POSITIVE TEACHER LANGUAGE: IMPROVING TEACHER-STUDENT RELATIONSHIPS AND ENGAGING LOW PROGRESS STUDENTS

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ABSTRACT

Teacher's language can help create a supportive and conducive classroom environment for learning. Positive Teacher Language (PTL) is one of ten practices in the Responsive Classroom approach. PTL emphasizes the careful and conscientious use of words, voice, tone, and pacing by the teacher when talking to students, and together with effective listening skills, will nurture students to develop self-discipline, build sense of belonging, and encourage students to learn and achieve in an engaging and active way. While research has shown that a strong teacher-student relationship is critical as a firm foundation for learning for low progress students, there are few research studies in the Singapore context that look at the how-to of building teacher-student relationships. The purpose of this research study was to evaluate the impact of a teacher professional development program on PTL to improve teacher-student relationships and to engage low progress students. We utilized a single-case research design, specifically, the multiple baseline across participants design. Twelve teachers and 18 students from two primary schools participated in the study. The outcome measures were direct classroom observation of students' classroom engagement and audio-recording of lessons to collect data on teachers' use of PTL. Teachers completed a questionnaire and were interviewed on their views on the acceptability and effectiveness of PTL. Teachers reported high acceptability of the PTL intervention, and they perceived that PTL is effective and beneficial for their students. However, the results revealed that the task of unlearning formed teacher talk habits and learning the new PTL presented a steep learning curve for the teachers. Performance feedback to the teachers led to greater use of PTL in the classroom. However, this study did not show conclusive findings with regards to the effect of PTL on students' classroom engagement and teacher-student relationships.

Keywords: Teacher language, Teacher-student relationship, Low progress students

INTRODUCTION

Low progress students are diverse in their learning and psychological needs (Wang et al., 2014). They exhibit a wide range of maladaptive behaviours such as negative affect and low motivation. Frequently, they are also low in self-esteem, academic self-efficacy, and self-concept (Baird & Scott, 2009; Wang et al., 2014). However, low progress students had reported that a key contributing factor to their failure was the lack of close teacher-student relationships, as shown by teacher apathy, low teacher expectations, and lack of warmth, care and support from the teachers (Lee, 1999; Wang et al., 2014). To these students, relationship matters in student engagement and achievement. There is also growing consensus that quality relationship between students and their teachers play a critical role in motivating and engaging students (Archambault et al., 2009; Wentzel & Miele, 2016).

Teachers need to create a safe and nurturing environment, and build strong relationships with students, as these are critical enablers for ensuring that students rediscover the joy of learning in school. Low progress students who perceive high emotional support from teachers are more likely to be engaged in class (Chong et al., 2010; Martin & Rimm-Kaufman, 2015). Strong teacher-student relationships have also been associated with increased academic achievement and reduced school dropout (Croninger & Lee, 2001; Murray & Malmgren, 2005). Thus, it is imperative that teachers have the skills to build teacher-student relationships, especially with their low progress students.

One notable example of an evidence-based classroom practice for enhancing teacher resilience and teacher- student relationship is the Responsive Classroom (RC) approach which was developed by the Northeast Foundation for Children (Northeast Foundation for Children, 2007, 2009). The RC approach is purported as an evidence-based intervention for the professional development of teachers in primary and secondary students. The RC approach emphasizes the creation of a caring, well-organised classroom environment and the importance of respectful social interaction that will enhance teachers' and students' social and relational skills and improve students' social and academic outcomes (Baroody et al., 2014; McTique & Rimm-Kaufman, 2011). Studies using the RC approach also reported that both students and teachers had benefited from this intervention with students improving in reading achievement, math tests, and prosocial skills, while teachers reporting greater teaching efficiency (e.g., more positive attitude towards students, and able to provide more emotional support to their students; Baroody et al., 2014; McTigue & Rimm-Kaufman, 2010; Ottmar et al., 2014).

PURPOSE OF STUDY

This study evaluated the impact of a teacher professional development program on Positive Teacher Language (PTL), a component of RC, to increase students' classroom engagement. PTL emphasizes the careful and conscientious use of words, voice, tone, and pacing by the teacher when talking to students, and together with effective listening skills, will nurture students to develop self-discipline, build sense of belonging, and encourage student to learn and achieve in an engaging and active way (Northeast Foundation for Children, 2007, 2009). The purposes of the study were to (1) examine the impact of the professional development program on teachers' use of the PTL intervention, (2) evaluate the effectiveness of the PTL intervention on students'

classroom engagement and teacher-student relationship, and (3) explore teachers' perception of the effectiveness and acceptability of the PTL intervention.

