



THE UNIVERSITY OF  
**NEWCASTLE**  
AUSTRALIA

# SUPPORTING QUALITY TEACHING AT KOTARA SCHOOL (SSP) 2022

## FINAL REPORT

DR LEANNE FRAY · LAUREATE PROFESSOR JENNY GORE · DR DREW MILLER · ASSOCIATE  
PROFESSOR JESS HARRIS · DR CARL LEONARD · DR JUDITH FOGGET · YVONNE DEAN

March 2022

## Contents

List of Tables.....	iii
List of Figures.....	iv
Abbreviations .....	v
1. Project summary .....	1
2. Teaching domain .....	2
2.1. Pedagogical audit .....	2
2.2. Interpreting pedagogical audit data.....	2
2.2.1. Quality Teaching: Kotara School compared to NSW primary schools.....	3
2.2.2. Quality Teaching: Kotara School compared to special education contexts .....	5
2.3. Teacher questionnaire.....	7
2.4. Interpreting teacher questionnaire data.....	8
2.5. Teaching efficacy .....	9
2.6. Knowledge and perception of Quality Teaching Rounds .....	10
2.6.1. Staff perceptions of Quality Teaching Rounds .....	11
2.6.2. Changes to pedagogy .....	12
3. Leading domain .....	13
3.1 Leadership and staff belonging .....	13
3.2 Teacher well-being .....	15
3.3 Collaboration .....	17
4 Learning domain.....	18
4.1 Progressive Achievement Tests (Mathematics and Reading) .....	18
4.2 Behavioural data.....	19
4.3 NME Minimap assessments .....	21
5 Concluding comments.....	22
6 Bibliography.....	23

## List of Tables

Table 1. Quality Teaching Model.....	2
Table 2. Kotara School teacher questionnaire items .....	7

## List of Figures

Figure 1. QTM Dimensions. Kotara School compared to NSW primary school average.....	3
Figure 2. QTM, Intellectual Quality elements. Kotara School compared to NSW school average.....	4
Figure 3. QTM, Quality Learning Environment elements. Kotara School compared to NSW primary school average .....	4
Figure 4. QTM, Significance elements. Kotara School compared to NSW primary school average.....	5
Figure 5. QTM Dimensions. Kotara School compared to other special education contexts.....	5
Figure 6. QTM, Intellectual Quality elements. Kotara School compared to other special education contexts..	6
Figure 7. QTM, Quality Learning Environment elements. Kotara School compared to other special education contexts .....	6
Figure 8. QTM, Significance elements. Kotara School compared to other special education contexts.....	7
Figure 9. Comparative Data, Teacher Efficacy.....	9
Figure 10. Snapshot Data, Teacher Efficacy .....	10
Figure 11. Comparative Data, Knowledge and perception of Quality Teaching Rounds .....	10
Figure 12. Snapshot Data, Knowledge and perception of Quality Teaching Rounds.....	11
Figure 13. Comparative Data, Leadership .....	13
Figure 14. Snapshot Data, Leadership.....	13
Figure 15. Comparative Data, Belonging.....	14
Figure 16. Snapshot Data, Belonging.....	15
Figure 17. Comparative Data, Teacher Wellbeing.....	16
Figure 18. Snapshot Data, Teacher Wellbeing .....	16
Figure 19. Comparative Data, Collaboration .....	17
Figure 20. Snapshot Data, Collaboration.....	17
Figure 21. Progressive Achievement Test, Mathematics .....	18
Figure 22. Progressive Achievement Tests, Reading.....	19
Figure 23. Gold, Silver and Bronze awards by term. Kotara School .....	20
Figure 24. Behaviour trends, 2021. ....	20
Figure 25. NME score, 2021 .....	21

## Abbreviations

BK	Background knowledge
C	Connectedness
CK	Cultural knowledge
DK	Deep knowledge
DU	Deep understanding
E	Engagement
EQC	Explicit quality criteria
HE	High expectations
HOT	Higher order thinking
I	Inclusivity
KI	Knowledge integration
M	Metalanguage
N	Narrative
PAT	Progressive Achievement Test
PK	Problematic knowledge
QTM	Quality Teaching Model
QTR	Quality Teaching Rounds
SC	Substantive communication
SD	Student direction
SS	Social support
SSR	Students' self-regulation

# 1. Project summary

During 2020-2021, Kotara School undertook a set of initiatives to improve teaching quality and student outcomes at the school. The project included four inter-connected elements of work:

1. **Benchmarking review** (2020) conducted by the Teachers and Teaching Research Centre (TTRC) to support reporting and planning for the 2021-2022 period and inform the action plan;
2. **Pilot testing** of data collection processes (2020);
3. **Quality Teaching Action Plan** (2020-2021) focussed on Quality Teaching Rounds (QTR) to work in conjunction with ongoing curriculum refinement; and
4. **Evaluation Plan** (2021) to inform the implementation of the Quality Teaching Action Plan and the school's progress.

Research into school improvement suggests that significant shifts in school performance in a relatively short time period typically requires a focus on teaching and learning, leadership development, creating an information-rich environment, creating a positive school culture, building a learning community, ongoing professional development, involving parents, external support and sufficient resources (Muijs et al., 2004; Richmond et al., 2020; Ylimaki et al., 2007). A comprehensive school improvement plan also requires linked readiness, implementation and evaluation activities (Damschroder et al., 2009). When implementing a specific intervention or program, ongoing engagement with the program developers has been demonstrated to increase the level of adoption within schools (Forman et al., 2009).

The compressed timeframe (of 18 months) for this project meant that intensive staff development was required in the early stages to accelerate the benefits arising from widespread adoption of Quality Teaching Rounds. As such, early engagement of all staff with the professional learning processes was essential in increasing the likelihood of demonstrable improvement within the proposed timeframe. This document is organised in three main sections that follow the key themes of the NSW School Excellence Framework (NSW Department of Education, 2017a, 2017b):

- Teaching
- Leading
- Learning

We draw on evidence gathered from teachers and school leaders from our baseline and final data collection processes. All individual participant names and details have been de-identified for the purposes of this report.

The 2021 school year was significantly disrupted due to the COVID-19 pandemic. Across much of NSW, schools were closed for up to 14 weeks. Kotara School and Nexus delivered learning from home to students from 6 August 2021 until 25 October 2021.

## 2. Teaching domain

### 2.1. Pedagogical audit

Nine post-intervention QT lesson observations were conducted at Kotara School (n = 6) and Nexus (n = 3), for reporting purposes they have been aggregated and displayed in relation to the QT Model Dimensions and Elements. One lesson per teacher was coded using the observation scales from the Quality Teaching – Classroom Practice Guide (NSW Department of Education, 2020). These scales, assessed on a 1-to-5 scale, evaluate teaching comprehensively (Table 1).

Table 1. Quality Teaching Model

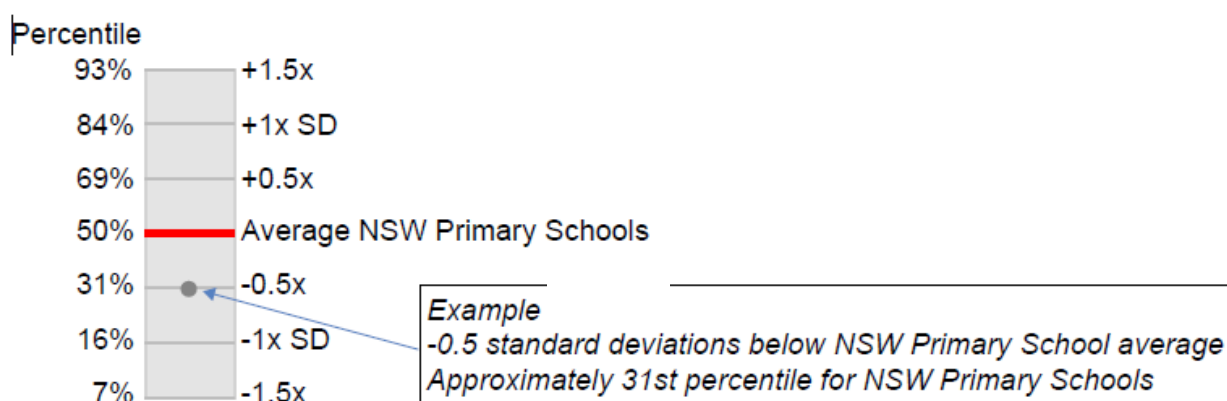
Intellectual Quality	Quality Learning Environment	Significance
Deep knowledge	Explicit quality criteria	Background knowledge
Deep understanding	Engagement	Cultural knowledge
Problematic knowledge	High expectations	Knowledge integration
Higher-order thinking	Social support	Inclusivity
Metalanguage	Students' self-regulation	Connectedness
Substantive communication	Student direction	Narrative

### 2.2. Interpreting pedagogical audit data

Mean values for Kotara school are presented in relation to data from a wide range of NSW government primary schools, as demonstrated in the figure below.

The red line represents average of teaching quality in NSW primary schools, measured using the scales of the Quality Teaching Model. The grey boxes represent the distribution around the average in half standard deviation units. The dot represents the result for the school.

In the fictional example below, the result sits at half a standard deviation below the mean for NSW primary schools. This result can be converted to percentiles, which indicates that this school is in the 31st percentile of NSW schools.



Diagrams in the report show Kotara school in relation to NSW Primary schools. Where specified, other diagrams show Kotara school in relation to data from other special education contexts. In each case, the data used for the comparison is indicated in the diagram heading.

### 2.2.1. Quality Teaching: Kotara School compared to NSW primary schools

At baseline (Term 1, 2021)<sup>1</sup> average lesson codes for Kotara School were below the NSW average for Quality Teaching Total, Intellectual Quality and Quality Learning Environment. The Significance dimension was above the NSW Primary school average (Figure 1). At post-intervention data collection (Term 4, 2021), average lessons codes for Quality Teaching Total, and each of the dimensions (Intellectual Quality, Quality Learning Environment and Significance) were above the NSW average.

