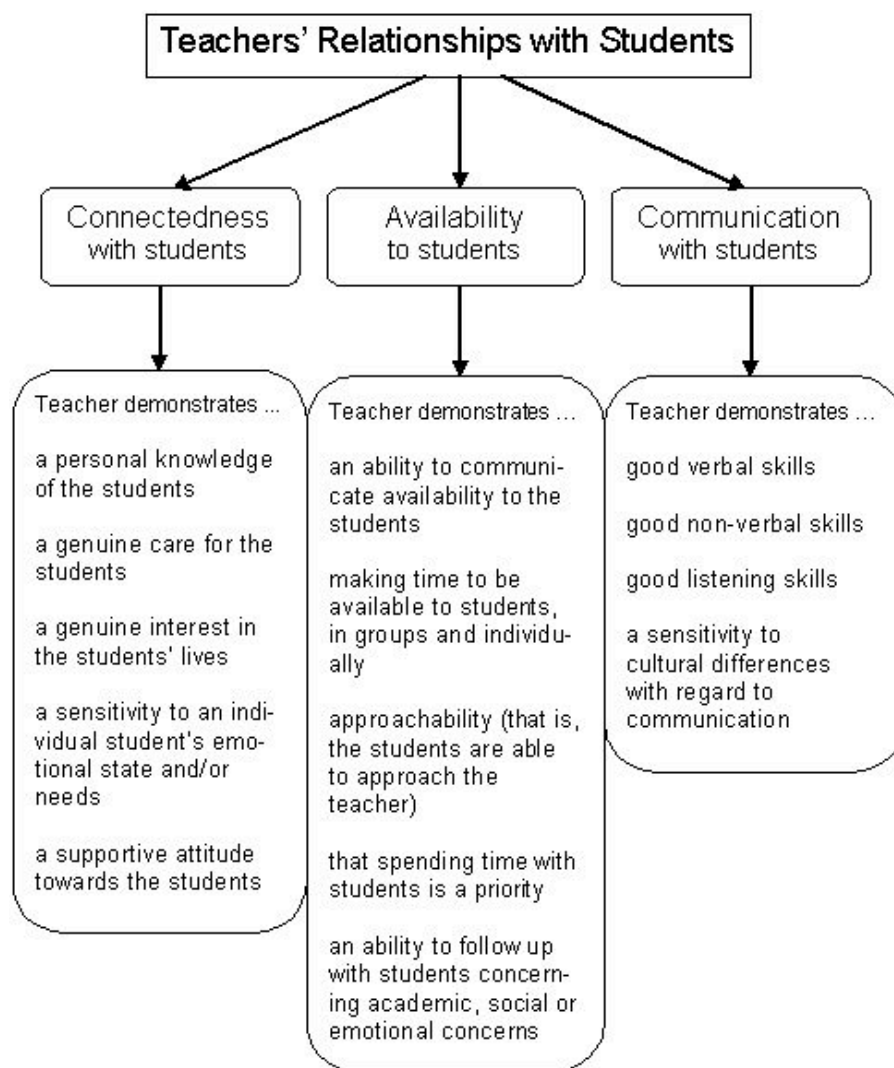


Figure 1. Theoretical Model: Teachers' Relationships with Students.

Source: Created by Natalie Leitão (2006)










The Theoretical Model is a multi-levelled model. Incorporated in the first level are the three key aspects most expected to impact on teachers' relationships with students: Connectedness, Availability and Communication. The second level of the model features the expected mechanisms by which the key aspects were expected to be demonstrated by teachers as they relate with the students in their classes. Teachers who demonstrated the expected mechanisms were seen to be working towards achieving the key aspects in their relationships with students.

A Structural Model of Teachers' Relationships with Students

In addition to the theoretical model, a structural model for the questionnaires has been constructed for use in the study. The structural model presents the theoretical basis for the construction of the questionnaires developed for this study. It is based on an expectation that attitudes influence behaviour (Ajzen, 1989; Clark & Peterson, 1986). More specifically, the theory of reasoned action purports that beliefs influence attitudes, attitudes influence intentions, and intentions influence behaviour (Ajzen, 1989). The theoretical model demonstrates the degrees of difficulty associated with each of these steps. For example, in this study, it was expected that attitudes would influence intentions and be easier than intentions, and intentions would influence behaviour and be easier than behaviour. In this way, a pattern of difficulty emerges in the structural model from left to right. In addition, a pattern of difficulty emerges in the structural model from top to bottom, because the items within each key aspect are presented in order of difficulty. Within each key aspect, the initial item was expected to be the easiest to answer, the following items were expected to be harder to answer and the final item was expected to be the hardest of all to answer. Thus, what results is a structural model that maps out multi-directional expected levels of difficulty as shown in Table 1. Varying intensities of the colour blue have been used to represent the varying degrees of difficulty. The lightest shade of blue represents the easy to answer attitudes and the easy first items. The middle shade of blue represents the harder to answer intentions and the harder middle items. The darkest shade of blue represents the hardest to answer behaviour and the hardest to answer final items.

Table 1

Structural Model of Teachers' Relationships With Students

		Easy	Harder	Hardest
		Attitudes	Intentions	Behaviour
Easy	First item			
Harder	Middle item/s			
Hardest	Final item			

Source: Created by Natalie Leitão (2006)

The structural model interconnects closely with the Rasch measurement used in this study. Rasch measurement calculates item difficulties on the same scale as the measures and has been used to enable a true linear scale to be created with standard units. In this way, Rasch measurement provides a means for testing the structure of the questionnaire and, in turn, testing the structure of the teachers' relationships with students model, relating to the stated key aspects that were expected to influence teachers' relationships with students.

