

Insights to inform school practice

Education Improvement Research Centre

Insights paper 5
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School reviews in Queensland provide powerful insights into school practice. With every state school and centre reviewed by the Education Improvement Branch every four years, reviews are an opportunity to consider changes in practice over time and to identify areas for continuous improvement across the system.

Using data effectively

Data-informed decisions that have real impact in schools require three key ingredients: a clear purpose, analytical skills, and ongoing collaboration.

As [Insights paper 4](#) showed, the use of data was one of the top five areas identified for improvement in the 2019 school reviews.

This paper explores this theme further by unpacking the key improvement strategies recommended to schools in 2019 and 2020 under the second domain of the [National School Improvement Tool](#): analysis and discussion of data. These recommendations suggest steps schools can take in applying and mixing their 'ingredients' to use data more effectively.

School reviews in 2019 and Term 1, 2020 (total: 413)

School types

P-6	Secondary	P-9/10/12	Other
287	65	34	27*

Review types

Full school	Priority support	Self-determined
348	54	11

* Includes 13 special schools, eight outdoor and environmental education centres, two schools of distance education, one community school, one sport education centre, a specific purpose school and a TAFE.

What does the *National School Improvement Tool* say about the analysis and discussion of data?



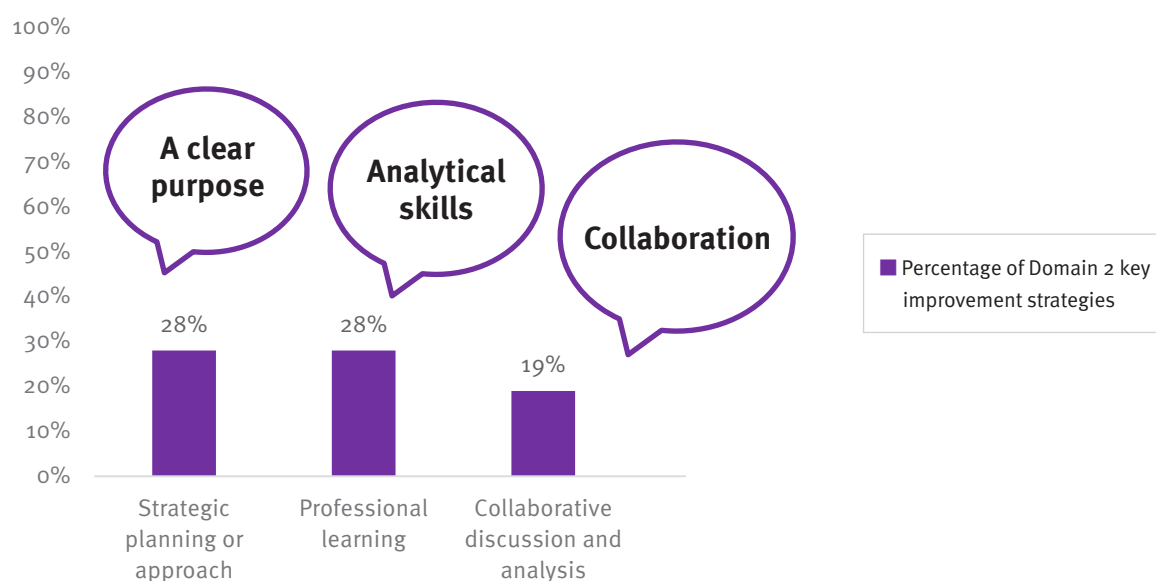
“A high priority is given to the school-wide analysis and discussion of systematically collected data on student outcomes, including academic, attendance and behavioural outcomes, and student wellbeing. Data analyses consider overall school performance as well as the performances of students from identified priority groups; evidence of improvement/regression over time; performances in comparison with similar schools; and, in the case of data from standardised tests, measures of growth across the years of school.”