Figure 1. QTM Dimensions. Kotara School compared to NSW primary school average

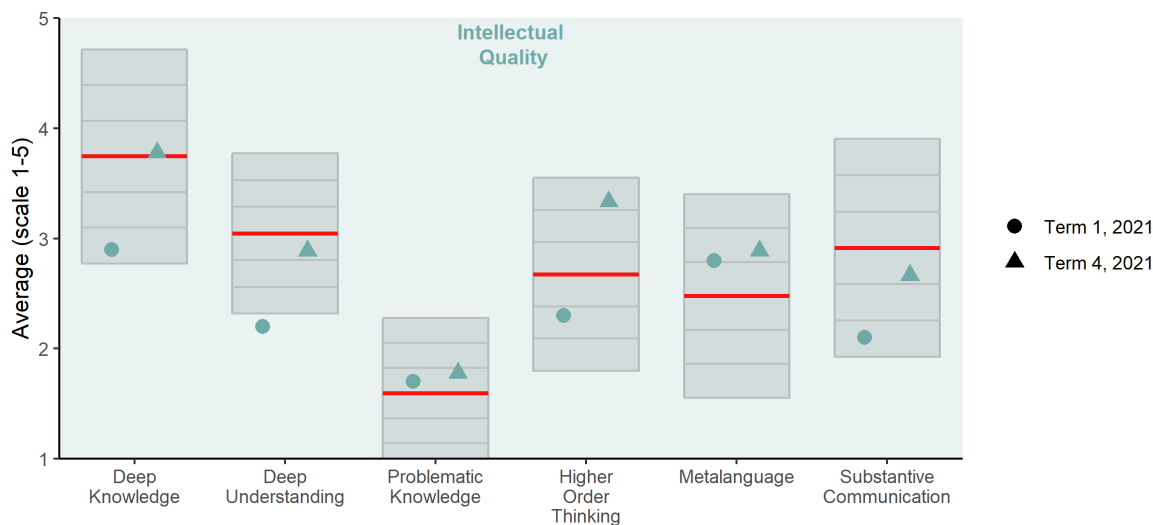


At post intervention data collection in Term 4, when broken down by elements, Kotara School and Nexus were above the state average for the elements within the Intellectual Quality dimension: Deep Knowledge, Problematic Knowledge, Higher Order Thinking and Metalanguage. The elements of Deep Understanding and Substantive Communication coded lower than the NSW State average for primary school (Figure 2). Considerable gains in average codes were made across all elements in the Intellectual Quality dimension when compared with baseline results.

<sup>1</sup> Note: Some baseline lesson observations were conducted in Term 4, 2020. In addition, lesson observations were conducted as new staff joined the school during 2021.

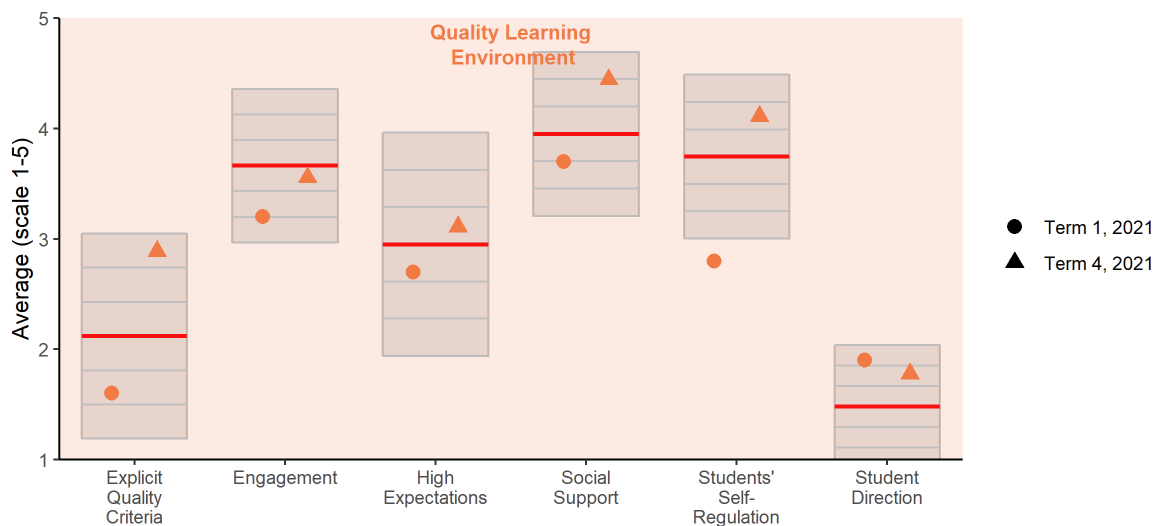


Figure 2. QTM, Intellectual Quality elements. Kotara School compared to NSW school average



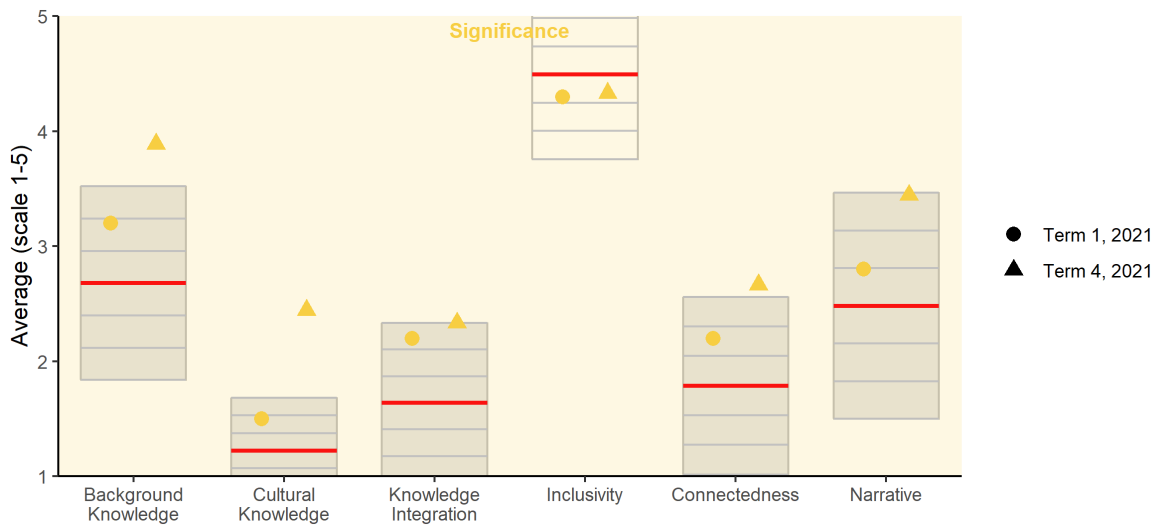
Within the Quality Learning Environment dimension, Kotara School and Nexus were above the state average for the elements: Explicit Quality Criteria, High Expectations, Social Support, Students’ Self-Regulation and Student Direction in Term 4, 2021. The Engagement element coded lower than the NSW State average for primary schools (Figure 3). Considerable gains in average codes were made across all elements in the Quality Learning Environment dimension, except for Student Direction, which remained relatively stable when compared with baseline results.

Figure 3. QTM, Quality Learning Environment elements. Kotara School compared to NSW primary school average



Within the Significance dimension, Kotara School and Nexus were above the state average for the elements; Background Knowledge, Cultural Knowledge, Knowledge Integration, Connectedness and Narrative in Term 4, 2021. The Inclusivity element coded lower than the NSW State average for primary school (Figure 4). Considerable gains in average codes were made across all elements in the Quality Learning Environment dimension, except for Inclusivity, which remained relatively stable when compared with baseline results.

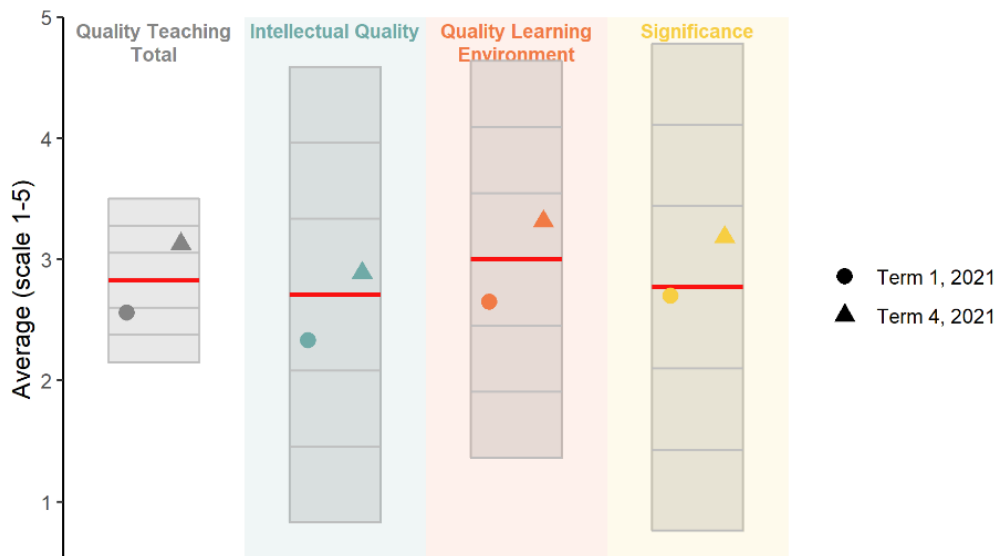
Figure 4. QTM, Significance elements. Kotara School compared to NSW primary school average