Aim

This paper reports on just one part of a larger study that investigated teachers' views and students' views of teacher-student relationships using linear scales and discussion data. The part of the study documented in this paper focuses on the teachers' views using a linear scale. As such, this part of the study had two main aims. The first aim was to create a theoretical model involving three aspects (connectedness, availability and communication skills) to determine teacher self-reported self-views in three perspectives (ideal, capability and actual) with regard to the teacher-student relationship. The second aim was to create a linear scale of self-reported teacher-student relationships from the teacher's point of view in which the item difficulties are ordered from easy to hard and calibrated on the same scale as the measures from low to high.

Significance

Given that research into the social and emotional aspects of teacher-student relationships is a relatively new area of study, it is understandable that there are few well-validated tools available. Calls have been made for the development of valid and reliable tools that can be used to better understand teacher-student relationships (Ang, 2005; Pianta, 1999). This study responds to those calls by employing world's best practice in measurement in the human sciences (Rasch measurement), to develop a linear scale from the point of view of the teacher. This is a significant aspect to the study as linear measures of teacher-student relationships using a Rasch measurement model have not been created before. In addition, a theoretical model of teachers' relationships with students and a structural model have been created for this study. In so doing this study offers a completely new approach to better understand relationships between teachers and students and the role these relationships play in the primary school classroom.

This study is important because it contributes new knowledge to the body of information about teachers' relationships with students in primary school classrooms in Perth, Western Australia. Of the research published on teacher-student relationships most of the studies have been conducted in the United States of America. My research provides information based on Western Australian teachers and students, resulting in greater local applicability than that of research conducted overseas.

Method

Prior to the commencement of the study, approval was sought at the university level and at the school level. Initial approval to conduct the study was given by the Edith Cowan University Ethics Committee. Subsequent approval was given by school principals, staff, students and the students' parents.

Convenience sampling was used to find the 43 participants who were all from schools in the Perth Metropolitan area. Four female teachers made up the pilot sample and they tested the questionnaire. They were later incorporated into the main

sample with an additional 39 teachers, 10 were male and 29 were female.

Teachers completed the Teachers' Relationships with Students Questionnaire: Teacher's View (see Appendix A). Teachers were given sufficient copies of the questionnaire to correspond with the number of students they were reporting on. For example, a teacher reporting on a single relationship completed a single questionnaire. A teacher reporting on relationships with five different students completed five questionnaires. In this way a total of 139 questionnaires were completed.

The Rasch Unidimensional Measurement Models computer program (RUMM) (Andrich, Sheridan, & Luo, 2005) was used to analyse the data and create a scale of Teacher-Student Relationships from the teachers' view. Wright (1999) recommends the use of such computer programs, particularly as they may be a way of helping social scientists "to take the decisive step from unavoidably ambiguous, concrete raw observations to well-defined, abstract linear measures with realistic estimates of precision and explicit quality control" (p. 101).

Results

Initial Rasch Analysis

The analysis started with ten items, each answered in three perspectives ('Idealistic', 'Capability' and 'Actual'), giving 10 x 3 (30) items. Data were analysed with the RUMM 2020 computer program (Andrich et al., 2005). First, the data was checked to see whether the response categories were answered consistently and logically. The RUMM 2020 program assesses this with two outputs, namely, response category curves and thresholds. Response category curves show the probability of answering each response category by the Teacher-Student Relationship measure. These curves showed that teachers could not consistently discriminate between the two lowest categories, namely, 'Not at all' and 'Some of the time (less than 50% of the time)'. An example of this is shown in Figure 2.

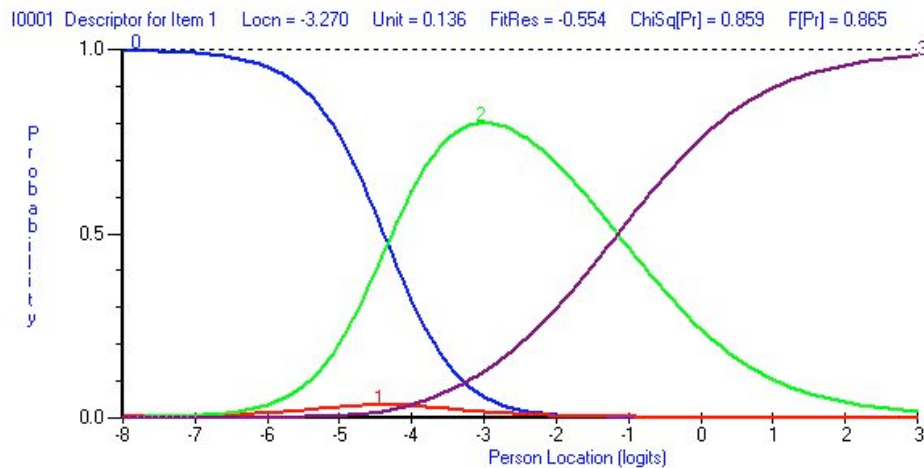


Figure 2 Response Category Curve for Item 1 Showing Poor Discrimination.

Note: Teachers have not discriminated between response categories 0 (not at all) and 1 (some of the time). Consequently, those two response categories were combined for the final analysis.

Thresholds are points between adjacent response categories where the odds are 1:1 of answering in either category. For good measurement, thresholds should be ordered in line with the ordering of the response categories. The thresholds, in this case, were not ordered in line with the ordering of the response categories, and this supported the evidence from the response category curves. Therefore, the two lowest response categories were combined giving score 1 for ‘not at all or some of the time’, score 2 for ‘most of the time’, and score 3 for ‘almost always. Using these three response categories, the data were re-analysed with the RUMM 2020 program (note: the RUMM 2020 program converts the scores to 0, 1, 2).

Of the 30 original items that formed the Teacher-Student Relationship Scale, six items did not fit the measurement model. The non-performing items were deleted thus creating a linear scale with all items fitting the model. This re-analysis is now reported.