(ACER 2012, p. 4)

Key findings from school reviews

Nearly half (44 per cent) of schools reviewed in 2019 and Term 1, 2020 received a key improvement strategy from the second domain of the *National School Improvement Tool*. Figure 1 presents the top three areas for further improvement.

Figure 1: Key improvement strategies, Domain 2, Analysis and discussion of data (2019 and Term 1, 2020)



Notes: N=180, constituting all review reports that had a key improvement strategy from Domain 2. The percentages do not sum to 100 because Figure 1 only includes the top three themes identified within the domain.

Starting with ‘why’

A model to inspire purposeful use of data in schools is the ‘golden circle’, presented by leadership thinker and author Simon Sinek.

The golden circle consists of three concentric rings. Sinek found that most organisations were familiar with the outer ring (*what* they do). Some also know *how* they do it (the middle ring). The inner ring of the golden circle is the *why*, the organisation’s core purpose or vision. Few organisations, according to Sinek, can articulate *why* they do what they do.

While many organisations start at the outside of the golden circle, moving inwards from the ‘what’ to the ‘how’, Sinek places the vision at the centre and moves outwards. He starts with the question ‘Why are we doing this?’ The next step is to develop processes to achieve this vision. This leads to the practice (the what).

A clear purpose or vision was a central theme in the key improvement strategies about data. One of the top five recommendations was for schools to strengthen a culture of self-evaluation and reflection in order to facilitate deeper discussions about data and generate strategies (the how) for improvement.

Recommendations about data frequently explained *why* a strategy was put forward (see Figure 2). The ‘why’ and the ‘what’ are closely connected. A practice (the what) should reflect the ‘why’ (the purpose). If a practice is not working, it may be a prompt to reconsider the ‘how’.

