



# Teacher Views of Relationships between their Teaching Practices and Beliefs, the School Context, and Student Achievement

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## Abstract

Teachers hold many beliefs, shaped by their educational knowledge, experiences, and cultural, social, historical, and political environments. These teacher beliefs, together with teacher characteristics and school context factors can influence cognitive processes, expectations, instructional decisions, and practices which could affect learning experiences, student engagement, and achievement. Numerous studies have explored these factors, however, often separately or with only one or two others. This paper explores primary school teachers' self-reported perceptions on the relationships between teacher beliefs (including teacher class level expectations, self-efficacy, motivation, goal orientation, work engagement, passion for teaching, relatedness to students), teacher characteristics (including gender, ethnicity, teacher experience), and school context factors (including decile and year level taught), and the impact of these on student achievement and teachers' instructional practices. Associations were found between teaching self-efficacy and all the other factors explored; work engagement and teachers' years of teaching experience, gender, and school decile; and years of teaching experience and student achievement. Further, relatedness to students, passion for teaching, and teaching self-efficacy was found to be associated with teachers' instructional practices.

**Keywords** Teacher beliefs · Teacher characteristics · School context factors · Student achievement · Teachers instructional practices

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## Introduction

Teachers hold many beliefs such as pedagogical, epistemological, moral, ethical, and societal beliefs, beliefs about their students, and beliefs about themselves. According to Levin (2017), these beliefs are often shaped by their educational knowledge, experiences, and the cultural, social, historical, and political environments they find themselves in. The beliefs and characteristics of teachers, as well as school context factors in the environments they find themselves in, can influence their behaviours (de Kraker-Pauw et al., 2016; Khader, 2012); their cognitive processes, instructional decisions, and practices (Rubie-Davies et al., 2012; Woolfolk Hoy et al., 2009); and their expectations of their students (de Kraker-Pauw et al., 2016; McDonald et al., 2016). In addition to the influence of teacher beliefs, it has also been shown that teacher factors such as teacher gender and years of experience (Namrata, 2011; Whitley, 2010), and school context factors such as socio-economic status (Namrata, 2011; Solomon et al., 1996), influence how teachers think and act, the decisions they make, and the learning activities and experiences they prepare for students. It can therefore be deduced that these same factors may influence student engagement with learning and student achievement (de Kraker-Pauw et al., 2016; Rubie-Davies et al., 2012; Whitley, 2010).

Although teacher beliefs, teacher characteristics, and school context factors have been the subject of research for the past four to five decades (Gill & Fives, 2017), and many studies have been conducted on these factors during this time, they have most often been considered separately from each other or with only one or two other beliefs, characteristics, and/or school context factors. Prior to the 1970s, educational research was largely focused on the content students should be taught, and the practical and theoretical knowledge teachers needed. It neglected to consider the role, perspectives, and actions of the teacher in influencing opportunities for student learning (Levin, 2017; Skott, 2017). For example, empirical research conducted by Coleman et al. (1966) showed that whether or not students did well at school was purely down to heredity and that schools and teachers had little to no influence on outcomes. However, during the 1970s, largely inspired by the seminal work of Jackson (1968), *Life in classrooms*, this belief about the ineffectiveness of teachers was challenged by social science researchers and shifted to focus on teachers' influence on student achievement in the classroom.

The seminal work of Rosenthal and his Pygmalion study (Rosenthal & Jacobson, 1968) was a further trigger for investigating whether teachers actually made a difference to students' learning or not. Teachers' reactions to fictitious information presented to them by Rosenthal and Jacobson (1968) about some students, suggested that higher teacher expectations might influence higher student achievement. It was research like Rosenthal and Jacobson's that provoked questions around whether or not teachers did or could make a difference to student learning and inspired researchers to explore whether teachers treated students they believed to be more talented differently than they taught students they believed to be less talented.