Final Analysis

The final analysis of the data for the model of Teachers’ Relationships with Students: Teachers’ View used 24 items (6 x 3 perspectives; 2 x 2 perspectives and 2 x 1 perspective), and a total of 139 questionnaires completed by 43 teachers. The

RUMM 2020 program produces outputs to assess fit to the measurement model, reliability and dimensionality. These are now explained.

Global Item and Person Fit

Table 2 shows the global item and global person fit. The fit residuals for both the item difficulties and the person measures are the differences between the actual values and the expected values, calculated according to the measurement model. When they are standardised, they have an approximately normal distribution (mean = 0, SD = 1), if the data fit the measurement model. The fit residual data for the measure of Teacher-Student Relationships have a good fit to the measurement model (see Table 2).

Table 2

Global Item and Person Fit to the Measurement Model

ITEM-PERSON INTERACTION

	ITEMS		PERSONS	
	Location	Fit Residual	Location	Fit Residual
Mean	0.00	-0.27	3.27	-0.37
SD	2.26	1.10	2.18	0.85

Notes on Table 2.

1. Item location is item difficulty in logits
2. Person location is person measure in logits
3. SD is standard deviation
4. The mean item difficulty is constrained to zero by the RUMM 2020 program
5. Fit residuals are the difference between the actual values and the expected values calculated according to the measurement model (standardised). They have a mean near zero and an SD near 1 when the data fit the measurement model. (A good fit for these data).
6. All values are given to two decimal places because the errors are to two decimal places.

Individual Item Fit

The RUMM 2020 program calculates individual item fits to the measurement model and these are given in Appendix B. Twenty items out of 24 fit the measurement model with a probability greater than 0.05, indicating that there is an excellent fit to the measurement model. Deleting the not-so-good fitting items and re-analysing the data

did not produce a better fit to the measurement model and so the 24 items were retained.

Consistency of Category Responses

The thresholds between category responses are given in Appendix C. The thresholds are ordered in line with the conceptual ordering from low to high (not at all/some of the time, most of the time and almost always). This indicates that the teachers answered the three response categories consistently and logically.

The RUMM 2020 program produces category response curves for each item showing the relationship between the probability of answering each category in relation to the Teacher-Student measure. An example is given in Figure 3. This figure shows that when the measure is low, then the probability is high that the teacher response is low (not at all/some of the time), that as the measure increases, the probability of answering in the lowest category decreases and the probability of answering in the next category increases, and that as the measure increases further still, the probability of answering category two (most of the time) decreases and the probability of answering category three (almost always) increases. This means that the teachers have answered the three response categories logically and consistently. The response category curves for all 24 items were good.

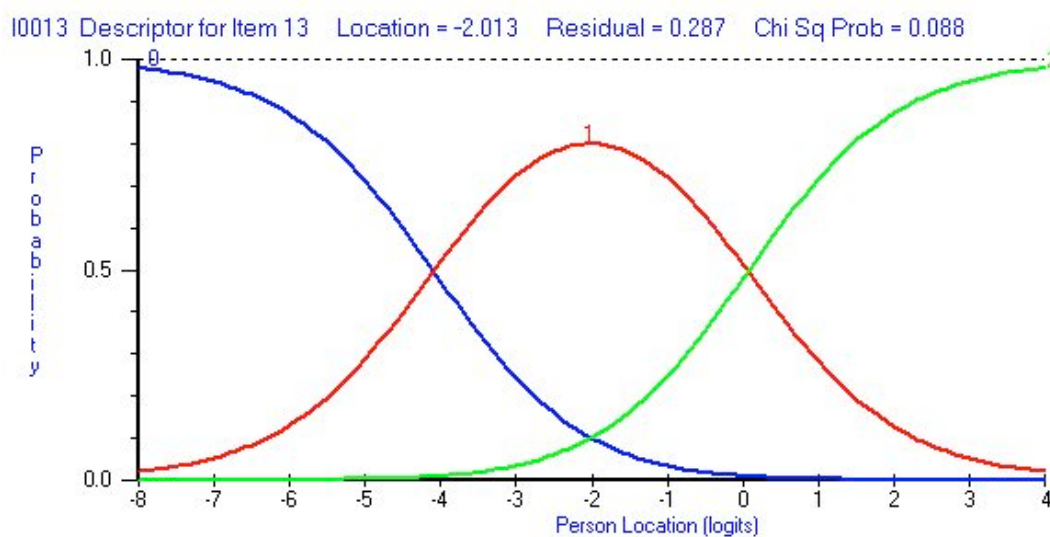


Figure 3 Response Category Curve for Item 13

Item Characteristic Curves

The RUMM 2020 program produces an item characteristic curve for each item showing the relationship between the expected response score and the Teacher-Student measure. An example is given in Figure 4 for item 30. It shows how the item discriminates for groups of persons near the item difficulty. In this case, the item is functioning as intended. The item characteristic curves for all 24 items showed that the items were functioning as intended.