### 2.2.2. Quality Teaching: Kotara School compared to special education contexts

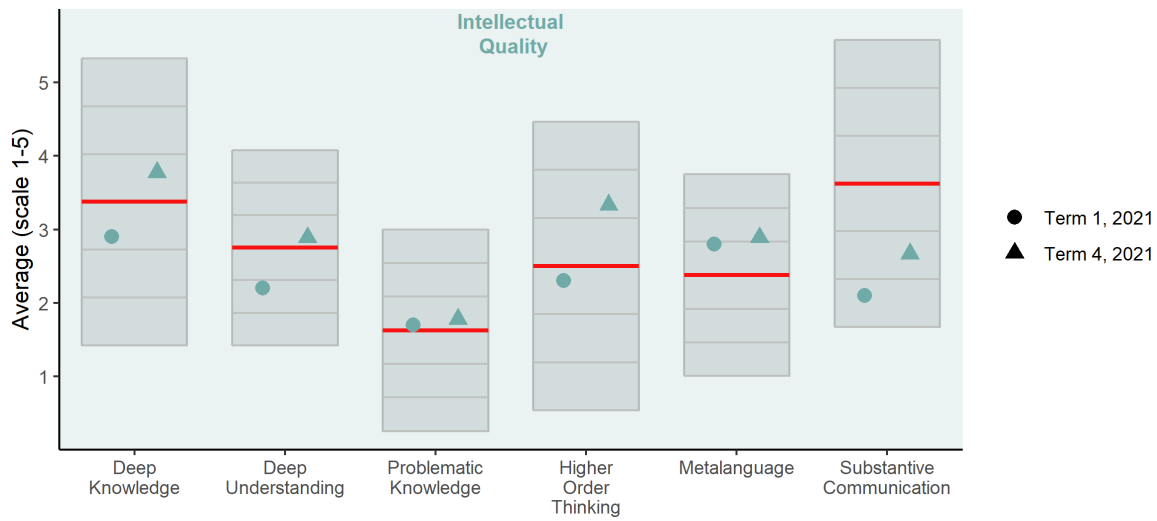
At post intervention data collection in Term 4, when compared to other special education contexts, average lesson codes for Kotara School and Nexus were above the average for Quality Teaching Total, Intellectual Quality, Quality Learning Environment and Significance in Term 4, 2021 (Figure 5).

Figure 5. QTM Dimensions. Kotara School compared to other special education contexts



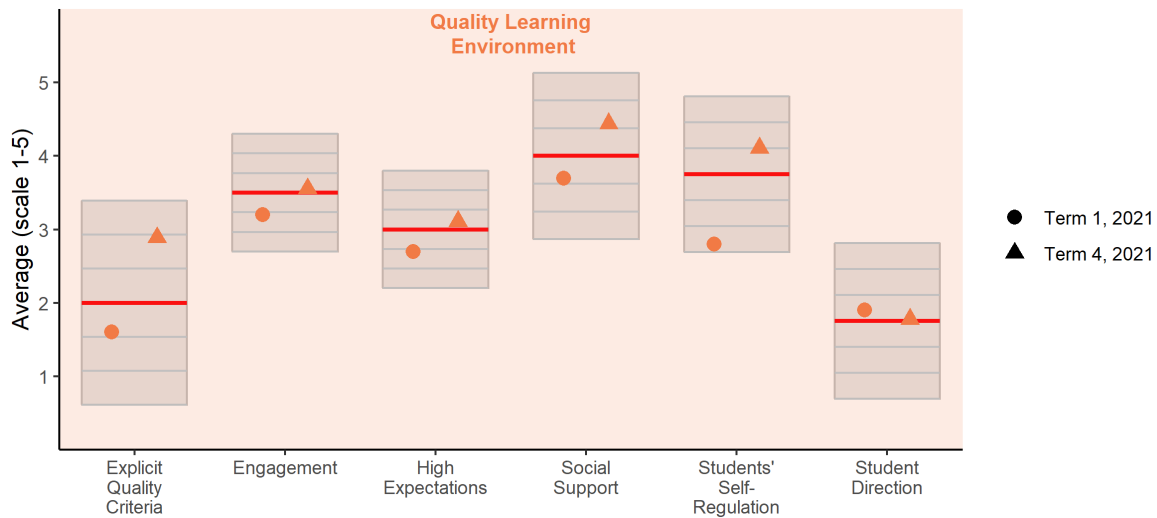
When broken down by element, Kotara SSP and Nexus were above average for the elements of Deep Knowledge, Deep Understanding, Problematic Knowledge, Higher Order Thinking, and Metalanguage within the Intellectual Quality dimension in Term 4, 2021 (Figure 6).

Figure 6. QTM, Intellectual Quality elements. Kotara School compared to other special education contexts



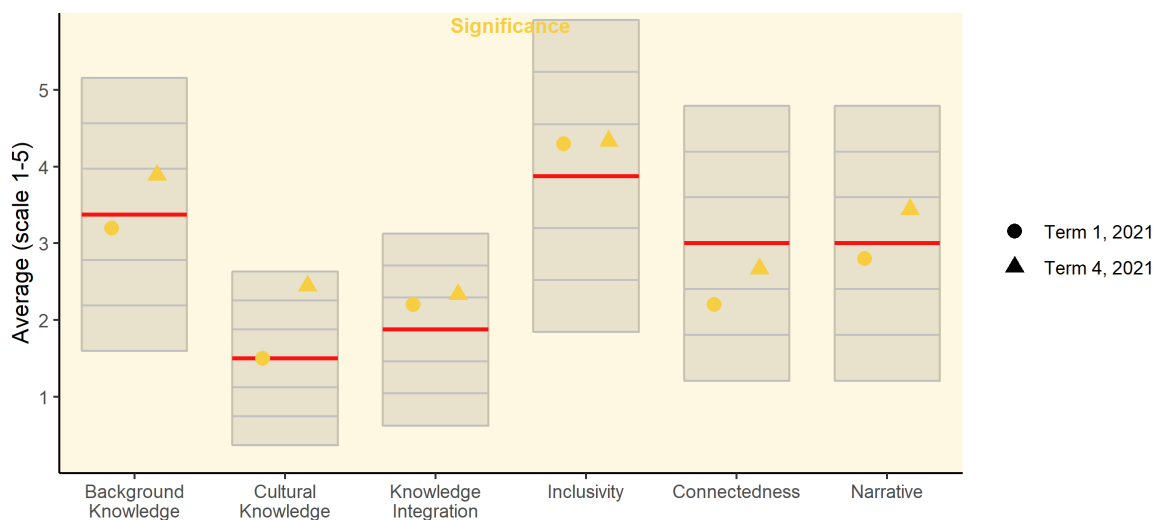
Within the Quality Learning Environment dimension, Kotara School and Nexus were above or at state average for all elements at post-intervention data collection in Term 4 2021 (Figure 7).

Figure 7. QTM, Quality Learning Environment elements. Kotara School compared to other special education contexts



Within the Significance dimension, Kotara School and Nexus were above state average for the elements Background Knowledge, Cultural Knowledge, Knowledge Integration, Inclusivity and Narrative in Term 4, 2021 (Figure 8).

Figure 8. QTM, Significance elements. Kotara School compared to other special education contexts



### 2.3. Teacher questionnaire

Ten teaching staff members from Kotara School completed a teacher questionnaire on a Staff Development Day at the beginning of Term 1, 2021. One support staff member commenced the support staff questionnaire; however, the questionnaire was not fully completed and so these results are not included in this report.

Nine teaching staff completed the follow-up teacher questionnaire towards the end of Term 4, 2021.

The questionnaire included items related to teaching efficacy, teacher well-being, leadership, belonging and perceptions of QTR (Table 2).

Table 2. Kotara School teacher questionnaire items

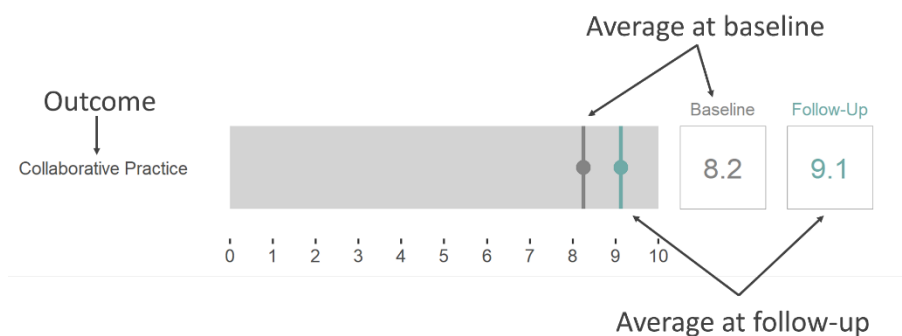
Construct	Items	Source
Teaching efficacy	Classroom management	(Tschannen-Moran & Hoy, 2001)
	Instructional strategies	(Tschannen-Moran & Hoy, 2001)
	Student engagement	(Tschannen-Moran & Hoy, 2001)
Teacher wellbeing	Stress, coping and intention to leave	(Miller, Harris and Gore, n.d.)
Leadership	Leadership perceptions	(Langford & Langford, 2009)
Belonging	Subjective wellbeing – Connectedness	(Mankin et al., 2017)
	School morale	(Hart et al., 2000)
	Appraisal and recognition	(Hart et al., 2000)
Perceptions of QTR	Knowledge of QTR	(Miller, Harris and Gore., n.d.)
	Perceptions of effect:	
	Teaching practice, student outcomes, staff morale and school culture	

## 2.4. Interpreting teacher questionnaire data

In this section of the report, we include two sets of results. The first set of results reports on *Comparative Data* collected at two time points – baseline and follow-up. Baseline data were collected on the first day of the 2021 school year. Follow-up data were collected during Term 4, 2021. Results include only those teachers who completed the survey at both timepoints (n=4).

Data for each of the scales are presented in the format outlined below. For each outcome an average is presented at two time points. The average gives an indication of the typical view of teachers surveyed at the school.

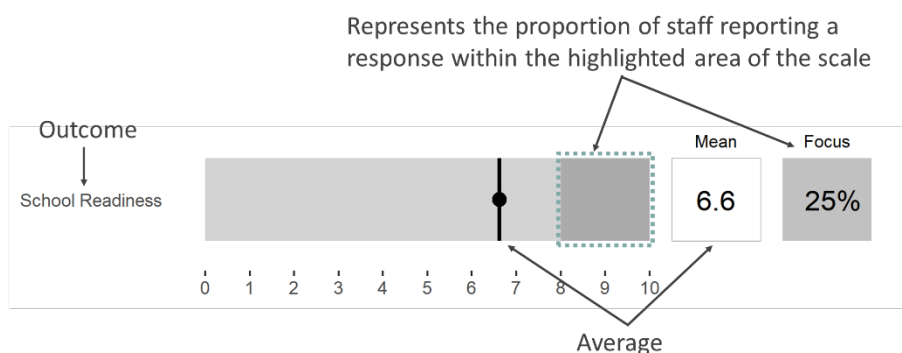
### Example



The second set of data (*Snapshot Data*) includes all teachers, who completed the teacher questionnaire at follow-up, effectively providing a snapshot of teacher responses at the whole school level at the end of the 2021 school year. Data for each of the scales in the teacher questionnaire are presented in the format outlined below. For each outcome, two pieces of information are presented:

- Average – gives an indication of the typical view of teachers surveyed at the school.
- Focus area – gives an indication of the percentage of respondents over (or under) a specific threshold on the 0 – 10 scale.