One such researcher was Tom Good, who conducted an empirical study with four grade-one teachers and their students in 1968. He found that teachers did

indeed interact differently with students they believed to be more talented, for example, by providing more praise and giving them more opportunities to speak than their lower achieving peers (Good, 1970). This study was replicated and expanded on by Brophy and Good (1970) and results confirmed Good's previous results. In their book, *Teachers make a difference*, Good et al. (1975) emphasised that teachers do have an effect on student outcomes and suggested ways to improve educational practices.

A proliferation of studies followed into the ways teachers thought and acted in their teaching, thereby highlighting the importance of teacher beliefs for teaching and learning (Skott, 2017). One such ground-breaking study was that of Rubie-Davies et al. (2015). In this study, the researchers implemented an intervention designed to teach teachers the practices associated with those of high expectation teachers, thereby providing experimental evidence that the beliefs and actions of teachers did impact students' achievement (Rubie-Davies et al., 2015). Today much research supports the view that some teachers do treat students they report as high or low achievers differently. However, much research shows that many teachers do not and it should be noted that some teachers, but not all, tend to treat students believed to be higher achievers more favourably than they treat other students.

Studies into teachers' self-efficacy for teaching followed (e.g., Dembo & Gibson, 1985; Pajares, 1992; Tschannen-Moran et al., 1998). Teacher self-efficacy beliefs can be defined as the beliefs teachers hold about their capability to achieve what they set out to achieve and their aptitude to teach students with different needs and abilities (Tschannen-Moran & Woolfolk Hoy, 2001; Tschannen-Moran et al., 1998). Teacher self-efficacy also refers to the beliefs teachers have that they can affect student learning (Dembo & Gibson, 1985), and their beliefs about their ability to engage students in learning in order to generate desired outcomes (Pajares, 1992; Tschannen-Moran & Woolfolk Hoy, 2007).

Much research has been conducted into teachers' self-efficacy in student engagement, instructional strategies, and classroom management. For example, teachers with a high sense of efficacy have been shown to be confident in their ability to positively influence student engagement (van Uden et al., 2013). Teachers' self-efficacy beliefs also influence their instructional strategies with efficacious teachers tending to implement more challenging and student-directed, group-based, and cooperative instructional practices and activities (Caprara et al., 2006; Tschannen-Moran et al., 1998). Teacher efficacy in classroom management, defined by Brouwers and Tomic (1999) as the level of control, structure, and organisation in the classroom, has been shown to result in more efficient organisation of the classroom and positive student behaviours.

The current study built on a small study conducted by Rubie-Davies and her colleagues in 2012 which explored the interrelations between teacher beliefs (teacher expectations for reading, teacher self-efficacy, and teacher goal orientation), teacher characteristics (gender and teaching experience), and school contextual variables (socioeconomic level of school and the year level teachers taught. It presents teachers' perceptions of the relationships between a wider variety of teacher beliefs (including teacher class level expectations, self-efficacy, motivation, goal orientation, work engagement, passion, relatedness to students), teacher characteristics

(including gender, ethnicity, teacher experience), and school context factors (including decile and year level taught), as well as the impact of these on student achievement and teachers' instructional practices.

## Method

An interpretive, qualitative methodology was used to elicit teachers' perceptions of what they believed the relations between various teacher beliefs variables, teacher characteristics, and school context factors would be and why, and how these were associated with student achievement and teachers' academically supportive instructional practices. Ethical approval (Ref: 2010/582) was obtained from the University of Auckland Human Participants Ethics Committee (UAHPEC).

## Participants

In the Participant Information Sheet that was sent to 2597 teachers from the greater Auckland, New Zealand area for a different study (a quantitative study utilising an online survey) in this research project, potential participants were also asked whether they would be willing to participate in a focus group, and 131 teachers volunteered. Purposive sampling was employed for the purpose of getting teachers from schools in similar geographic areas of Auckland, New Zealand (North, South, East, West, and Central) together in each of five focus groups, and for the participants to represent a mix of genders, year levels, and school deciles overall. A total of 35 teachers was approached and consented to participate. On the actual days of the focus groups, however, only 20 teachers in total participated in five focus groups. Participants in the study therefore comprised 20 elementary teachers from across Auckland. The description of the participant sample can be seen in Table 1 below:

## Data Collection and Analysis

Data were collected from five focus group interviews, whereby focus group participants were asked to respond to questions and statements to gather their ideas and opinions on the relations between teacher beliefs, school context factors, teacher

**Table 1** Description of N=20 Participant Sample

Area (of Auckland)	Decile	Level	Female/Male
North = 4 (20%)	High (8–10) = 7 (35%)	Junior (NE-Y3) = 7 (35%)	F = 16 (80%)
Central = 6 (30%)	Mid (4–7) = 8 (40%)	Middle (Y4-Y6) = 6 (30%)	M = 4 (20%)
West = 4 (20%)	Low (1–3) = 5 (25%)	Senior (Y7-Y8) = 6 (30%)	
East = 3 (15%)		Associate Principal: 1(5%)	
South = 3 (15%)			

characteristics, student achievement, and teachers' academically supportive instructional practices. A full list of the focus questions can be found in Online Appendix A.

A qualitative approach, employing small q thematic analysis, as outlined by Braun and Clarke (2021), was used to analyse and interpret the data for the current study. Small q qualitative research sits within a positivistic paradigm. As explained by Braun and Clarke (2021), small q research uses qualitative tools and techniques often in combination with quantitative research values such as accuracy, reliability, and researcher subjectivity. The researcher's goal in using small q research was to get as close to the reality of the participants' experiences as possible.

## **Findings and Discussion**

Due to the large number of interrelations investigated, it is not possible to present all the results in this paper. However, three key themes, evident from the data, will be presented: Interrelations between teachers' self-efficacy and other teacher beliefs, characteristics, and school context factors; Links to student achievement; Links to teachers' academically supportive instructional practices.

### **Interrelations between Teacher Self-Efficacy for Teaching, Other Teacher Beliefs, Characteristics, and School Context Factors**

Based on the large number of responses by the teacher participants, and the fact that all participants mentioned alluded to it, the findings in this study indicated that teachers perceived teaching self-efficacy to be the most important teacher belief related to all other teacher beliefs, teacher characteristics, and school context factors explored. Participant responses are presented and discussed here under three subheadings: Teacher self-efficacy for teaching and other teacher beliefs; Teacher self-efficacy for teaching and teacher characteristics; Teacher self-efficacy for teaching and school context factors.

#### **Teacher Self-Efficacy for Teaching and Other Teacher Beliefs**

Teachers were of the opinion that teacher self-efficacy for teaching was interrelated with teacher-student relatedness, expectations, goal orientation, work engagement, and motivation to teach.

#### **Teacher Self-efficacy and Teacher-Student Relatedness**

Teachers in the study identified an association between teachers' self-efficacy for teaching and teacher-student relatedness, stressing that a high sense of teacher self-efficacy was most associated with strong teacher-student relations, vital for teaching and learning. Teacher-student relatedness can be described as the intersubjectivity and joint meaning making between teachers and students that is nurtured through discourse, interaction, and collaboration (Talay-Ongan et al., 2002). Given the many

roles teachers play in the education of their students, teachers consider their relatedness to, and caring of, students as a key component of quality teacher-student relations (Furrer & Skinner, 2003; Wentzel, 1997).

Teacher participants expressed the importance of having sound knowledge of students and having good relationships with them in order to confidently engage students in their learning. This was aptly encapsulated by one teacher who said, “Relationship is the key to everything. If you don’t have a relationship, you don’t have a learning environment basically, or you have a learning environment that perhaps isn’t as strong as you want” (FG2). Another teacher added, “A lot of it comes back to really knowing students and their families. The more you know them the more you can engage them and know their interests” (FG5). Yet another teacher claimed, “You should establish an amazing rapport with your kids... have open communication, be prepared to listen if they’ve got something to say, not fob them off. They need to know that you care” (FG3).