METHODOLOGY

Participants

We recruited 12 primary school teachers (i.e., six main teachers and six mentor teachers) from two primary schools (i.e., Alpha School and Beta School) to participate in the study. The main teachers taught in Primary 3 to Primary 5 classrooms where there were low progress students. Mentor teachers were experienced teachers within the school who were tasked to support the teacher participants during the study. Please see Table 1 for demographic information of the teachers.

Aside from teachers, we also recruited 18 low progress students (three students in each participating teachers' classroom) to participate in the study. Low progress students were defined as students who (a) have attended or are currently attending remedial programs, (b) are struggling academically as indicated by their class teachers, and/or (c) are taking at least one subject at the foundation level.

Table 1: Demographics of Participating Teachers and Classroom

Main Teacher	Age; Gender; Teaching Experience; Designation	Class Level; Subject; Class Size; Participating Students
Study 1 (Alpha School)		
Teacher Charles	47 years old; Male; 7 years; Teacher *Mentor teacher: 54 years old; Female; 28 years; Teacher*	P5; Mathematics; 38 students; 1 male and 2 female students
Teacher Wendy	38 years old; Female; 7 years; Teacher *Mentor teacher: 47 years old; Female; 24 years; Senior teacher (English)*	P4; English Language; 27 students; 2 male and 1 female students
Teacher Nadine	36 years old; Female; 13 years; Teacher *Mentor teacher: 54 years old; Female; 27 years; Head of department (English)*	P3; English Language; 29 students; 2 male and 1 female students
Study 2 (Beta School)		
Teacher Zane	38 years old; Male; 11 years; Teacher *Mentor teacher: 54 years old; Female; 30 years; Senior teacher (Math)*	P5; Science; 34 students; 2 male and 1 female students
Teacher Sally	34 years old; Female; 9 years; Teacher *Mentor teacher: 60 years old; Female; 35 years; Senior teacher (Science)*	P5; Science; 10 students; 1 male and 2 female students
Teacher Pam	34 years old; Female; 4 years; Teacher	P3; Science; 16 students; 3 male students

Mentor teacher: 44 years old; Female; 20 years; Senior teacher (Chinese language)

Research Design

For Study 1 in Alpha School, we utilized a multiple baseline across participants design (Kazdin, 2011), which consisted of a baseline phase, a PTL training phase, a mentor teacher check-in phase, a performance feedback phase, and a maintenance phase. For Study 2 in Beta School, the design consisted of a baseline phase, a PTL training phase, a performance feedback phase, and a maintenance phase. We removed the mentor check-in phase for Study 2 because the results from Study 1 showed that mentor check-in did not result in a large increase in the participating teachers' use of PTL.

Procedures

Baseline. During baseline, the teacher conducted class lessons as per usual. An observer gathered direct observational data in the classroom. Simultaneously during the direct observation data collection session, the observer audio-recorded the teacher talk for that lesson. Data collection procedure in the following intervention phases were the same as baseline procedure.

Positive Teacher Language training. After a stable trend in the baseline data across the teachers, the researchers trained the teachers and mentor teachers on the Positive Teacher Language intervention. In Study 1 (Alpha School), the teachers, including mentor teachers, were trained on the five components of PTL (i.e., *Envisioning Language*, *Reminding Language*, *Reinforcing Language*, *Redirecting Language* and *Open-Ended Questions*) over two separate days of 3-hour training per day.

In Study 2 (Beta School), the teachers were trained on three components of PTL (i.e., *Envisioning Language*, *Reminding Language* and *Reinforcing Language*) in three hours. The research team decided to focus on these three PTL components as the teachers in Study 1 did not use these components much and we wanted to examine whether reducing the number of components during the professional development training would allow the teachers in Study 2 to pick up PTL with greater ease.

Mentor teacher check-in. During this intervention phase, the mentor teacher had one-to-one weekly check-in sessions with the teacher. During the 10–15-minute check-in sessions, the mentor teacher discussed the implementation of PTL and problem-solved any issues the teacher encountered.