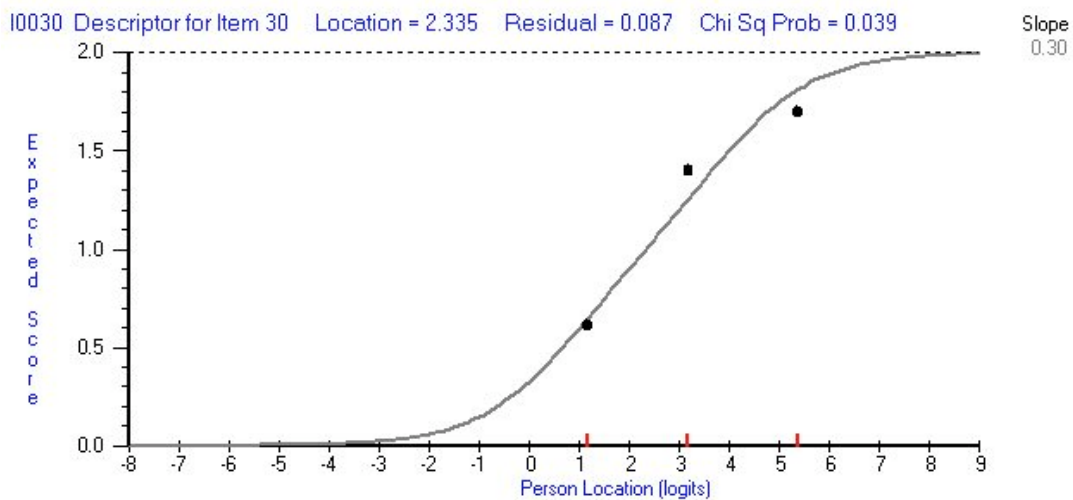


Figure 4 Characteristic Curve for Item 30

Dimensionality

The RUMM 2020 program calculates an item-trait interaction effect to determine whether a unidimensional trait has been measured. This examines the consistency with which teachers with measures all along the scale agree with the calculated difficulties of the items along the scale. That is, it provides a check that all the teachers agree that particular items are easy, of medium difficulty or hard. For the item-trait interaction, the total item chi-square was 71.37, and the probability was 0.02 (chi-square = 71, df = 48, p = 0.02). This indicates that there was no significant interaction of person measures with item difficulties along the scale and that, therefore, it can be concluded that a unidimensional trait was measured.

Person Separation Index

The Person Separation Index is 0.93 indicating that the measures are well

separated along the scale in comparison to their errors of measurement. This also implies that the power of the tests-of-fit are strong and the RUMM 2020 program says that the power for these data are excellent.

Targeting

The RUMM 2020 program produces a Person Measure/Item Difficulty graph. This graph (see Figure 5) shows the scale of item difficulties from easy (about -4.2 logits) to hard (about +3.2 logits) and the teacher measures calibrated on the same scale from low (about -4.6 logits) to high (about + 7.8 logits). This shows that some hard items need to be added to the scale to better target those teachers with high measures.

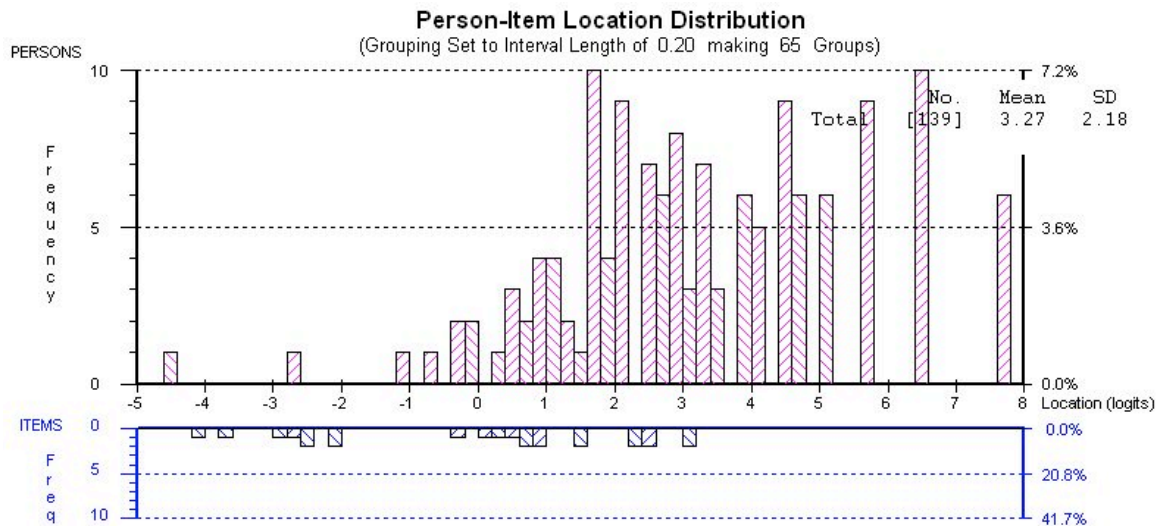


Figure 5 Person Measure/ Item Difficulty Graph

Notes on Figure 5

1. Person measures are given on the upper side in logits.
2. Item difficulties are given on the lower side in logits.
3. Some harder items need to be added to the scale in future use to cover the higher measures.

The RUMM 2020 program also produces a Person Measure/Item Threshold graph (see Figure 6) which shows the item thresholds instead of item difficulties. The thresholds range from easy (about -5.8 logits) to hard (about +5.1 logits) and thus

better cover the range of teacher measures. Nevertheless, in any future use of the scale, some harder items need to be added to better measure those teachers with high teacher-student relationships.