The fact that teachers unanimously perceived having knowledge of students and building relations with them as being related to teaching self-efficacy, was unsurprising. The New Zealand Curriculum document (2007) clearly outlines the importance of teachers building knowledge of their learners to encourage participation in the learning process, to help them make links to prior learning, to recognise their competencies and strengths, and help them work towards their aspirations. This requires teachers having strong teaching self-efficacy, building sound relations with their students, and demonstrating enthusiasm for their teaching.

Tschannen-Moran et al. (1998) similarly stressed the link between teachers’ feelings of competence and self-efficacy, their relations with students, and effective teaching and learning, a view supported by Hamre et al. (2008) who found that relations between teachers and students were indeed related to teachers’ sense of efficacy. In other studies, however, low teaching self-efficacy was shown to lead to negative teacher-student relations (Wood & Olivier, 2008). Given that positive teacher-student relations have been associated with both positive social emotional outcomes (Williford et al., 2013) as well as positive academic outcomes (Niebuhr & Niebuhr, 1999) for students, it seems crucial that schools put processes in place to boost the self-efficacy of teachers to engage students in their learning, thereby also building solid relations with them.

### **Teacher Self-Efficacy and Teacher Expectations**

Teachers in the study referred to the relation between teachers’ self-efficacy for teaching and teacher expectations. Teacher expectations can be defined as the pre-determined beliefs teachers have, or the inferences and judgements they make about what students can achieve and how much progress they might make within a specific period of time (Good, 1987; Rubie-Davies, 2007).

Teachers in the study emphasised the importance of having expectations that were also linked to the school values and expectations. As one teacher explained, “In our school there is a collective culture of having high expectations for our students even though we are a low decile school” (FG4). Another teacher alluded to the

fact that teachers' self-efficacy and their expectations went hand in hand saying, "If a teacher has high self-efficacy they will have high expectations for their students. They will give them activities to challenge them and expect and support them to be successful" (FG1).

The practices of teachers with high efficacy are often associated with the teacher's ability to engage students in learning, provide a variety of instructional strategies to enhance learning, and manage student behaviour in the classroom (McDonald et al., 2016; Rubie-Davies et al., 2012; Tschannen-Moran & Woolfolk Hoy, 2007). Therefore, given that the practices of high expectation teachers seem to closely match the actions and behaviours of teachers with high self-efficacy, it would be expected that teacher expectations and teacher self-efficacy would be related (McDonald et al., 2016; Rubie-Davies et al., 2012). Even in early literature concerning teacher self-efficacy and/or expectations, researchers postulated a correlation between these two teacher beliefs (Dembo & Gibson, 1985; Good, 1981) although this was not measured at the time.

### **Teacher Self-Efficacy and Goal Orientation**

Teachers in the study also identified an association between teachers' self-efficacy for teaching and their goal orientation. Teacher goal orientation explains the different ways teachers approach or engage in educational situations. These may be to nurture ability or competence, referred to as mastery goal orientation or to prove ability or competence, referred to as performance goal orientation (Ames, 1992; Midgley, 2002).

With respect to the relations between teachers' self-efficacy and goal orientation, the opinion was expressed that most teachers ultimately aspired to be mastery goal-oriented, but that assessments and accountability pressures led to them focusing more on student performance and achievement. This opinion was explained by one teacher who stated, "As much as you might be strong in believing that you should be mastery goal-orientated, you are actually fighting a battle that isn't yours to be fought and have no choice but to at times focus on performance" (FG2).

This finding is consistent with previous research in which teacher efficacy was found to be positively correlated with mastery goal orientation but negatively correlated with performance goal orientation (Rubie-Davies et al., 2012). The ways teachers organise their classrooms, interact with, and motivate students are often reflective of their goal orientations (Rubie-Davies et al., 2012). For example, teachers with high efficacy for engaging students were found to be more likely to have mastery goal beliefs, and teachers with low efficacy for instructional strategies were more likely to be performance goal oriented (Rubie-Davies et al., 2012).