### Example

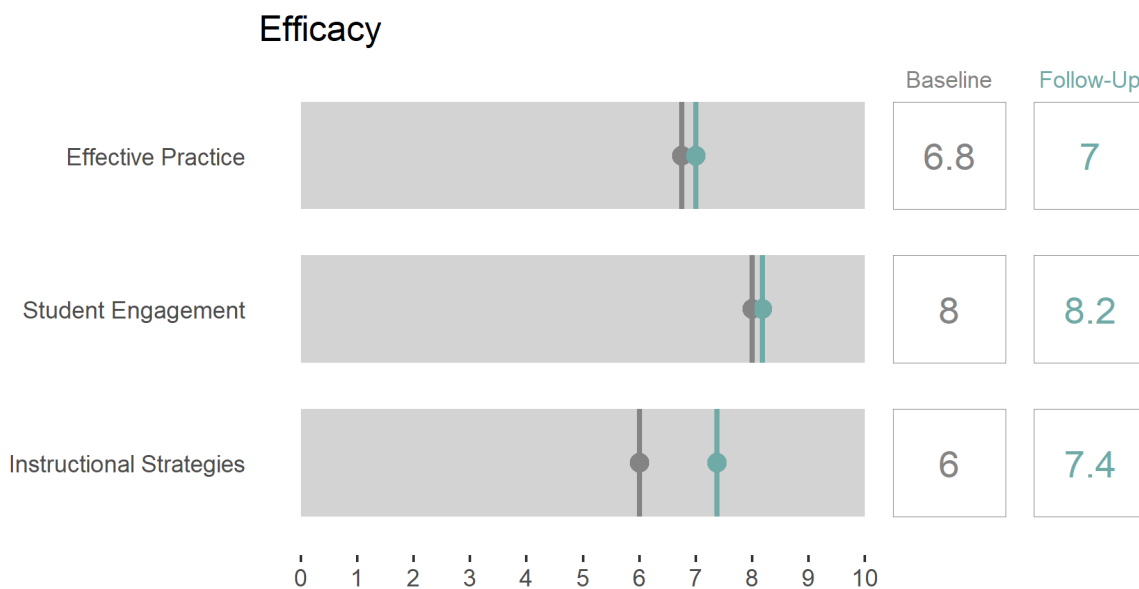


## 2.5. Teaching efficacy

Evidence from *Comparative Data* shows high levels of teacher efficacy in relation to student engagement. Teaching efficacy in relation to effective practice and instructional strategies, however, had lower mean values when compared to student engagement. In each instance improvements in teaching efficacy are evident, with the greatest gains in Instructional Strategies (Figure 9).

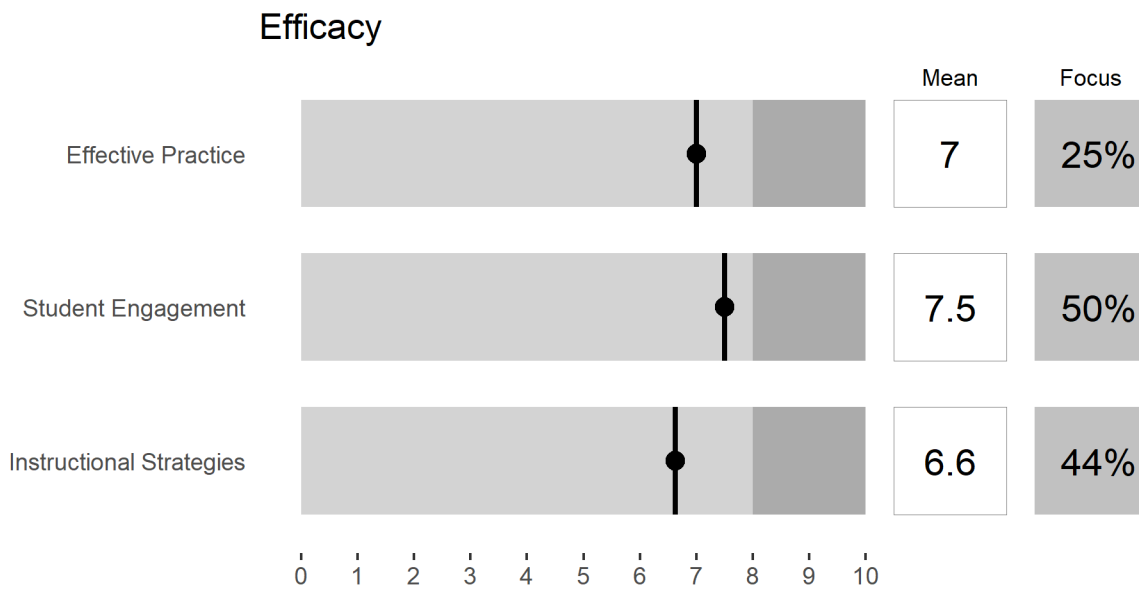
Measure	Example question
Effective Practice	I am a successful teacher
Student Engagement	I am able to get students to believe they can do well in schoolwork
Instructional Strategies	I ask my students to demonstrate relationships between central concepts/ideas

Figure 9. Comparative Data, Teacher Efficacy



*Snapshot Data* from the teacher survey shows high levels of teacher efficacy in relation to Student Engagement. Lower mean values were obtained for efficacy in relation to Effective Practice and Instructional Strategies (Figure 10).

Figure 10. Snapshot Data, Teacher Efficacy

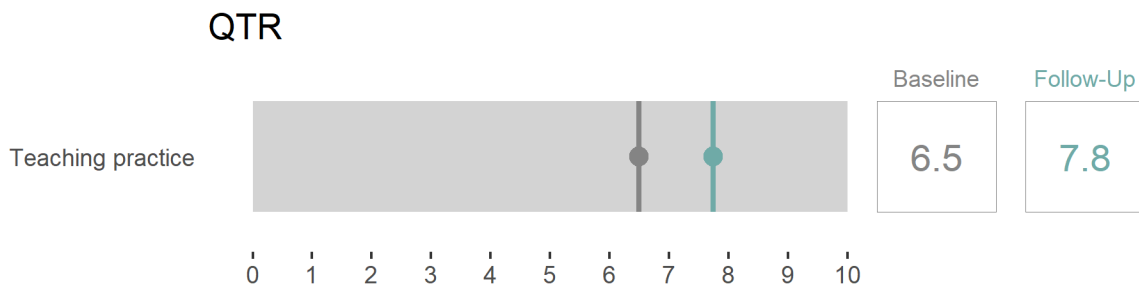


## 2.6. Knowledge and perception of Quality Teaching Rounds

*Comparative data* indicates an increase in teachers understanding and knowledge of QTR (Figure 11).

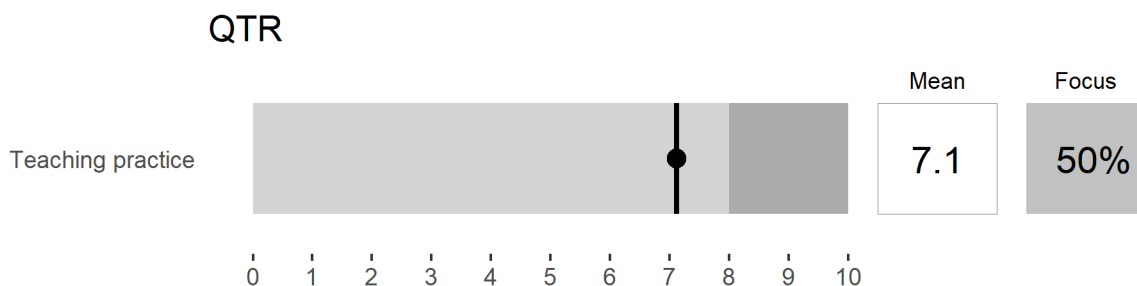
Measure	Question text
Teaching practice	In this school, QTR will have a positive impact on teaching practice

Figure 11. Comparative Data, Knowledge and perception of Quality Teaching Rounds



*Snapshot data*, collected during Term 4 2021, indicated QTR had a positive impact on teaching practice, with 50% of responders falling in the focus area (Figure 12).

Figure 12. Snapshot Data, Knowledge and perception of Quality Teaching Rounds



### 2.6.1. Staff perceptions of Quality Teaching Rounds

Telephone Interviews were conducted with teachers and school leaders at baseline (n = 15) (November and December 2020 and March 2021) and post-intervention (n = 11) (November and December 2021). Post intervention interviews took place after teachers had returned to normal classroom teaching after a period of up to 14 weeks of learning from home due to the COVID-19 pandemic. School culture, change, morale, professional development, and Quality Teaching were the focus of teacher and school leader interviews.