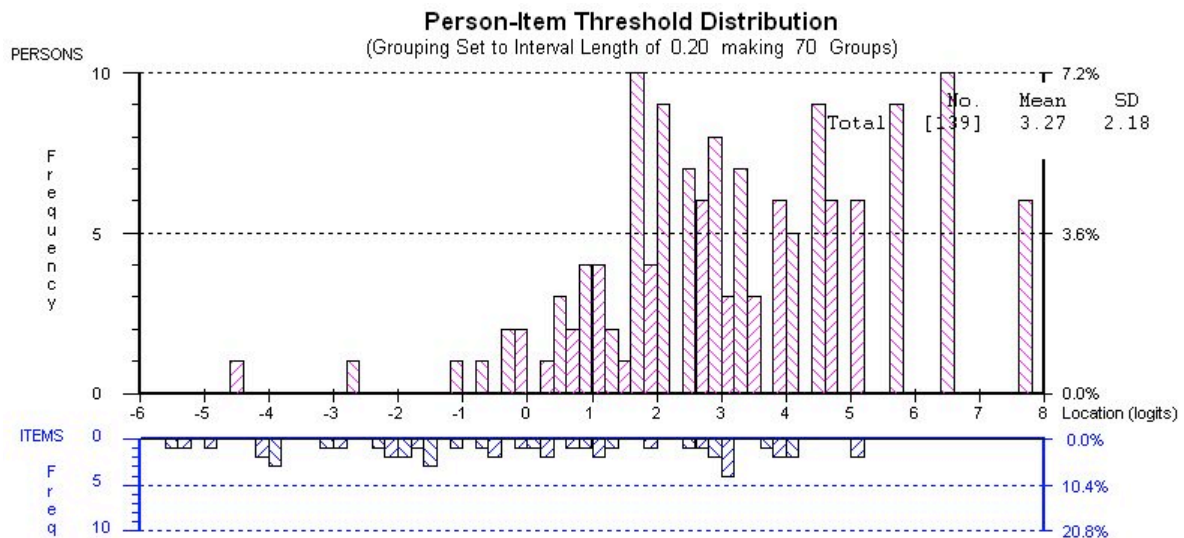


Figure 6 Person Measure/Item Threshold Graph

Notes on Figure 6

1. Person measures are given on the upper side in logits.
2. Item threshold are given on the lower side in logits.

The Teacher-Student Relationship Scale: Teachers' View

The Rasch analysis has calibrated the teacher measures on the same scale as the item difficulties and produced a linear, unidimensional scale (see Table 3), for which the data have a good fit to the measurement model. Since it has now been shown that the scale data are reliable (there is good individual and global fit to the measurement model, the separation of measures is good in comparison to the errors and the teachers have answered the response categories consistently and logically), valid inferences can be made from the scale.

Items

For each item, teachers found that the idealistic perspective ('this is what I would like to happen') was easier to answer than the capability perspective ('this is what I am capable of') and the actual behaviour ('this is what actually happens') was

the hardest to answer, as conceptualised at the beginning of the study.

The four easiest attitude items (what teachers would like to happen) are, and these are very easy:

1. I like this child (item 1, difficulty -4.19 logits);
2. This child and I get along well together (item 2, difficulty -3.71 logits);
3. I listen to this child when he/she needs to talk about personal issues. (item 9, difficulty -2.82 logits);
4. I am available and will provide help when this child asks for it. (item 6, difficulty -2.66 logits).

Table 3

Item Wording and their Difficulties (Final Data Analysis)

Item no.	Item Wording	Response		
		Idealistic	Capability	Actual
Connectedness				
1	I like this child.	-4.19	NF	NF
2	This child and I get along well together.	-3.71	-0.27	+1.58
3	I am interested to learn about this child's personal thoughts, feelings and experiences.	-2.42	+0.03	+3.17
4	This child and I have a good, supportive relationship.	-2.18	+0.37	+2.46
Availability				
5	I am available for this child.	-2.01	+0.97	+3.06
6	I am available and will provide help when this child asks for it.	-2.66	+0.86	+2.20
7	If I am busy and this child needs help urgently, I will stop what I am doing and make myself available.	NF	+1.50	NF
Communication Skills				
8	I communicate effectively with this child.	NF	+0.74	+2.46
9	I listen to this child when he/she needs to talk about personal issues.	-2.82	+0.44	NF
10	I communicate with this child in positive and sensitive ways.	-2.52	+0.61	+2.33

Note on Table 3

1. Item difficulties are in logits.
2. NF indicates no fit

The four hardest attitude items (what teachers would like to happen) are, although these are still quite easy:

1. I am available for this child (item 5, difficulty -2.01 logits);

2. This child and I have a good, supportive relationship (item 4, difficulty -2.18 logits);
3. I am interested to learn about this child's personal thoughts, feelings and experiences (item 3, difficulty -2.42 logits);
4. I communicate with this child in positive and sensitive ways (item 10, difficulty -2.52 logits).

The four easiest capability items (what teachers believed themselves to be capable of) are, although these are moderately hard:

1. This child and I get along well together (item 2, difficulty -0.27);
2. I am interested to learn about this child's personal thoughts, feelings and experiences (item 3, difficulty +0.03);
3. This child and I have a good, supportive relationship (item 4, difficulty +0.37);
4. I listen to this child when he/she needs to talk about personal issues (item 9, difficulty +0.44).

The four hardest capability items (what teachers believed themselves to be capable of) are, and these are moderately hard:

1. If I am busy and this child needs help urgently, I will stop what I am doing and make myself available (item 7, difficulty +1.50);
2. I am available for this child (item 5, difficulty +0.97);
3. I am available and will provide help when this child asks for it (item 6, difficulty +0.86);
4. I communicate effectively with this child (item 8, difficulty +0.74).

The three easiest behaviour items (what actually does happen) are, although these are still hard:

1. This child and I get along well together (item 2, difficulty +1.58 logits);
2. I am available and will provide help when this child asks for it (item 6, difficulty +2.20 logits);
3. I communicate with this child in positive and sensitive ways (item 10, difficulty +2.33 logits).

The four hardest behaviour items (what actually does happen) are, and these are very hard:

1. I am interested to learn about this child's personal thoughts, feelings and experiences (item 3, difficulty +3.17);
2. I am available for this child (item 5, difficulty +3.06);
3. This child and I have a good, supportive relationship (item 4, difficulty +2.46);
4. I communicate effectively with this child (item 8, also with a difficulty of +2.46).

Persons

Each person's raw score has been converted to a teacher measure, expressed in logits. The teacher measures range from a lowest possible -4.54 logits to a maximum possible +7.74 logits. The lowest measures indicate a perception of a distant relationship while, conversely, the highest measures indicate a perception of a close relationship. The data on person measures is presented in Appendices D and E. Of the total 139 relationships reported on by the teacher participants, 18 teacher-student relationships were measured at the lower end of the scale, indicating those teachers perceived themselves to have a not-so-good relationship with their students. In particular, the eight lowest measures (the questionnaires numbered 123, 69, 113, 66, 70, 108, 107 and 122) indicate that these teachers need some help in improving their relationships with the particular students involved. Twenty-five teacher-student relationships were measured at the higher end of the scale which indicates those teachers perceived themselves to have a highly satisfactory relationship with their students.