### **Teacher Self-Efficacy and Work Engagement and Motivation to Teach**

Teachers in the current study also perceived relations to exist between teachers' self-efficacy to teach and their work engagement and motivation to teach. Work engagement, as defined by Schaufeli et al. (2006), is a "positive, fulfilling, work-related

state of mind that is characterised by vigour, dedication, and absorption” (p. 702) whereas the energy and drive people have to acquire new knowledge, work effectively, and reach their potential, and the actions and behaviours that enable them to achieve this, can be explained as motivation (Martin, 2009).

The teacher participants suggested that teachers who held higher teaching self-efficacy would be more engaged in their work and would be highly motivated to teach. They were the teachers who “wouldn’t give up. They would just keep trying something different, something new until that child became more engaged, more motivated” (FG2).

Other studies have yielded similar results where increased teaching self-efficacy has been found to positively increase teachers’ work engagement (e.g., Klassen & Chiu, 2010), and motivation to teach (e.g., Patrick, 2016). Teachers further believed that those with a higher sense of teaching self-efficacy were more prepared to take risks and possibly even fail, deeming failure as an opportunity to enhance teaching and learning rather than as something negative. This latter view suggests teachers need to feel safe taking risks in their teaching, something schools need to facilitate and enable.

## Summary

Teachers in the current study were therefore of the opinion that teachers who exhibited greater dedication, vigour, and enthusiasm for their work (work engagement), and more understanding, helpful, and friendly behaviours (teacher-student relatedness) such as listening to students with interest, being patient, being friendly and considerate, and inspiring confidence and trust in their students (Wubbels & Levy, 1993), were more likely to have the higher teaching self-efficacy. Such highly efficacious teachers would also hold higher expectations for their students and present a choice of exciting activities to challenge them. They would often exhibit mastery goal-orientation focused on learning rather than performance, and exude energy and drive to reach their full potential as a teacher (motivation).

## Teacher Self-efficacy for Teaching and Teacher Characteristics

Teachers in the current study expressed the opinion that teachers’ self-efficacy were related to their years of experience and gender. However, they did not believe that teachers’ self-efficacy was related to their ethnicity, stating that good teachers are good teachers regardless of ethnicity.

## Teacher Self-Efficacy and Years of Teaching Experience

Increased years of teaching experience was a teacher characteristic perceived to positively impact teachers’ self-efficacy in student engagement, classroom management, and instructional strategies. The general consensus was that the more years of experience a teacher had, the better their self-efficacy to manage the class because less experienced teachers had to contend with so many other matters at the beginning of



their careers, of which classroom management was only one. This point was illustrated by a teacher who said, “Beginning teachers struggle [to manage students] because of their lack of experience and there is so much stuff coming at them” (FG3).

This finding was supported by several other studies (e.g., Fives & Buehl, 2010; Klassen & Chui, 2010) which similarly found that teachers with more years of teaching experience demonstrated greater self-efficacy to manage the classroom. This finding perhaps suggests that less experienced teachers need support and mentoring from more experienced teachers at the beginning of their teaching careers with managing the classroom.

Similarly, teachers perceived teachers’ years of experience to be linked to their self-efficacy to engage students in their learning and their self-efficacy in instructional strategies. Teachers expressed the view that, “You [teachers] do need a few years under your belt to feel comfortable that you are teaching effectively to engage students in their learning and to advocate for students” (FG2). Another teacher was of the opinion that more experienced teachers had the ability to focus on the instructional strategies and activities that matter and could let go of the things that were not important in their teaching, more so than less experienced teachers. A teacher from FG3 agreed, adding that teachers also “have had time to examine their practice and engage in professional development over the years thereby building their teaching self-efficacy” (FG3).

These findings, aligned with findings from other researchers (Kim & Burić, 2019; Rubie-Davies et al., 2012), confirmed that the more experienced teachers were, the higher their teaching self-efficacy was. As explained by Zee and Koomen (2016), teachers with more years of experience are probably more aware of and sensitive to the signals students send out and therefore are more efficacious in the way they provide for their needs and expectations.