Performance feedback. When the teacher reached a stable trend with no further increase in their use of PTL, the second phase of intervention, the performance feedback phase, was initiated. Similar to the first intervention phase, the mentor teacher had a 10-15-minute weekly session with the teacher. The research team generated graphical feedback which was based on data collected on the teacher's use of PTL during direct observations. The mentor teacher then provided the teacher with this graphical performance feedback. The mentor teacher discussed the teacher's implementation of PTL and problem-solved any issues the teacher may encounter.

Maintenance. After the teachers reached a stable trend with no further gains in the use of PTL, maintenance effects were assessed at least 2-week post intervention phase. During maintenance phase, the mentor teachers did not meet the teachers for the check-in or performance feedback sessions.

Dependent Measures

Classroom observations. A trained observer collected data in the classroom two to three times a week. During each classroom observation, the observer collected data on student classroom engagement and teacher use of PTL for 30 minutes for Alpha School and 20 minutes for Beta School. The observer stood in an unobtrusive location within the classroom.

Student classroom engagement. Classroom engagement of three low progress students within the classroom was operationally defined and then were collected using a 10-s momentary time sampling method. Using this recording method, for example in a class with three target students, the observer observed Student A for 10 s, then Student B during the next interval, followed by Student C in the next interval, and then returning to Student A for the following interval. Student classroom engagement was determined by whether the student was engaged (e.g., raising up hand, eyes on teacher, answering questions, discussing class work with peers, reading assigned materials), or not engaged (e.g., looking out the window, reading unassigned materials, not following instructions).

Teacher use of Positive Teacher Language. To reduce the number of observers in the classroom, the observer simultaneously audio-recorded teacher talk and collected data for student classroom engagement. After the classroom observation, the observer listened to and transcribed the audio-recording, and then coded the transcript on the teacher's use of PTL. A coding and definitions guideline was developed to guide coding of the transcribed lesson. The coded transcript was then vetted by the research team for consensus, any discrepancy was discussed and final decision on the coding was then agreed upon.

Observer Training and Reliability. The researchers trained two observers to collect classroom observation data. Inter-observer agreement (IOA) checks were assessed on at least 30% of the total observations and were collected by the two trained independent observers. For Study 1, the IOA for the student classroom engagement in the classrooms of Teachers Charles, Wendy, and Nadine were 83.3%, 84.3%, and 85.1% respectively. For Study 2, the IOA for the student classroom engagement in the classrooms of Teachers Zane, Sally, and Pam were 87.8%, 87.0% and 86.0% respectively.

Pre- and Post-Tests Measures. In addition to the classroom observation measures, these measures were also administered to the participants: (a) *Network of Relationship Inventory* (NRI; Furman & Buhrmester, 1985), a student-rated teacher-student relationship measures; and (b) *Teacher-Student Relationship Inventory* (TSRI; Ang, 2005), a teacher-rated teacher-student relationship. These were administered to the participants twice in the study, the pre-test at baseline, and the post-test at the end of the data collection period. The post-test measures were done three months after the pre-test measures.

Treatment Acceptability. Teachers' acceptability of the PTL intervention was assessed at the conclusion of the study using a modified Intervention Rating Profile 15 (IRP-15; Martens et al., 1985). Both teachers and mentor teachers completed the questionnaire. We also interviewed all

the teachers on their perception of and experience using PTL. The teachers were interviewed one-on-one, and the interviews were audio-recorded. The length of interviews ranged from 21 to 55 minutes. The interviews were then transcribed verbatim and analysed for general themes.

Data Analysis. Student classroom engagement and teacher's use of PTL were analyzed through visual analysis. Visual inspection of the results involved simultaneous graphing of all experimental phases for the teachers and students. Due to the small sample size of student participants, the pre- and post-test measures (i.e., NRI, TSRI) were analyzed descriptively. The IRP-15 data were averaged across the teachers and mentor teachers and analyzed descriptively.

RESULTS AND FINDING

Impact of Mentor Check-in and Performance Feedback on Teachers' Use of PTL

Figure 1 shows the frequency of PTL use by Teachers Charles, Wendy, and Nadine (Alpha School) and the percentage of student classroom engagement of the selected students in the teachers' respective classrooms. All three teachers showed low and stable levels of PTL use at baseline. After the PTL training, during the mentor check-in phase, Teacher Charles's use of PTL did not differ from the baseline phase, whereas Teachers Wendy and Nadine showed an immediate increase in their use of PTL. The implementation of performance feedback led to an immediate small increase in Teacher Charles's use of PTL, however his overall use of PTL remained similar to his baseline level. Teacher Wendy did not respond to the performance feedback immediately and then she showed a large increase in the third session. Her use of PTL remained high for the rest of the intervention sessions. Teacher Nadine too showed a clear increase with the implementation of performance feedback. However, her use of PTL showed a decline towards the end of the phase. Teachers Charles and Wendy continued to use PTL when maintenance data were collected, but Teacher Nadine did not use PTL during the maintenance session.