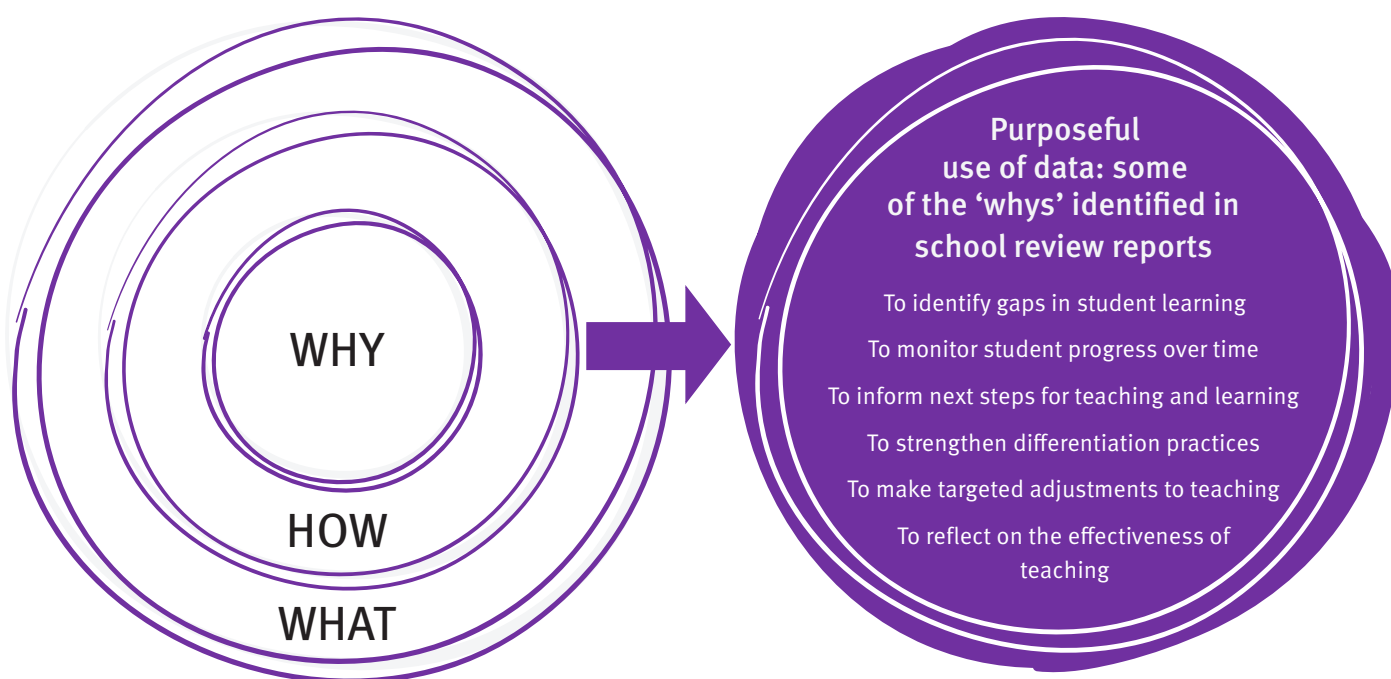


Figure 2: The ‘golden circle’ from Simon Sinek

Unpacking the ‘how’: the top three ingredients

Starting with ‘why’ helps schools to determine:

- how they will collect meaningful data
- how they will build staff capability to interpret and use data in a way that complements and enhances existing expertise
- how they will facilitate effective data analysis.

The review recommendations from 2019 and 2020 provide next steps for applying these processes.

► A clear purpose

Schools were advised to take a whole-school approach to collecting and using data. Generally, this included identifying the purpose for collecting data and how it aligns with the school’s improvement priorities. Depending on where they were in their improvement journeys, schools received recommendations to ‘develop’, ‘refine’, ‘implement’ or ‘review’ a plan. This included whole-school data plans, collection schedules or assessment plans. References to these planning documents included the following common elements:

- what data will be collected and by whom
- the reasons for collecting and analysing data
- timelines for data collection
- data collection tools
- how data will be analysed and used to inform teaching and learning
- where the data will be stored.



► Analytical skills

Another step identified in reviews was for schools to further support staff in using data effectively. The key recommendations were to provide teachers and school leaders with ongoing professional learning to build capability and confidence in collecting, discussing, analysing and using data to inform classroom practice. This included enhancing their abilities in using data to:

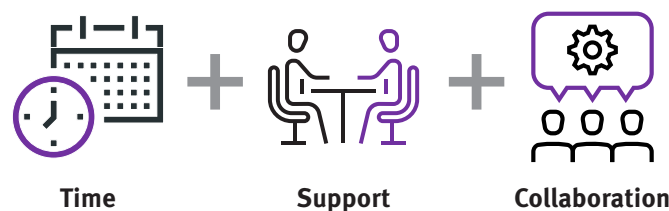
- establish starting points for teaching and next steps for student learning
- understand individual learning needs, make timely adjustments to teaching and provide differentiated learning experiences
- identify gaps in learning and monitor student progress
- reflect on the effectiveness of pedagogy
- inform strategic planning
- build a culture of self-evaluation, reflection and high expectations.

► Collaboration

Most of the recommendations about data analysis highlighted the value of time and collaboration. Schools were advised to provide further opportunities for staff to share and discuss data, and to enhance data conversations. The next steps were to:

- allocate specific times and opportunities for staff to engage in regular, in-depth discussions and analysis of systemic and student achievement data
- promote systematic data conversations within the teaching team and between teachers and school leaders that inform decisions on student learning needs and progress
- refine and strengthen data discussions, ensuring they align with the school’s priorities, generate strategies for further improvement, and further develop staff capability in interpreting and using data.

For effective use of data, review recommendations highlight the importance of providing staff with time, support and collaboration.



To generate discussion ...

- What are our school's priorities for student learning, engagement and wellbeing?
- How are these measured and monitored across the school?
- How does our school implement systematic processes for the purposeful use of data, including both test data and class assessments?
- What opportunities do teaching teams have for in-depth analysis and discussions of achievement data to plan strategies for continuous improvement in student outcomes?
- How does our school monitor the implementation of whole-school improvement initiatives and interventions to ensure progress and maximise impact?