### **Teacher Self-Efficacy and Teacher Gender**

With respect to teacher gender, teachers in the study did not believe being a male or female teacher was in any way associated with teachers’ self-efficacy in engaging students or their self-efficacy in instructional strategies as explained by this teacher who claimed, “I think it comes down to the teacher’s personal strengths. It doesn’t hinge on gender because in some areas it’s easier for male teachers to engage students and in others female teachers” (FG5). They did, however, believe relations existed between teacher gender and teachers’ self-efficacy in classroom management that favoured male teachers. There was a consensus that male teachers had a more straightforward approach to classroom management, demonstrating more authority than female teachers who were generally empathetic and nurturing in their management approach. One male teacher explained, “As a male, classroom management is very straightforward ... I spell things out 100%” (FG2), and a female teacher added, “Females have a tendency to go on and on and if you are dealing with boys, they just want to get over it. I think firm and fair is something that a lot of them do respect” (FG2).

These findings contrasted with findings in other studies (e.g., Greenwood et al., 1990; Rubie-Davies et al., 2012) in which female teachers were found to be more self-efficacious in all three aspects of teacher self-efficacy for teaching—student engagement, classroom management, and instructional practices. However, they did align with Klassen and Chui’s (2010) findings that found male teachers to have greater self-efficacy in classroom management.

### **Teacher Self-Efficacy and Teacher Ethnicity**

None of the teachers in the study perceived NZ European teachers to be more efficacious than teachers of other ethnicities. This teacher represented their views saying, “Good teachers are good teachers regardless of ethnicity” (FG2).

### **Summary**

Teacher participants perceived teachers who had been teaching for longer to have higher self-efficacy to engage students in their learning, manage the classroom, and employ effective instructional practices due to their superior experience as compared with their less-experienced peers. They also believed that both male and female teachers demonstrated equal self-efficacy in engaging students and employing effectual instructional strategies, however, were of the opinion that male teachers had greater self-efficacy when it came to classroom management. Teacher ethnicity was not seen as been associated with teaching self-efficacy.

### **Teacher Self-Efficacy for Teaching and School Context Factors**

When reflecting on whether teacher self-efficacy was related to school context factors, teachers in the study did not think that the year level teachers taught was related to their self-efficacy for teaching. They were, however, more divided in their views on whether teachers’ self-efficacy was related to school decile (SES).

### **Teacher Self-Efficacy and Year Level Taught**

Teachers were unanimous in expressing that teachers teaching a higher year level were not more efficacious than those teaching a lower year level, saying instead that the skills needed to teach at different levels were different. They expressed the opinion that teachers’ self-efficacy to engage and manage students and to utilise a range of instructional practices, had more to do with how well they were matched to a particular year level, and how comfortable, confident, and happy they felt teaching the level they did. One teacher claimed, “Some [teachers] really struggle with little ones and can’t relate to them and others can’t relate to older ones, but if you’ve got the right teacher and the right year group there shouldn’t be a difference in efficacy (FG4).

This finding was in contrast with that of other studies (e.g., Fives & Buehl, 2010; Klassen & Chiu, 2010; Rubie-Davies et al., 2012) in which it was found

that teachers teaching in lower year levels had more teaching self-efficacy than those teaching in higher year levels. This could possibly be because teachers of younger students were more easily able to see the impact they had on these students than teachers of older students.

### **Teacher Self-Efficacy and School Decile (SES)**

When considering possible relations between school decile and teachers' self-efficacy for teaching, teachers were divided in their opinions. Some were quite resolute that there was no difference in the self-efficacy of teachers in lower decile schools and those in higher decile schools, citing that there were challenges in both. As one teacher, who had taught in both high- and low-decile schools, stated, "I think there are difficulties in higher and lower decile schools with classroom management and engagement (FG1).

Other teachers felt that teachers in lower decile schools had lower self-efficacy to engage and manage students or to decide on suitable instructional strategies due to the apparent challenges evident in lower decile schools. One teacher described these challenges saying, "There might be some other factors, you know, resources or the cultural aspects which usually come with a lower decile that lowers self-efficacy" (FG5). This finding is aligned with that of Wood and Olivier (2008) who also linked teaching in low socio-economic schools with lower teacher efficacy.