Our baseline interviews with teachers and school leaders indicated some early scepticism and very real concerns about how QTR might work in ED/BD (Emotional Disturbance/Behavioural Disturbance) or Hospital School settings. Indeed, some teachers were resistant to participating in QTR:

I was really against it just because of the type of school that we're in and I was unsure about how it was going to work. (Ashley, baseline)

Another teacher wondered whether a focus on pedagogy was reasonable when the day-to-day reality of challenging student behaviour was such a major component of their teaching at the school:

A lot of [students] don't know how to socially interact and so when you're working so hard on these kids' behaviours to make sure they don't hurt each other or upset each other, changing your practice isn't necessarily a bad thing, but it can be a bit difficult with all these different expectations. (Quinn, baseline)

With baseline interviews identifying concerns as to how QTR could be implemented in a SSP setting, we were interested in understanding if attitudes towards QTR had shifted in post-intervention interviews. Parker (school leader) describes changes amongst teachers at the school:

Definitely anxiety to begin with. Huge amounts of anxiety. Huge amounts of resistance to begin with. And then, as each of them started, that mind shift just changed. And we had multiple meetings where people were constantly quite resistant going 'you need to realise this isn't mainstream' and 'it's not going to work with our kids'. And just, as more and more people went through, we could see that this process was actually working. And the kids were doing what we wanted them to do and we're all now very keen to continue it into next year. (Parker, post intervention)

One teacher in particular, who described how they '*didn't think it was going to work*', went on to say:



I think the PLCs were great. I really enjoyed those days. Just opening my mind up – well refreshing my mind about what QTR is and how we can embed it within our context here, I feel like a lot of the stuff is very difficult for us to achieve. A lot of the elements. But apart from that, it was good to just think about what we are doing. And what we're doing well and what things [could be] easy for us to work on. (Ashley, post intervention)

We were interested in understanding if teachers and school leaders felt QTR was appropriate in a SSP or Hospital School setting. While one teacher told us '*Yeah absolutely. Hundred percent. No question*' (Petri, post intervention), another said:

I guess it's appropriate everywhere, after seeing it at Nexus. And if it's going to work at Nexus it's going to work wherever it can because Nexus is the most non-classroom setting you can have ... If you put in the time and you put in the effort, it just works because you just make it work. It can be adapted for anything, and you can do a five-minute lesson and still code it. (Sam, post intervention)

Despite overall positive perceptions of QTR within Kotara School and at Nexus, one teacher reported that there were teachers who remained resistant to the intervention:

I think amongst half of the teachers it's really clicked. But I think there are a couple of teachers that I'm kind of thinking of, that are still not sold on it. (Petri, post intervention)

### 2.6.2. Changes to pedagogy

The overall aim of this project was to improve the quality of teaching and student outcomes at Kotara School. While the pedagogical audit demonstrated substantial gains in the overall quality of teaching at Kotara School, there was clear evidence from teacher and school leader interviews of positive changes to pedagogy. Jo and Petri, classroom teachers, told us:

Everyone is willing to try new things and implement new things, but the programming and how we run lessons is completely different [since QTR]. That's done a 180 and I think for the better. Better for our students and the better for our own teaching and the lessons. (Jo, post intervention)

I'm a better teacher, that's for sure... I'm starting to look for opportunities to be more diverse in my approach to teaching. I also was far more encouraged by it than I thought I'd be. I thought I'd be coming out of it feeling like I'm completely shithouse... But what I ended up coming out with is actually a clearer understanding of [what I'm good at and what needs improving] (Petri, post intervention)

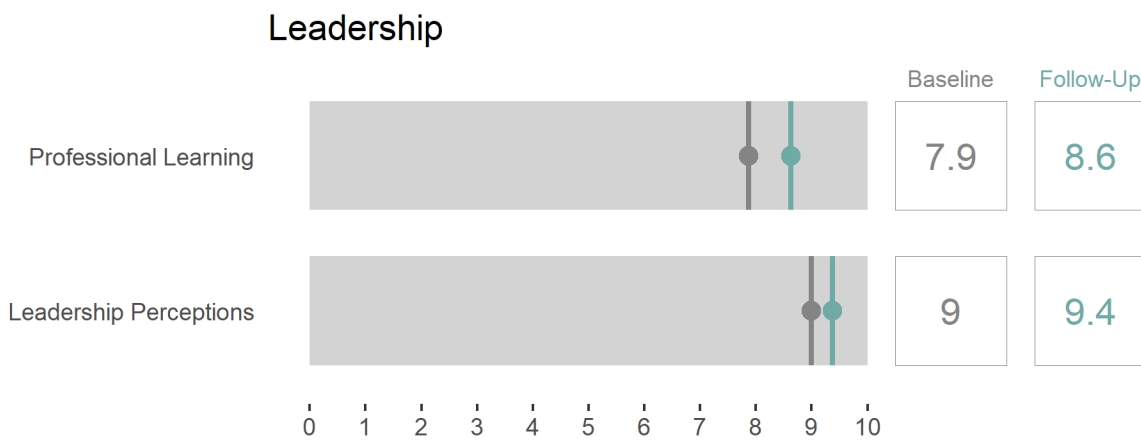
### 3. Leading domain

#### 3.1 Leadership and staff belonging

Evidence from *Comparative Data* indicate positive responses to leadership, with gains noted in support for professional learning and leadership perceptions (Figure 13).

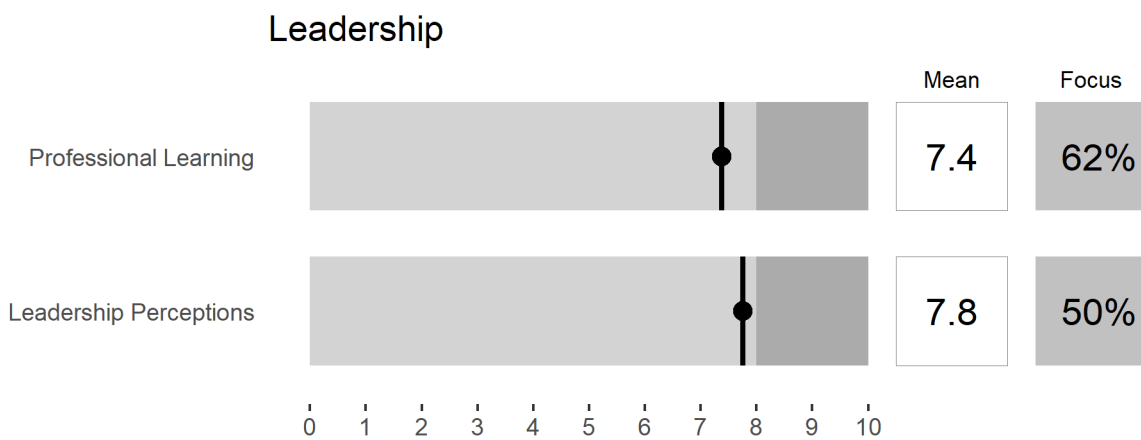
Measure	Example question
Professional Learning	Professional learning is supported by other initiatives to improve the school
Leadership Perceptions	School executive members are good role models for staff

Figure 13. Comparative Data, Leadership



Teachers reported positive responses to leadership in *Snapshot Data*. 62% of staff fell within the focus area for professional learning and 50% for leadership perceptions.

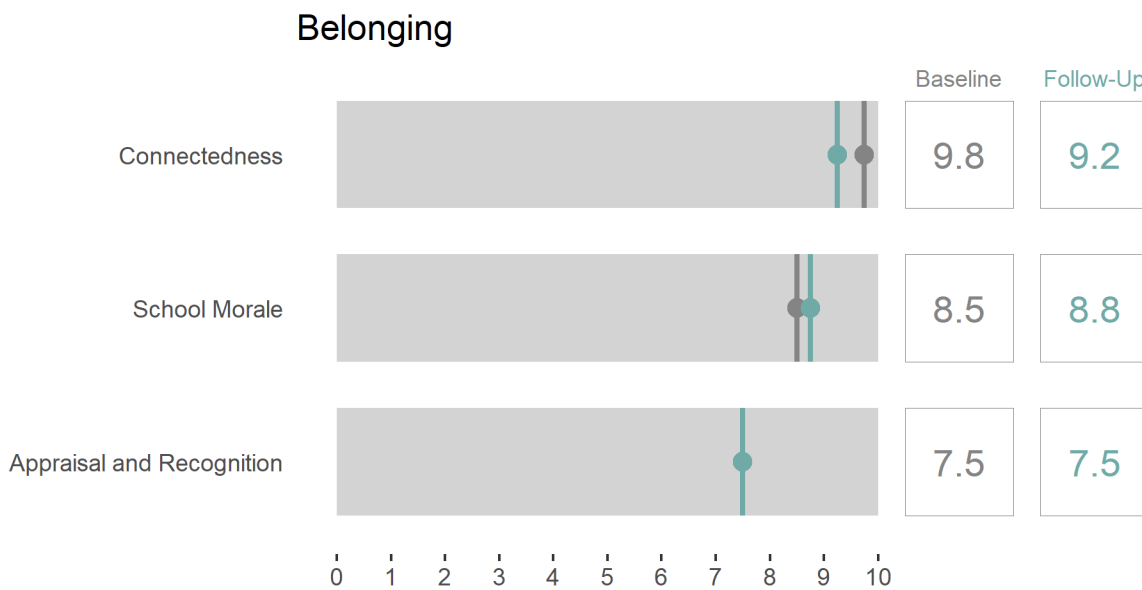
Figure 14. Snapshot Data, Leadership



Comparative Data indicate teacher connectedness and school morale are healthy at the school, despite a slight drop in connectedness in follow-up data. School Morale slightly increased between baseline and follow-up while appraisal and recognition remained steady (Figure 15).