Practical considerations for using data

Establish a clear purpose for the effective use of data

- Clarify what's important in the school and 'measure what you treasure'.
- Ensure the range of assessments and data tools are aligned to the school's priorities, including student academic achievement, attendance, behaviour and wellbeing.
- Use data in meaningful ways to boost learning – to identify starting points for learning; to identify where students have progressed in their learning at a particular point in time; and to monitor progress at the individual student, class and cohort levels.
- Take an action-oriented approach to using data for the primary purposes of informing teaching and learning, as well as monitoring whole-school initiatives and interventions.

Embed routine practices using data within the teaching and learning cycle

- Widely publish a concise and streamlined data plan to build consistent understanding among all staff of the school's approach to using data.
- Maintain a systematic process for data collection using both classroom curriculum assessments as well as other diagnostic and standardised tests.
- Make student learning visible through engaging and accessible data displays in each classroom and in general staff areas.
- Provide opportunities for the analysis and discussion of data at regular intervals within the term cycle so that assessment data informs the next steps in teaching and learning.

Foster a culture of collaboration and continuous improvement

- Prioritise regular time for staff to review and discuss achievement data for their students.
- Foster intentional collaboration through structured facilitation and protocols which encourage deep reflection and dialogue.
- Invest in professional development for staff to deepen their understanding of selected assessment tools and in analysing and interpreting data.
- Model a reflective and courageous professional culture where datasets are used to reflect on teaching practice and the effectiveness of classroom strategies.
- Use data and feedback from parents, stakeholders and the community to inform school practices and to strengthen the information and engagement in students' learning.

School snapshot

Case study: Knowing and growing every student

A primary school in the south-east of the state has forged a data culture driven by wanting to ‘know’ and ‘grow’ each of their students.

The school has a collective sense that data ‘is not a dirty word’ but a credible tool to ‘look for evidence’. It is embedded in the language of teaching practice, with a clear line of sight running from whole-school data, data conversations and professional learning, through to the progress of each student.

The school purposefully and systematically collects data to gain an all-encompassing view of every student. It draws on a range of behavioural, attendance, wellbeing and academic data to help staff ‘know their students inside out’. Teachers collaboratively trial and review Early Start datasets to find the most useful information about their students. This overall approach enables staff to identify student starting points, plot progress, understand context, plan interventions and tailor support.

Analytical skills have been developed by focusing on staff data literacy. Professional development to build capability in analysing and interpreting data is provided through staff meetings, staff development day sessions and professional learning teams (PLTs). The PLTs provide ‘safe pathways’ to share practice. Teachers are happy to take ownership, knowing that everyone is in it together, creating ‘buy in’ across the school.

The school analyses data through a ‘culture of teamwork’. Its collaborative approach is supported by processes for organising and comprehending information. The school has created an online ‘fluid’ data wall. Alongside this, the school has a ‘D/E/N register’ for tracking the literacy and numeracy performance of students. Students who receive a D, E or N are tracked on this register so that the school can consider the intervention and support needed to lift their performance. OneSchool is used as a repository for collating and examining behaviour incidents. A schedule of five-week check-ins supports the analysis of and responses to student data.

The school integrates the work of teacher-deputy ‘one-on-ones’ and teacher-led PLTs to make actionable sense of student data and celebrate success. Discussions focus on student, cohort and whole-school progress. There are opportunities to unpack the data with their peers, and investigate ‘why’ a student may not have progressed and ‘how’ they can move students or maintain achievement. PLT minutes document expectations, timelines, responsibilities and actions so that knowledge is translated into practice at the ‘ground level’ (see the ‘Professional learning team meeting minutes’ template on the next page for further details).



For further details about this case study, email the Education Improvement Branch at eibmb@qed.qld.gov.au.