In contrast, other teachers believed that teachers at lower decile schools had higher teaching self-efficacy because they had the resilience to manage fewer resources, and a belief they could make a difference in the lives of the students in their schools. As this teacher explained, "We [teachers at low-decile schools] have to keep pulling things out of our hat to re-engage children and explain it in a different way... I think you would need greater efficacy with the lower deciles because you're working with lower resources or different resources or whatever" (FG5). In their study, Rubie-Davies et al. (2012) similarly found that teachers teaching in lower socio-economic schools demonstrated higher self-efficacy. The difference in the views of teachers in the current study was interesting, especially as they represented different deciles. It could be that each was talking from their own experiences, hence the diverse views.

### **Summary**

Teacher participants did not correlate the year level teachers taught with their self-efficacy for teaching was not, however, did believe that the skills needed to teach different year levels were different. They were however, divided on whether teachers teaching in lower decile schools versus those teaching in higher decile schools differed in their teaching self-efficacy. Interestingly, they cited resourcing and challenges in each scenario as reasons for their differing views.

## Links to Student Achievement

The only factor that teachers unanimously felt would most strongly predict student achievement in mathematics and reading was teachers' years of teaching experience. Teachers alleged that more experienced teachers had superior content and pedagogical knowledge, were able to draw on a range of theories to enhance their practice, and were better able to elicit information from students and assess where they were at in their learning and respond to their needs. Reasons teachers provided to explain this view included, "[With more experience] you get better at your content knowledge, at your ways of eliciting information, and your ability to assess and move kids... you kind of got a good bank of experiences and approaches" (FG4); and "You've [experienced teachers] got more knowledge, more things in your little bag of tricks, ... you can work out how to target the kids that have blocks" (FG2).

Chingos and Peterson (2011) and Toropova et al. (2019) similarly found relations between teachers' years of teaching experience and student achievement, however, in their studies they found that this was only applicable up to around 10–19 years, after which time it declined. In contrast, Whitley (2010) found that the effect of years of teaching experience on student achievement was negligible and not sufficient to guarantee students' academic achievement.

## Links to Teachers Academically Supportive Instructional Practices

When asked which of the teacher beliefs they thought would be most related to teachers' academically supportive instructional practices, all teachers agreed that most important were the relations teachers had with their students. They proffered that the rapport and relationship teachers had with their students, and the way they were able to interact with them, had bearing on how they taught and the strategies and instructional practices they implemented in the classroom. The more positive these relationships were, the easier it was to explore and implement different strategies and instructional practices.

Passion for teaching was the next most important belief teachers perceived related to teachers' academically supportive instructional practices. Teachers deemed that if they were passionate about teaching, they would also be highly engaged and excited about their work, think outside the box, and implement interesting and varied instructional practices to make learning exciting for students. One teacher encapsulated this view saying, "I think if you are passionate about teaching you are going to be engaged as a teacher in the work and for your subjects and ... your instructional practices" (FG2).

Teachers further believed that strong teacher self-efficacy for teaching was another factor strongly related to excellent academically supportive instructional practices, a finding supported by Deemer (2004) who found that teachers with a high sense of teaching self-efficacy provided academically supportive instructional practices that were creative and meaningful, intent on progressing student competence and comprehension. Aligned with these findings, Toropova et al., (2019) also

found consistent relations between teachers' self-efficacy for teaching and their academically supportive instructional practices, particularly at the primary school level. They concluded that teacher self-efficacy was crucial for improving the quality of teachers' academically supportive instructional practices, enabling them to present appropriate, relevant, and varied learning for their students. As academically supportive instructional practices are a strong means to developing student competence and understandings, supporting students to become autonomous and strategic learners, and supporting improved academic outcomes, it would be wise for schools to focus on nurturing and developing the teacher beliefs that have been found to determine the quality of these academically supportive instructional practices.