Figure 1: Frequency of PTL use by Teachers Charles, Wendy, and Nadine (Alpha School) and the percentage of student classroom engagement of the selected students in the teachers' respective classrooms.
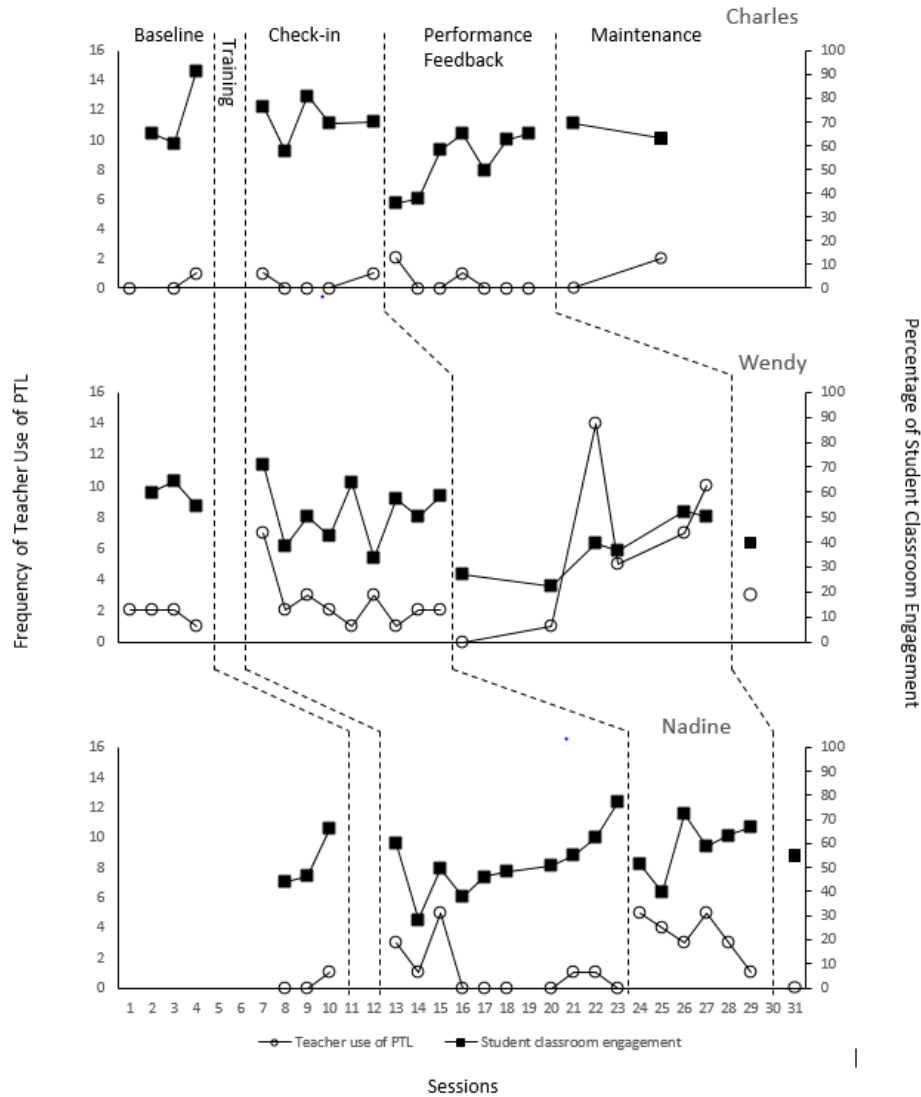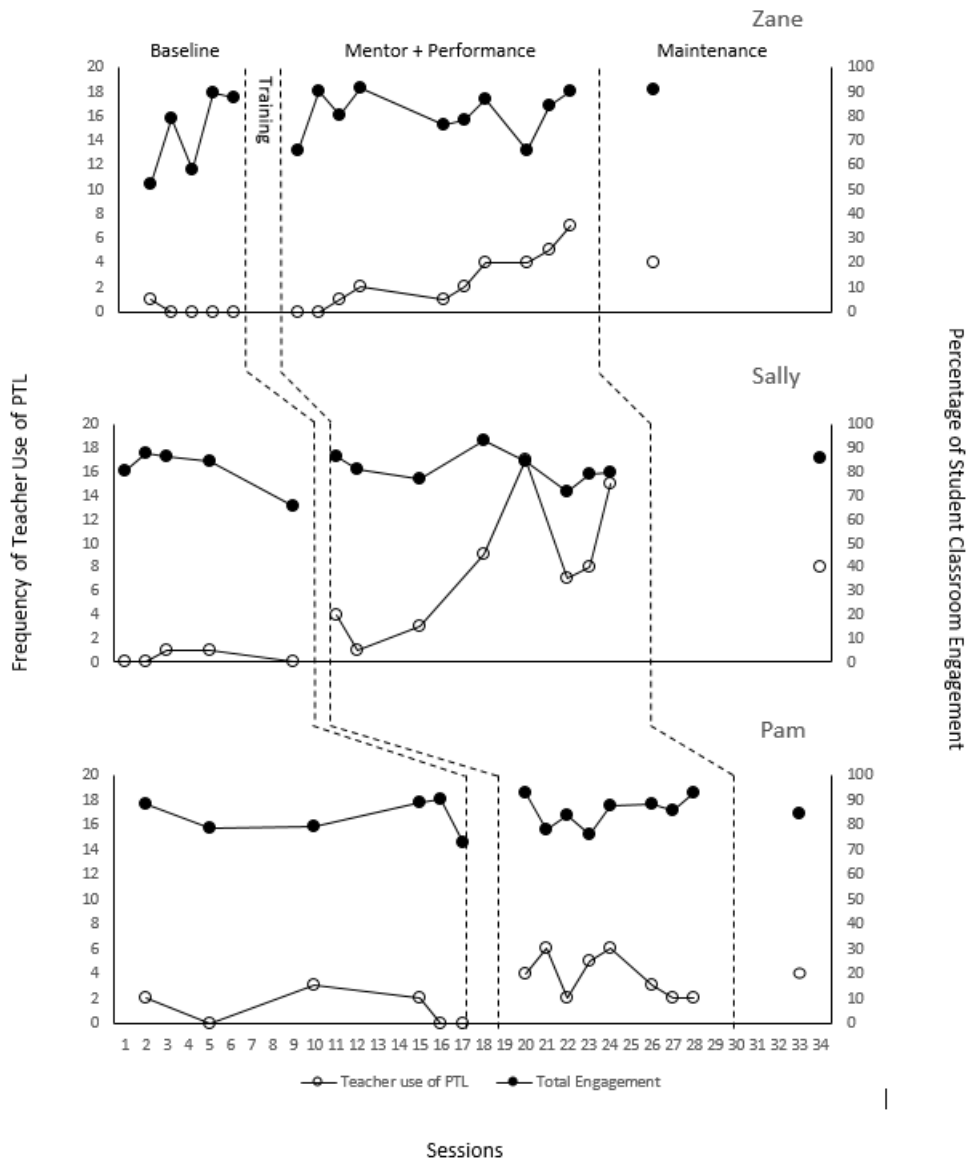