Professional Learning Team Meeting - Minutes

Term & Week:

Time:

Attendees:

Apologies:

Minute Taker:

ENGLISH

What is it we expect our students to learn? (This cycle)

How will we know when they have learned it? (Planned common assessment.
Formative/Summative)

What will we do for the students who don't get it?	Who & What	Response & Time Lines
What will we do for the students who need enrichment?	Who & What	Response & Time Lines
What is it we expect our students to learn and by when?		
•		

Meeting Closed:

References and further reading

Australian Council for Educational Research (ACER) 2012, *National School Improvement Tool*, ACER, Melbourne.

Bernhardt, VL 1998, 'Multiple measures', *California Association for Supervision and Curriculum Development (CASCD)*, nces.ed.gov/pubs2007/curriculum/pdf/multiple_measures.pdf.

Earl, LM & Timperley, H (eds.) 2008, *Professional learning conversations: challenges in using evidence for improvement*, Springer, New York.

Fullan, M, Hill, P & Cr  vola, C 2006, *Breakthrough*, Corwin, Thousand Oaks.

Hattie, J 2005, 'What is the nature of evidence that makes a difference to learning?', Australian Council for Educational Research, research.acer.edu.au/research_conference_2005/7.

Sharratt, L 2019, *Clarity: what matters most in learning, teaching, and leading*, Corwin, Ontario Principals' Council, ACEL Inspiring Educational Leaders, Thousand Oaks.

Sharratt, L & Fullan, M 2012, *Putting faces on the data: what great leaders do!* Corwin, Thousand Oaks.

Sinek, S 2011, *Start with why: how great leaders inspire everyone to take action*, Portfolio Penguin.

Sinek, S 2009, *How great leaders inspire action* [TED talk], www.ted.com/talks/simon_sinek_how_great_leaders_inspire_action?language=en.

State Schools — Performance

Resources

- [Assessment and Moderation Hub](#)
- [Every Aboriginal and Torres Strait Islander student succeeding](#)
- [Every student succeeding: state schools improvement strategy 2020–2024](#)
- [Every student with disability succeeding](#)
- [Inquiry planner](#)
- [P–12 curriculum, assessment and reporting framework](#)
- [School improvement planning: a guide to effective improvement planning](#)
- [Standards of Evidence](#)
- [State schools improvement strategy 2020–2024 \[PowerPoint\]](#)

- [The Evidence Hub](#)
- [Whole school approach to differentiated teaching and learning](#)



Professional learning

Rosenshine, B 2012, 'Principles of instruction: research-based strategies that all teachers should know', *American Educator*, www.aft.org/sites/default/files/periodicals/Rosenshine.pdf.

This article presents 10 research-based principles of instruction, along with suggestions for classroom practice.

Wiliam, D 2014, 'Using assessments thoughtfully', *Educational Leadership*, vol. 71, no. 6, pp. 16–9, www.ascd.org/publications/educational-leadership/mar14/vol71/num06/The-Right-Questions,-The-Right-Way.aspx.

Formative feedback is a well-researched practice to move student learning forward. Dylan Wiliam shares some practical strategies to enhance the formative assessment and feedback loop.

QELi's online executive coaching for individuals and teams

As leaders move into uncharted leadership territory due to the impact of COVID-19, coaching can make a significant difference to the quality and effectiveness of your decision making.

QELi's online coaching for individuals and teams offers flexible and highly individualised coaching as a means to understand the evolving landscape for you and your community. With your highly experienced coach, you can make sense of the myriad advice currently available and determine the best way forward to lead your school, your teams and your students.

QELi TV

QELi has recently launched QELiTV, a new platform on their website where they host videos and voice recordings from some of the country's most experienced thought leaders and QELi partners.

“ Nothing else matters in teaching and learning as much as ... data that inform and differentiate instruction for each learner in a never-ending cycle of inquiry to discover what works best ”

(Sharratt 2019, p. 120)



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