## Conclusion and Implications

In this study the interrelations between a large number of teacher beliefs, teacher characteristics, and school context factors were explored, whereas much of the previous literature has tended to focus only on specific variables, and then often in isolation. By focusing on a broad range of variables, this study uncovered that teachers' self-efficacy for teaching was the teacher belief associated with all the other teacher beliefs, for example, goal orientation, motivation for teaching, work engagement, and relatedness to students, and that these teacher beliefs worked together to strengthen teachers' engagement with their students. Contrary to previous research, findings revealed no differences between males and females and teachers' self-efficacy in student engagement and instructional strategies. A further important finding revealed teachers' years of teaching experience to be the teacher characteristic most strongly associated with student achievement. A final finding was that teachers' self-efficacy for teaching, teacher-student relatedness, and passion for teaching all combined to aid teachers' academically supportive instructional practices. None of these findings would have been possible by focusing on only one or two variables, especially since it has been shown these beliefs do not exist in isolation.

The findings from this study have several educational implications for teachers, school management, initial teacher education providers, and other pertinent stakeholders in education. The prominent finding that teachers' self-efficacy for teaching was associated with most other teacher beliefs, characteristics, and school context factors explored in this study, highlights the importance of increasing teachers' self-efficacy for teaching. Self-efficacy for teaching influences teachers' beliefs about their ability to engage students in learning, use a range of instructional strategies to promote student thinking and learning, and implement strategies to effectively manage the classroom, all-encompassing actions that directly impact on student outcomes. It is therefore important that the self-efficacy of all teachers is as high as it can possibly be.

The responsibility for ensuring this happens lies with a number of stakeholders. Initial teacher education providers should ensure their programmes adequately equip teachers to enter the profession with sound content and pedagogical knowledge, teaching strategies and approaches, effective classroom management skills, and professional relationship skills, enabling high levels of teaching self-efficacy. Within

schools, teachers can improve their self-efficacy through positive interaction, collaboration, and sharing of ideas and resources with other colleagues. Teachers should be given opportunities to observe effective peer teaching, thereby strengthening their belief in their own ability to teach in a similar manner. School management could initiate within-school professional development or provide short externally developed training programmes as a means to improving self-efficacy for teaching.

School management teams should heed the fact that teachers' years of teaching experience was found to be so prevalently associated with the teacher beliefs explored in this study as well as with student achievement and teachers' instructional practices. Schools could address this by having novice teachers paired up with more experienced teachers who teach alongside them for the first one or two years of their teaching careers to enable them to develop confidence in their teaching self-efficacy, teacher expectations, motivation for teaching, and instructional practices. Novice teachers could be further supported by ensuring smaller class sizes in their first two years of teaching when they are still coming to grips with the many complexities and multifaceted layers of teaching.

This research study therefore contributes to the existing body of knowledge and international literature previously focused on teacher beliefs, teacher characteristics, and school context factors, but further extends this to include an exploration of a wide range of these variables in combination. It further contributes new knowledge about the relations between teacher beliefs, teacher characteristics, and school context factors in relation to student achievement and teachers' academically supportive instructional practices.

## Limitations and Future Research

Data collected in this study were self-reported focus group data. Teacher participants were aware that they were part of a teacher beliefs study, and their responses could have reflected social desirability, a tendency for participants to portray themselves in a favourable manner, giving responses to the questions they thought the researcher would want to hear. Participants, seated next to teaching colleagues, could have been more circumspect in their responses during the focus group discussions. Further, the number of participants were fewer than originally anticipated due to non-attendance, and were all drawn from one geographic area in New Zealand. It would therefore be prudent to extend this study to include focus groups of teachers from throughout New Zealand, but also include individual interviews in which teachers can freely express their personal opinions and perceptions to the researcher thereby avoiding being more guarded in front of colleagues.

The study focused solely on the perspectives of teachers. The self-report style of the study did not allow for the dynamics of the classroom to be captured. Future research could include exploring the perspectives of students as well as school management about their perceptions of the expectations and beliefs practised by teachers, and how these relate to student achievement and teachers' instructional practices.

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**Data availability** The corresponding author can be contacted regarding any interest in accessing the data used for this paper.

## Declarations

**Conflicts of interest** On behalf of all authors, the corresponding author states that there is no conflict of interest.

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