Figure 2 shows the frequency of PTL use by Teachers Zane, Sally, and Pam (Beta School) and the percentage of student classroom engagement of the selected students in the teachers' respective classrooms. All three teachers showed low and stable levels of PTL use at baseline. After PTL training, with performance feedback, Teacher Zane showed a slow increasing trend while Teacher Sally showed an immediate increase and stayed at a high level. Teacher Pam showed a small increase in the use of PTL statements. All three teachers continued to use PTL when maintenance data were collected.

Figure 2: Frequency of PTL use by Teachers Zane, Sally, and Pam (Beta School) and the percentage of student classroom engagement of the selected students in the teachers' respective classrooms.

Effect of PTL on Students

Classroom Engagement. Figures 1 and 2 show the percentage of student classroom engagement of the selected students in the teachers' respective classrooms in Alpha School and Beta School. The students' classroom engagement data were relatively stable across the different phases and there were no distinct differences in students' classroom engagement during the intervention phase as compared to the baseline phase for all six classrooms. We did not see a functional relationship between the teacher's use of PTL and the students' classroom engagement.

Teacher-Student Relationship. In terms of teacher-student relationship (see Table 2), the post-test scores showed positive improvement compared to the pre-test scores for both the student-

rated NRI and the teacher-rated TSRI. The student-rated NRI scores for the subscales of Warmth and Closeness were higher during post-test compared to pre-test. The teacher-rated TSRI subscale score for the subscales of Satisfaction and Instrumental Help showed an increase during post-test, while the subscale of Conflict showed a decrease during post-test which meant that there was reduced conflict at post-test. However, due to the small sample size and the short duration of the study, coupled with the lack of a control group, we were not able to conduct statistical analyses to test for significance for all the pre- and post-test measures.

Table 2: Pre-test and Post-test Teacher-Student Relationship Questionnaires Scores.

Teacher Student Relationship Questionnaires	Pre-Test M	Post-Test M
Network of Relationship Inventory (NRI) subscales*		
Warmth	13.8	16.4
Closeness	10.3	12.6
Conflict	4.8	4.9
Teacher-Student Relationship Inventory (TSRI) subscales#		
Satisfaction	17.2	20.3
Instrumental Help	9.1	14.8
Conflict	7.6	5.9

*Note. * NRI is a student-rated questionnaire. # TSRI is a teacher-rated questionnaire.*

Treatment Acceptability

The teachers in both Alpha School and Beta School rated the PTL intervention highly with the mean ratings for most of the items were above 5.00. The item with the lowest score at 4.50 - 4.80 was "Item 5: The students' classroom engagement problem is severe enough to warrant use of this intervention". The item with the highest score at 5.33 - 5.67 was "Item 15: Overall, this intervention would be beneficial for the students". The interview data supported the findings from the IRP questionnaire. The teachers unanimously agreed that the PTL intervention was beneficial for the students.

DISCUSSIONS

Research has shown that a strong teacher-student relationship enables low progress students to thrive in school (Chong et al., 2010; Martin & Rimm-Kaufman, 2015), however there are few research studies in the Singapore context that look into helping teachers build strong teacher-student relationship with their students. This research study contributed towards meeting the professional development needs of teachers who support low progress learners by introducing and investigating the use of PTL in two primary schools.

All six teachers in this study demonstrated an increase in their use of PTL but to different levels. Teacher professional development modules are often intense and packed with a lot of information to be disseminated in a short duration of time in order to make better use of the time given for teachers' professional development. This may not be an appropriate mode of training for all topics, and it may lead to cognitive overload on the part of the teachers. The training in this study is relatively short-term, however the performance feedback that the teachers received provided them with follow-up support in the form graphical feedback on their use of PTL as well

as providing them with examples of how to rephrase non-example statements that they had used in class to examples of PTL statements. This study provided insights into the structuring of an effective in-service professional development programme, as well as the process of change after the initial training. The close monitoring of the teachers' use of PTL after training reviewed that further support was needed to see a change in teachers' practice.

One important aspect of evaluating the effectiveness of an intervention implemented in schools is to assess the social validity of the intervention in terms of stakeholders' acceptability of the intervention procedures. The teachers felt that the PTL intervention was effective in improving students' classroom engagement. They were agreeable to the procedures used in the intervention and acknowledged that the procedures used were consistent with those that they have used in classroom settings. This is an indication of the potential of this intervention being adopted more readily by teachers, and this could also indicate the sustainability of this intervention in schools.

Limitations and Future Research

Some limitations warrant consideration when evaluating and interpreting the current study. The first limitation relates to the small sample size of the study which limits the generalizability of the findings. Future research should explore the application of PTL across more teachers in different schools, teaching different subjects and different grade levels. Second, the duration of the intervention phase in this study was relatively short. We collected only one to two short-term maintenance data for each teacher. The lack of long-term maintenance is a limitation of this study. Future research should also examine the impact of PTL on not just student engagement and TSR, but on other important aspects such as the quality of teacher-student interactions in class and students' academic achievement.

Conclusion

The purpose of this research study was to evaluate the impact of a teacher professional development programme on PTL to improve teacher-student relationships and to engage low progress students. The majority of the teachers showed a clear increase in their use of PTL during the intervention phases, however their use of PTL were not consistently high. The provision of performance feedback to teachers during professional development courses is helpful for them to increase and improve their use of the learned strategy. This study did not result in conclusive findings with regards to the effect of PTL on student classroom engagement and teacher-student relationship. Further research is warranted to study the impact of PTL on students.

ACKNOWLEDGEMENTS

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