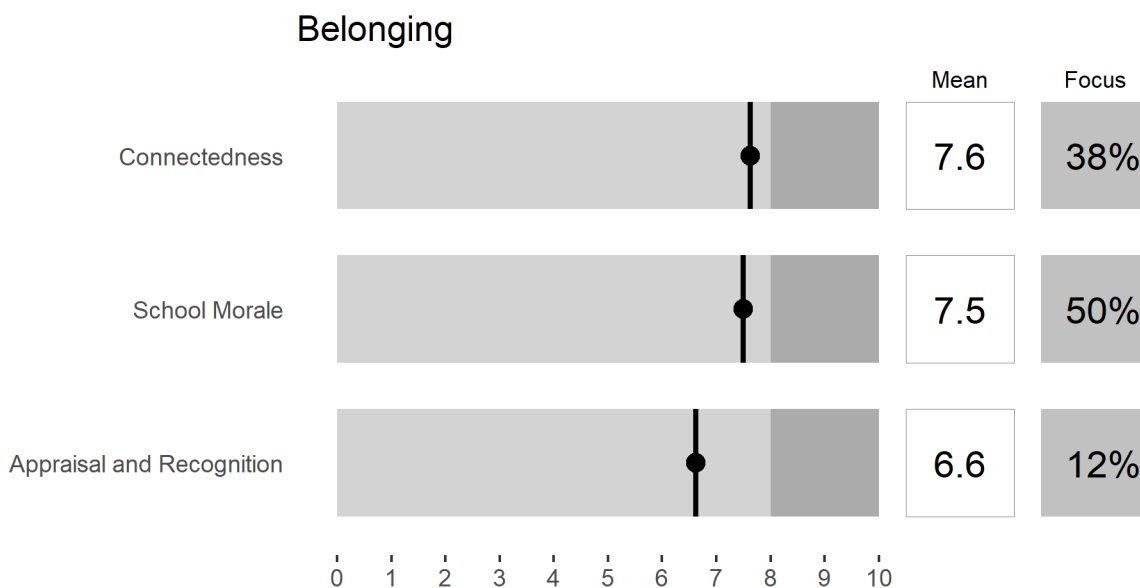
Measure	Example question
Connectedness	I feel like I belong at this school
School Morale	The level of morale in this school could be described as: Extremely low (0) to Extremely high (10)
Appraisal and Recognition	I am happy with the quality of feedback I receive on my work performance

Figure 15. Comparative Data, Belonging



Snapshot Data demonstrate that teacher connectedness and school morale are generally strong at the school. Half of staff (50%) responses appear in the upper end of the scale for school morale, however just 12% appear in the focus area for appraisal and recognition (Figure 16).

Figure 16. Snapshot Data, Belonging



Educational change is difficult to implement effectively as it can lead to teacher resistance and have a detrimental impact on morale (Evans, 2000). At Kotara School, implementation of school change initiatives had an initial negative impact on school morale. However, improvements in pedagogy and teacher collaboration that have occurred as a result of teacher participation in QTR have led to positive changes at the school:

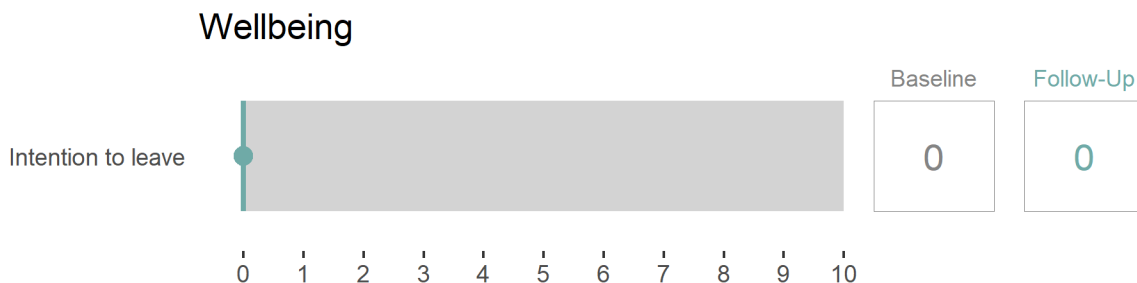
When it first came in, I think people - it probably did have a bit of an impact upon morale. I think people did feel like it was a bit of a checking up sort of thing and maybe wasn't our business and wasn't part of special education and they were going to get asked to shoot through hoops that were going to be counterproductive. But I feel like at the end of it...I think the fact that there's much more of a focus now around our academics and our pedagogy and that sort of stuff I would say that in terms of our pedagogy I think people probably feel more developed and more confident and better about it. I think there's a sense of collaboration as well amongst staff that we're all on the same page. We're all moving in the same direction and we're all kind of working together so I think it's been quite a positive change. (Cameron, post intervention)

### 3.2 Teacher well-being

The chart for teacher well-being is designed to report the lower end of the distribution. By reporting at the lower end of the distribution it is easy to identify the percentage of staff who are considering leaving in the short term. *Comparative Data* indicate that there were no teachers who were planning to leave the profession in the six months after the survey was administered (Figure 17).

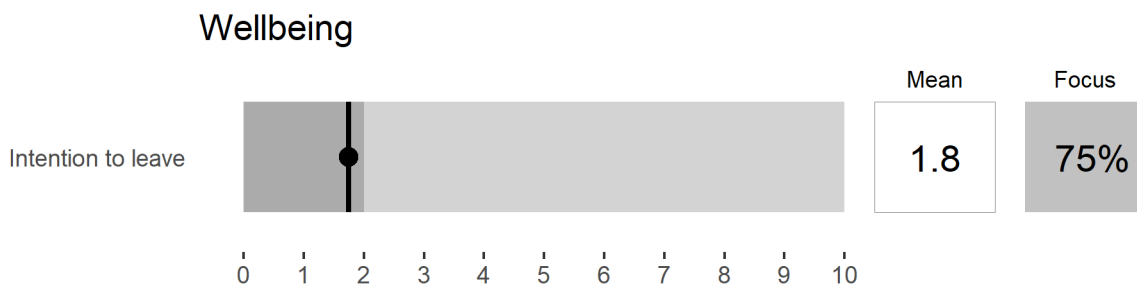
Measure	Example Question
Intention to leave	Please indicate your intention to leave the profession within the next 6 months: Extremely low (0) to Extremely high (10)

Figure 17. Comparative Data, Teacher Wellbeing



*Snapshot Data* indicate that few teachers are planning to leave the profession, with 75% of responders appearing in the focus area (Figure 18).

Figure 18. Snapshot Data, Teacher Wellbeing



Students in NSW public schools learnt from home for up to 14 weeks of the 2021 school year and the impact on teacher well-being has been significant (Fray et al., 2022). Teachers at Kotara School were also impacted by COVID-19, and this was acknowledged by teachers who took part in the interviews:

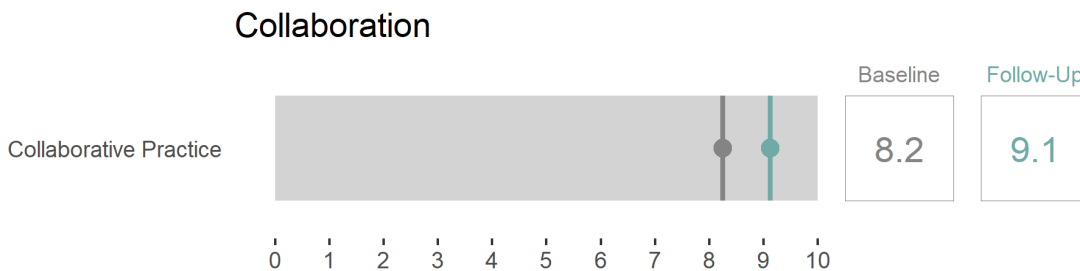
At the moment, pretty tired. It's just been a long year including COVID. I think that's really affected us. But also, our principal, when we were going through COVID and having to, I guess, work from home and not see the students as much, or not see them at all really, they did explain that it's a good opportunity to do things that we never have time to do as teachers. So, it's time to do that learning, to get our quality teaching down pat and to I guess have a break from all of those social needs of the students that we deal with. So, I think that it's been a hard year, but we've all done really well to get each other through it. (Morgan, post intervention)

### 3.3 Collaboration

A high proportion of survey participants reported collaborative practice at the school, with *Comparative Data* indicating an increase in collaboration over time (Figure 19).

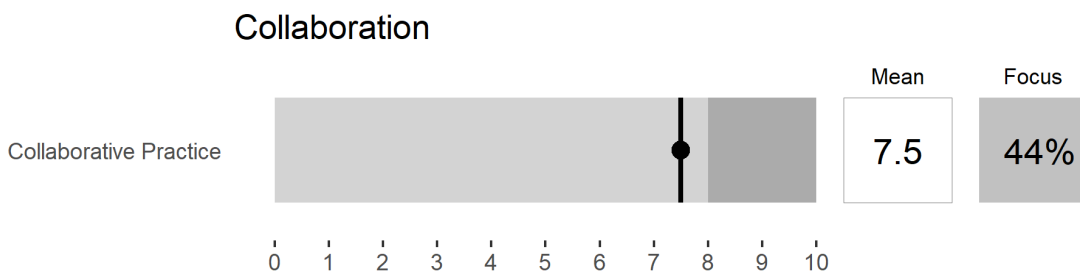
Measure	Question
Collaborative Practice	There is collaborative practice at this school

Figure 19. Comparative Data, Collaboration



*Snapshot Data* indicate that collaborative practice is common in the school, with 44% of staff responses in the focus area (Figure 20).

Figure 20. Snapshot Data, Collaboration



Collaboration amongst teachers is associated with positive impacts on student achievement (Hargreaves, 2019), teacher efficacy and job satisfaction (OECD, 2016). Participation in QTR has been shown to enhance teacher collaboration and flatten power hierarchies (Gore et al., 2017). At Kotara school, participation in QTR provided enhanced opportunities for teacher collaboration, increased collegiality and provided a language to support discussions of pedagogy:

I feel like it's much easier to approach any of the teachers, but especially the exec with concerns around teaching and those things. Because you can really be specific about what you're trying to focus on and what the things are that that you're feeling you need...I guess it's given the language for those discussions and I think because we're all in the same process within this school, we all know what we are doing. Those conversations definitely have been easier. (Jesse, post intervention)

## 4 Learning domain

### 4.1 Progressive Achievement Tests (Mathematics and Reading)

Progressive Achievement Tests (PATs) were administered by teachers in Term 4, 2020 and Terms 1, 3 and 4 in 2021. School disruptions caused by the COVID-19 pandemic (Week 4, Term 3 until Week 3, Term 4) precluded some students from completing PATs in Term 3. Students at Nexus did not participate in PATs at any time.

PATs provide a measure of academic growth in Mathematics and Reading for participating students throughout the school year. This report contains data from the Maths and Reading tests administered in 2021.

Grey lines represent individual students, the orange line the mean of all students for each term and the green line the overall trend across the 2021 school year. Student achievement grew in Mathematics and Reading across the school year (Figures 21 and 22), despite the disruption to schooling caused by the COVID-19 pandemic.