Results

A Rasch measurement analysis was conducted with ten items, conceptually ordered from easy to hard, and answered in three perspectives ('Idealistic', 'Capability' and 'Actual') giving an effective scale of 30 items. The RUMM 2020 computer program (Andrich et al., 2005) was particularly helpful in conducting this analysis. It was found that six items did not fit the measurement model and were deleted from the scale. The remaining 24 items were analysed and it was concluded that a reliable linear, unidimensional scale of Teacher-Student Relationships was created using the teacher's view in which the measures were calibrated on the same scale as the item difficulties. The reliability of the scale data was shown by:

1. Good global and person item fit to the measurement model;

2. Good individual fit to the measurement model;
3. The three category responses being answered in a consistent and logical way;
4. A good Person Separation Index indicating that the person measures were well separated in comparison to the errors.
5. A good item-trait interaction indicating the measurement of a unidimensional trait;
6. Reasonable targeting of the items against the person measures, although some harder items need to be added for any future use of the scale.

Since the scale data were shown to be reliable, the following valid inferences were drawn from the scale.

1. All attitude relationships ('idealistic') were easier than the actual behaviour relationship, and capability was harder than idealistic, but easier than the actual behaviour.
2. Teachers found it very easy to give idealistic responses to like their students and to get along well with them.
3. Teachers found it moderately easy to say that idealistically, they would like to be available for the students.
4. Teachers found it moderately hard to say that they were capable of being interested in learning about their student's personal thoughts, feelings and experiences.
5. Teachers found it very hard to say that they could actually be interested in learning about their student's personal thoughts, feelings and experiences.

The distribution of Teacher-Student Relationship Measures makes it possible to describe a relationship as perceived by the teacher. The teachers with highest measures perceive that they have a highly satisfactory relationship with their students, and they do not need any help with their relationships with their students. Teachers with low measures perceive that they have a not-so-good relationship with their students. A closer look at the responses given by the teachers within the three aspects of Connectedness, Availability and Communication Skills indicates which aspects specifically are sound and which may need attention in order for the relationship to be improved or enhanced.

Conclusion and Implications

This study demonstrates that it is possible to create a linear measure of teacher-student relationships, based on a model involving three aspects, in order to better understand teachers' views of their relationships with students. A teacher's relationship with a student was defined in terms of 24 items forming a linear scale, created using a Rasch measurement model with data from 43 teachers who reported on a combined total of 139 teacher-student relationships. Teacher-student relationship measures were calibrated from low to high on the same scale as the item difficulties that were calibrated from easy to hard. The linear measure supported the theoretical model of teachers' relationships with students as involving the three aspects of Connectedness, Availability and Communication to determine teacher self-reported self-views in three perspectives (ideal, capability and actual). In addition the linear measure supported the structural model of teachers' relationships with students whereby attitudes influence intentions which in turn influence behaviour, and whereby attitudes are easier than intentions which in turn are easier than behaviour.

Implications from this research may be drawn for teachers and educational administrators, for students, for policy makers and for those involved in future research.

For Teachers and Educational Administrators

Teachers are being encouraged to take on a more active role in the promotion of children's emotional well-being, and to capitalise on opportunities to relate to students, particularly those at risk, in positive ways (Karen, 1998). It has been suggested that teacher-student relationships can be harnessed as a preventative intervention and that positive teacher-student relationships offer protective factors for students (Karen, 1998; Pianta, 1999). For these reasons it is necessary for teachers to be aware of the importance of developing and maintaining positive relationships with students, and to be better equipped to identify aspects of the teacher-student relationship that need to be strengthened. This study contributes information in the area of teacher-student relationships by providing a tool that assists in the monitoring of relationship development. The tool is easy to use, is not time consuming, and may be used to pinpoint areas of strength and need within individual relationships. In using

the tool, teachers may choose to periodically assess their relationships with all their students, or to select and assess a sample of students. In selecting a sample of students, teachers may take a trouble shooting approach and decide to find out information about specific relationships that are conflictual or deemed to be in trouble.

For Students

In recent years there has been a growing awareness of mental health disorders in Australia, and surveys have been used to determine the scope of the problem (Minas & Sawyer, 2002). The increased awareness of mental health concerns in Australia highlights the need for strategies to be developed to address the problem. The development of positive teacher-student relationships is seen as important for promoting mental health in students (Denham, 2001; Nadel & Muir, 2005). This study contributes towards the development of strategies to promote the mental well being of students through the identification of social and emotional aspects of the teacher-student relationship that may be actively strengthened in order to enhance the relationships that teachers and students share.

For Policy Makers

Recent school reform in the United States has added pressure to school stakeholders and policy makers by legislating detailed expectations for student performance and consequences for students, teachers, and schools who fail to meet those expectations (Klem & Connell, 2004). Similar legislative changes have been mooted here in Australia. Recent debate has covered such topics as the development of a National Curriculum to specifically raise literacy and numeracy standards across the country, and the introduction of merit pay or performance based salary for teachers (Department for Education Science and Training, 2007a, 2007b). Any changes that our policy makers make must guard against student achievement becoming the sole focus of attention. An educational system that determines its success by demonstrable evidence may direct the spotlight onto standards of academic achievement and direct attention away from social and emotional areas of development. As Hargreaves (2000) pointedly states:

If we are serious about standards, we must become serious about emotions too and look again at the organizational conditions and professional expectations that can increase emotional understanding between teachers and

their students as a basis for learning. By focussing only on cognitive standards themselves, and the rational processes to achieve them, we may, ironically, be reinforcing structures and professional expectations that undermine the very emotional understanding that is foundational to achieving and sustaining those standards. (p. 825)

In the push to raise teaching standards and levels of literacy and numeracy here in Australia, policy makers must not overlook the importance of the social and emotional involvement of teachers and students in the teaching and learning process. As Pianta (1999) suggests “No amount of focus on academics, no matter how strong or exclusive, will substantially change the fact that the substrate of classroom life is social and emotional” (p. 170). Goleman (1995) challenges schools to educate the whole child, “bringing together mind and heart in the classroom” (p. xiv). In helping to maintain a balanced approach to determining the success of our education system here in Australia it is vital that when policy makers debate National Curriculum, they must focus on strengthening academic learning alongside social and emotional development. The teacher-student relationship must be recognised as relevant to the success of instruction and seen as a powerful resource in the classroom. Not only must our policy makers be aware of the importance of teacher-student relationships with regard to student achievement and development, but they must also be committed to supporting teachers in harnessing this resource.

For Future Research

Whilst this study has shown it is possible to create a linear measure of teacher-student relationships to better understand teachers’ views of their relationships with students, more needs to be done in this area. Future studies could expand on the Teachers’ Relationships with Students Questionnaire: Teachers’ View and build in additional stem items. Furthermore, future studies could incorporate additional aspects that impact on the shared relationship between teachers and students. Examples include class size, length of contact between class teacher and the class, the timetabling of specialised staff, and the use of humour in the classroom. Given that a limitation to the present study concerns the small sample size, future studies would do well to draw on a larger number of participants from a broader range of schools.

To conclude, this study contributes new knowledge to the body of information about teachers' relationships with students in primary school classrooms in Perth, Western Australia. Further research in this area is needed to expand our understanding of how good teacher-student relationships can be recognised and promoted. To use the words of Pianta (1999), "Relationships with teachers are an essential part of the classroom experience for all children and a potential resource for improving developmental outcomes" (p. 21). The more that is known about how to identify and build positive teacher-student relationships, the better use can be made of this resource in our schools and in our communities.

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Appendix A

Teachers' Relationships with Students Questionnaire (Teacher's View)

The aim of this questionnaire is to find out your self-views regarding your relationship with a child in your class. Answer each question with one particular child in mind. One set of responses is labelled "idealistic", the next is "capability", and the third is "actual". These labels are to help you differentiate between what you would *idealistically* like to happen, what you are *capable* of making happen, and what *actually* happens. Please rate the 30 questionnaire items using the following response format.

Almost always (over 80% of the time)	record 4
Most of the time (50% to 80% of the time)	record 3
Some of the time (less than 50% of the time)	record 2
Not at all	record 1

Example Item 1

This child and I get along well together.

If you would like to get along well with child "A" almost always (over 80% of the time), record 4. If you think you are capable of getting along well with child "A" most of the time (50% to 80% of the time) record 3. If you think you actually only get along well with child "A" some of the time (less than 50% of the time) record 2. Your recorded responses would be as follows:

Item no.	Item wording	Idealistic (This is what I what would like to happen)	Capability (This is what I am capable of)	Actual (This is actually happens)
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Sub-group: Connectedness

1-3	I like this child	_____	_____	_____
4-6	This child and I get along well together	<u>4</u>	<u>3</u>	<u>2</u>

Please indicate if you are willing to participate in a follow-up discussion.

YES NO

If you responded "yes", please supply your name and contact number. All responses to the questionnaire will remain strictly confidential.

(print name)

(contact number)

(signature)

(date)

Thank you

Teachers' Relationships with Students Questionnaire (Teacher's View)

The following questionnaire is anonymous. Please don't put your name or any identification on it. Please read the consent and cover page.

Item no.	Item wording	Idealistic (This is what I would like to happen)	Capability (This is what I am capable of)	Actual (This is what actually happens)
Sub-group: Connectedness				
1-3	I like this child.	_____	_____	_____
4-6	This child and I get along well together.	_____	_____	_____
7-9	I am interested to learn about this child's personal thoughts, feelings and experiences.	_____	_____	_____
10-12	This child and I have a good, supportive relationship.	_____	_____	_____
Sub-group: Availability				
13-15	I am available for this child.	_____	_____	_____
16-18	I am available and will provide help when this child asks for it.	_____	_____	_____
19-21	If I am busy and this child needs help urgently, where possible, I will stop what I am doing and make myself available.	_____	_____	_____
Sub-group: Communication Skills				
22-24	I communicate effectively with this child.	_____	_____	_____
25-27	I listen to this child when he/she needs to talk about personal issues.	_____	_____	_____
28-30	I communicate with this child in positive and sensitive ways.	_____	_____	_____

Are there any comments that you would like to make about your relationships with your students?

Thank you for taking the time to answer this questionnaire.

Appendix B

Item Fit to the Measurement Model (Teacher Measure)

Item No.	Location	SE	Residual	df	Chi-square	Probability
Item 01	-4.19	0.82	-0.48	124.52	0.26	0.88
Item 04	-3.71	0.62	-0.43	124.52	0.30	0.86
Item 05	-0.27	0.22	-0.68	124.52	0.47	0.78
Item 06	1.58	0.18	-1.43	124.52	2.19	0.32
Item 07	-2.42	0.38	-0.72	125.46	1.15	0.55
Item 08	0.03	0.22	-0.23	124.52	1.70	0.41
Item 09	3.17	0.18	0.58	124.52	2.67	0.24
Item 10	-2.18	0.35	0.25	125.46	6.15	0.02
Item 11	0.37	0.21	-1.28	124.52	1.63	0.43
Item 12	2.46	0.17	-1.42	124.52	1.63	0.43
Item 13	-2.01	0.31	0.29	125.46	4.39	0.09
Item 14	0.97	0.21	-2.05	124.52	8.51	0.00
Item 15	3.06	0.18	0.26	124.52	3.59	0.14
Item 16	-2.66	0.36	-0.45	124.52	0.27	0.87
Item 17	0.86	0.20	-0.35	125.46	3.44	0.16
Item 18	2.20	0.18	1.76	124.52	3.20	0.18
Item 20	1.50	0.18	2.70	124.52	11.22	0.00
Item 23	0.74	0.20	1.44	125.46	3.39	0.16
Item 24	2.46	0.18	-1.22	124.52	0.41	0.81
Item 25	-2.82	0.50	-0.05	125.46	1.16	0.55
Item 26	0.44	0.21	-1.59	124.52	2.61	0.25
Item 28	-2.52	0.42	-0.88	125.46	1.01	0.59
Item 29	0.62	0.20	-0.63	124.52	4.53	0.08
Item 30	2.36	0.17	0.09	124.52	5.50	0.04