Figure 21. Progressive Achievement Test, Mathematics

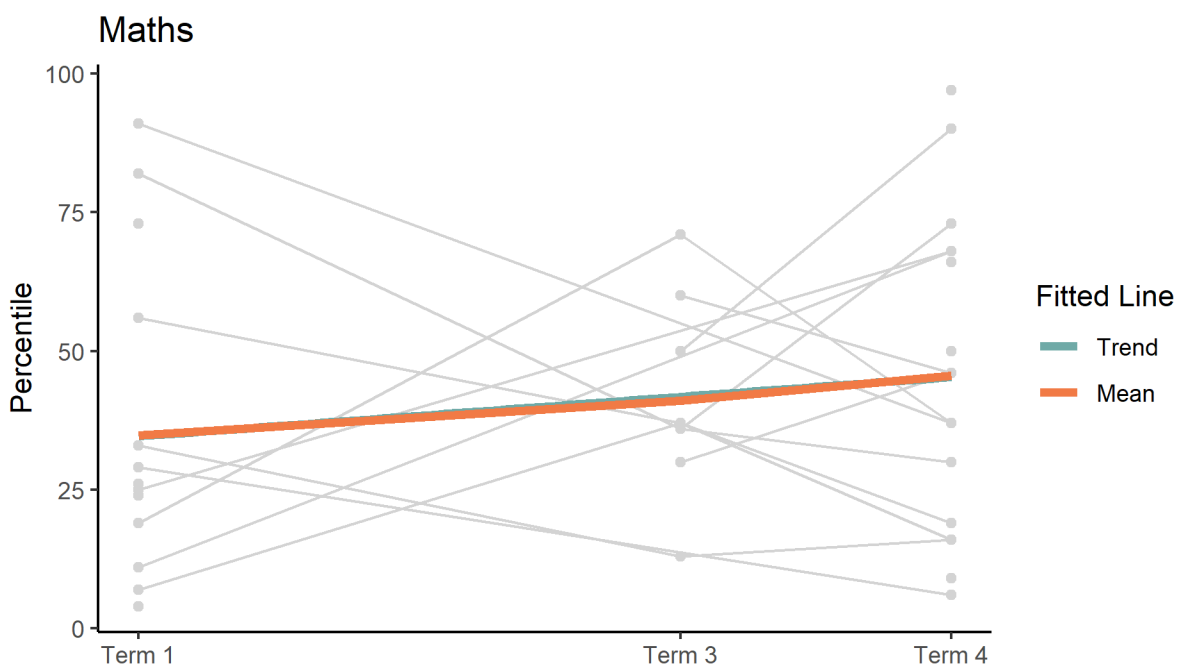
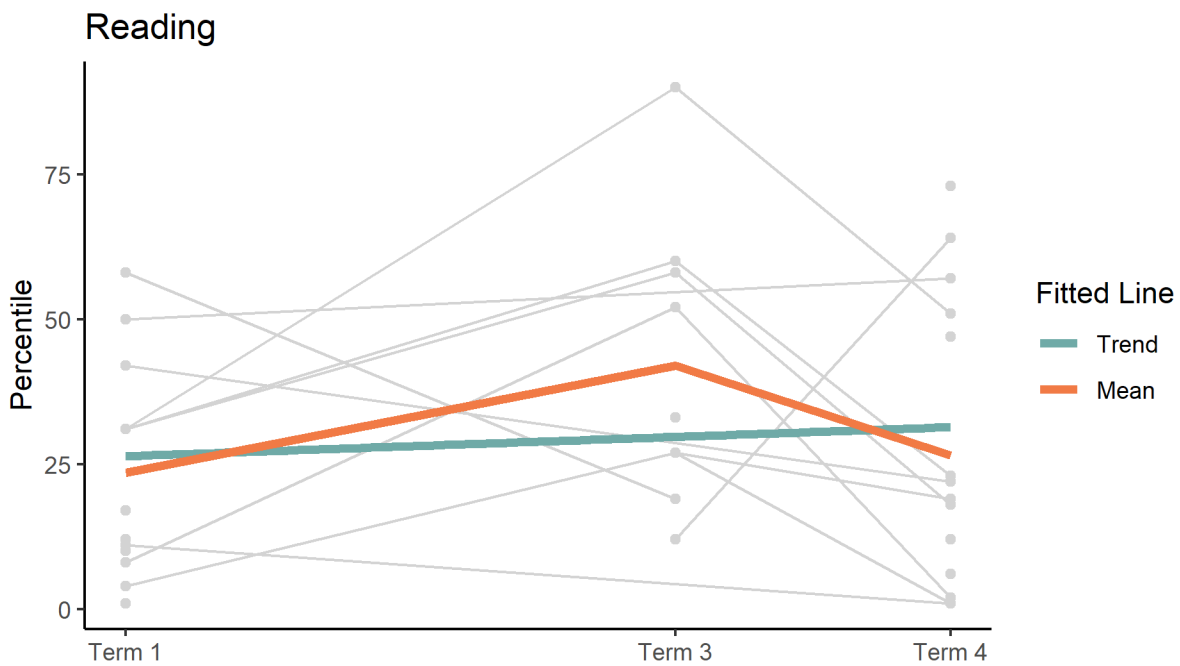


Figure 22. Progressive Achievement Tests, Reading



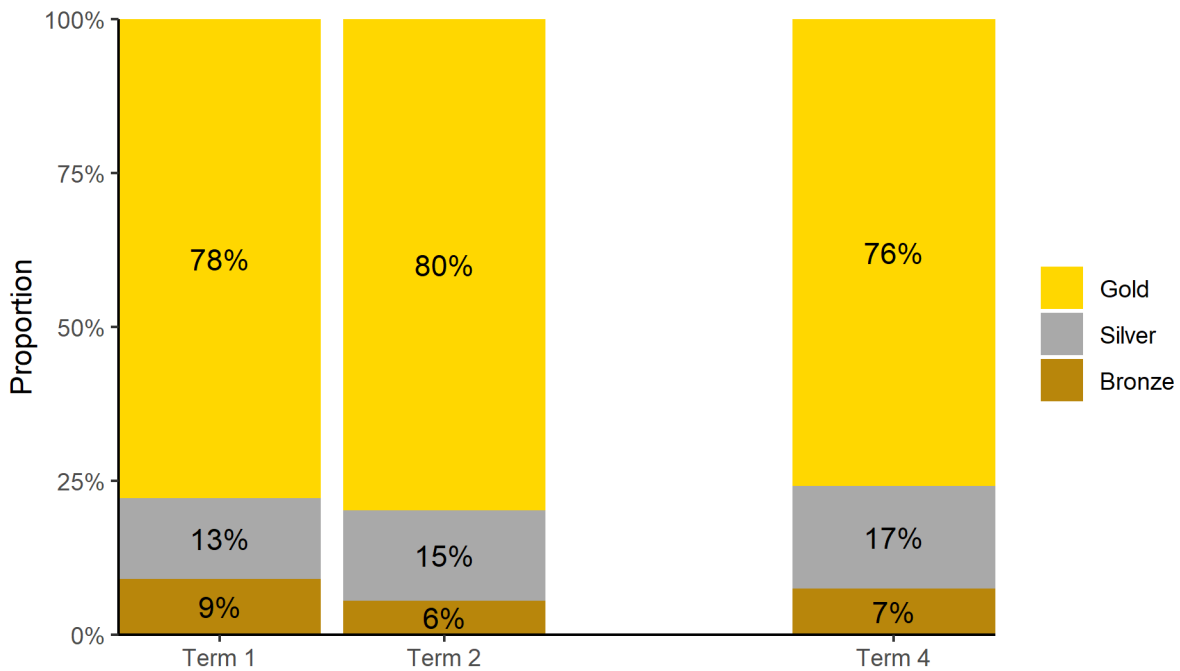
#### 4.2 Behavioural data

Behavioural data were collected from Kotara campus students by classroom teachers during 2021. Teachers captured the data using the KIN (Kotara Intelligence Network) App and the aggregated findings are reported by school term. Data were de-identified by Kotara School and provided to the University for analysis. Data were not collected in Term 3 due to COVID-19 school closure.

The percentage of gold awards given to students decreased in Term 4 (76%) when compared to Term 1 (78%) and Term 2 (80%). However, the percentage of silver awards increased in Term 4 (17%) when compared to Terms 1 (13%) and Term 2 (15%) (Figure 23).

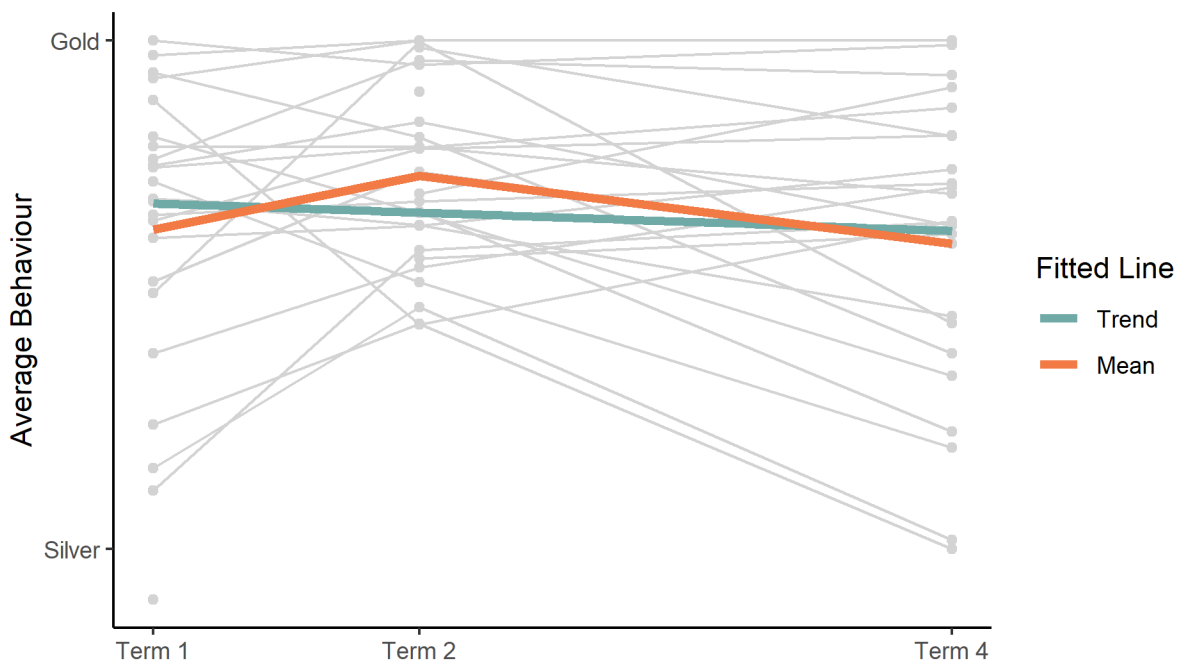


Figure 23. Gold, Silver and Bronze awards by term. Kotara School



Despite an increase in the number of gold awards earned by students between Terms 1 and 2, there was an overall downward trend across time (Figure 24).