Notes:

1. Location is item difficulty in logits.
2. SE is Standard Error.
3. Residual is the difference between actual value and expected value, calculated according to the measurement model.
4. df is degrees of freedom.
5. 20 out of 24 items fit the measurement model with a probability greater than 0.05.
6. All values are given to two decimal places because the errors are to two decimal places.

Appendix C

Item Thresholds for Teacher Measure

	THRESHOLDS		
	Mean	1	2
Item 01	-4.19	-5.49	-2.88
Item 04	-3.71	-5.33	-2.09
Item 05	-0.27	-2.36	1.82
Item 06	1.58	0.29	2.87
Item 07	-2.43	-4.07	-0.78
Item 08	0.03	-3.02	3.08
Item 09	3.18	1.34	5.01
Item 10	-2.18	-3.91	-0.46
Item 11	0.37	-1.83	2.57
Item 12	2.46	1.18	3.74
Item 13	-2.01	-4.09	0.07
Item 14	0.97	-1.96	3.89
Item 15	3.06	1.06	5.07
Item 16	-2.66	-4.86	-0.47
Item 17	0.86	-1.48	3.19
Item 18	2.20	0.33	4.08
Item 20	1.50	-0.12	3.13
Item 23	0.74	-1.56	3.03
Item 24	2.46	0.80	4.11
Item 25	-2.82	-3.97	-1.68
Item 26	0.44	-2.06	2.94
Item 28	-2.52	-3.92	-1.12
Item 29	0.62	-1.48	2.71
Item 30	2.34	0.79	3.89

Notes:

1. Thresholds are points between adjacent response categories where the odds are 1:1 of answering the adjacent categories.
2. Mean thresholds are the item difficulties in logits.
3. All values are given to two decimal places because the errors are to two decimal places.
4. The thresholds for each item are ordered in line with the ordering of the response categories.

Appendix D

Teachers with Lowest Teacher-Student Relationship Measures (N=18)

ID	Raw Score	Teacher Measure	SE	Residual
123	2	-4.54	0.86	+1.92
069	11	-2.79	0.49	-0.98
113	19	-1.05	0.46	+0.39
066	21	-0.63	0.46	-1.79
070	23	-0.21	0.46	+0.17
108	23	-0.21	0.46	-0.83
107	24	-0.00	0.46	-0.06
122	24	-0.00	0.46	+2.02
080	25	+0.21	0.46	-2.58
088	26	+0.43	0.47	-0.97
104	26	+0.43	0.47	-0.27
076	26	+0.43	0.47	-2.49
084	27	+0.64	0.47	-2.26
106	27	+0.64	0.47	+0.18
090	28	+0.86	0.47	-0.91
102	28	+0.86	0.47	+3.05
018	28	+0.86	0.47	-0.09
079	28	+0.86	0.47	+0.53

Notes:

1. ID is teacher identification number.
2. Raw score is the total score on the 24 questionnaire items with three response categories 0, 1, 2 (minimum raw score is 0, maximum is 48).
3. Teacher measure is in logits (minimum linear measure is -4.54 logits, maximum is +7.74).
4. SE is standard error in logits.
5. Residual is the standardised difference between the actual score and the score estimated according to the measurement model.
6. All values are given to two decimal places because the errors are to two decimal places.
7. The teachers with the eight lowest measures (-4.54 logits to 0.00 logits) may need help in improving their relationships with the students.

Appendix E

Teachers with Highest Teacher-Student Relationship Measures (N=25)

ID	Raw Score	Teacher Measure	SE	Residual
118	46	+5.67	0.78	-0.21
115	46	+5.67	0.78	-0.21
116	46	+5.67	0.78	-0.21
117	46	+5.67	0.78	-0.21
057	46	+5.67	0.78	-0.31
125	46	+5.67	0.78	+0.04
025	46	+5.67	0.78	-0.03
027	46	+5.67	0.78	+0.21
029	46	+5.67	0.78	-0.16
011	47	+6.48	1.06	-0.20
136	47	+6.48	1.06	-0.09
030	47	+6.48	1.06	-0.20
135	47	+6.48	1.06	-0.21
134	47	+6.48	1.06	-0.09
010	47	+6.48	1.06	-0.06
012	47	+3.06	1.06	-0.06
013	47	+6.48	1.06	+0.04
014	47	+6.48	1.06	+0.04
028	47	+6.48	1.06	-0.20
100	48	+7.74	-	-
126	48	+7.74	-	-
093	48	+7.74	-	-
094	48	+7.74	-	-
095	48	+7.74	-	-
138	48	+7.74	-	-

Notes:

1. ID is teacher identification number.
2. Raw score is the total score on the 24 questionnaire items with three response categories 0, 1, 2 (minimum raw score is 0, maximum is 48).
3. Teacher measure is in logits (minimum linear measure is -4.54 logits, maximum is +7.74).
4. SE is standard error in logits (RUMM does not estimate for maximum scores).
5. Residual is the standardised difference between the actual score and the score estimated according to the measurement model (RUMM does not estimate for maximum scores).

6. All values are given to two decimal places because the errors are to two decimal places.
7. The Rasch measures for the top six teachers' questionnaires are estimated because they obtained the highest raw score possible (48).