Figure 24. Behaviour trends, 2021.

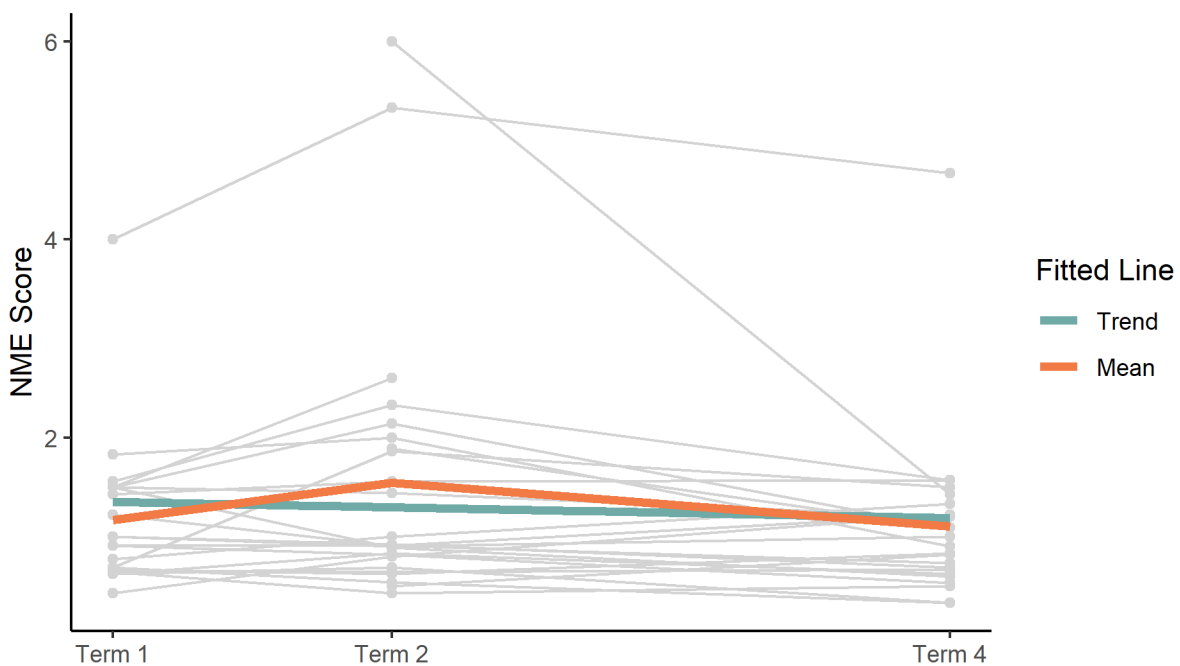


### 4.3 NME Minimap assessments

The Neurosequential Model in Education (NME) draws upon the Neurosequential Model of Therapeutics (NMT) which helps educators understand student behaviour and performance (Neurosequential Network, n.d.). Classroom teachers collected NME data at three time points during 2021 – at the end of Term 1, Term 2 and Term 4. Data were not collected in Term 3 due to COVID-19 school closures. NME data was de-identified and provided to the university for analysis.

While there was an increase in NME scores between Terms 1 and 2, overall, there was a slight downward trend across 2021.

Figure 25. NME score, 2021



## 5 Concluding comments

During 2020-2021, Kotara School partnered with the Teachers and Teaching Research Centre at the University of Newcastle to implement a set of initiatives designed to improve teaching quality and student outcomes at the school. This report offers unique insight into the impact of Quality Teaching Rounds (QTR) professional development at the school.

When comparing the quality of teaching at Kotara School to the average of all NSW primary schools, Kotara School was above state average in all three dimensions of the Quality Teaching Model after participation in QTR. Similar findings were noted when comparing the quality of teaching at Kotara School to the average quality of teaching in other special education contexts in NSW.

Data from the teacher questionnaire demonstrated improvements in teacher efficacy, collaboration, teacher wellbeing, professional learning and perceptions of leadership. While there was some resistance and anxiety from staff related to the whole school implementation of Quality Teaching Rounds, there is evidence of a dramatic shift in school culture and substantial improvements in teaching practice at the school.

Kotara School participated in QTR during one of the most disrupted periods of schooling in modern Australian history. In NSW, schools were closed for up to 14 weeks during 2021. At Kotara School and Nexus, students learnt from home from 6 August 2021 until 25 October 2021. Despite these disruptions, Progressive Achievement Tests in Mathematics and Reading demonstrated increased student achievement across the school year. There was, however, little change in student behaviour as measured by KIN data or NME data during 2021.

## 6 Bibliography

- Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implementation Science : IS*, 4(1). <https://doi.org/10.1186/1748-5908-4-50>
- Evans, L. (2000). The effects of educational change on morale, job satisfaction and motivation. *Journal of Educational Change*, 1(2), 173–192. <https://doi.org/10.1023/A:1010020008141>
- Forman, S. G., Olin, S. S., Hoagwood, K. E., Crowe, M., & Saka, N. (2009). Evidence-Based Interventions in Schools: Developers' Views of Implementation Barriers and Facilitators. *School Mental Health*, 1(1), 26–36. <https://doi.org/10.1007/S12310-008-9002-5/TABLES/4>
- Fray, L., Jaremus, F., Gore, J., Miller, A., & Harris, J. (2022). Under pressure and overlooked: the impact of COVID-19 on teachers in NSW public schools. *Australian Educational Researcher*.
- Gore, J. M., Lloyd, A., Smith, M., Bowe, J., Ellis, H., & Lubans, D. (2017). Effects of professional development on the quality of teaching: Results from a randomised controlled trial of Quality Teaching Rounds. *Teaching and Teacher Education*, 68, 99–113. <https://doi.org/10.1016/j.tate.2017.08.007>
- Hargreaves, A. (2019). Teacher collaboration: 30 years of research on its nature, forms, limitations and effects. *Teachers and Teaching: Theory and Practice*, 25(5), 603–621. <https://doi.org/10.1080/13540602.2019.1639499>
- Hart, P. M., Wearing, A. J., Conn, M., Carter, N. L., & Dingle, A. R. K. (2000). Development of the School Organisational Health Questionnaire: A measure for assessing teacher morale and school organisational climate. *British Journal of Educational Psychology*, 70(2), 211–228. <https://doi.org/10.1348/000709900158065>
- Langford, P. H., & Langford, P. H. (2009). Measuring organisational climate and employee engagement: Evidence for a 7 Ps model of work practices and outcomes. *Australian Journal of Psychology*, 61(4), 185–198. <https://doi.org/10.1080/00049530802579481>
- Mankin, A., von der Embse, N., Renshaw, T. L., & Ryan, S. (2017). Assessing Teacher Wellness: Confirmatory Factor Analysis and Measurement Invariance of the Teacher Subjective Wellbeing Questionnaire. *Journal of Psychoeducational Assessment*, 36(3), 219–232. <https://doi.org/10.1177/0734282917707142>
- Muijs, D., Harris, A., Chapman, C., Stoll, L., & Russ, J. (2004). Improving schools in socioeconomically disadvantaged areas - A review of research evidence. *School Effectiveness and School Improvement*, 15(2), 149–175. <https://doi.org/10.1076/SES1.15.2.149.30433>
- Neurosequential Network. (n.d.). *Introduction to the NME*.
- NSW Department of Education. (2017a). *Evidence Guide for School Excellence*. <https://education.nsw.gov.au/sef-evidence-guide/guidelines-for-using-data/analysing-quant-data/quantitative-data.pdf>
- NSW Department of Education. (2017b). *School Excellence Framework*. [https://education.nsw.gov.au/content/dam/main-education/teaching-and-learning/school-excellence-and-accountability/media/documents/SEF\\_Document\\_Version\\_2\\_2017\\_AA.pdf](https://education.nsw.gov.au/content/dam/main-education/teaching-and-learning/school-excellence-and-accountability/media/documents/SEF_Document_Version_2_2017_AA.pdf)
- NSW Department of Education. (2020). *Quality Teaching: Classroom Practice Guide* (3rd ed.).
- OECD. (2016). *Supporting Teacher Professionalism (TALIS)*. OECD. <https://doi.org/10.1787/9789264248601-EN>
- Richmond, S. A., Donaldson, A., Macpherson, A., Bridel, W., van den Berg, C., Finch, C. F., Hagel, B., & Emery, C. A. (2020). Facilitators and Barriers to the Implementation of iSPRINT: A Sport Injury Prevention

Program in Junior High Schools. *Clinical Journal of Sport Medicine : Official Journal of the Canadian Academy of Sport Medicine*, 30(3), 231–238. <https://doi.org/10.1097/JSM.0000000000000579>

Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17(7), 783–805. [https://doi.org/10.1016/S0742-051X\(01\)00036-1](https://doi.org/10.1016/S0742-051X(01)00036-1)

Ylimaki, R. M., Jacobson, S. L., & Drysdale, L. (2007). Making a difference in challenging, high-poverty schools: Successful principals in the USA, England, and Australia. *School Effectiveness and School Improvement*, 18(4), 361–381. <https://doi.org/10.1080/09243450701712486>