WE’RE READY FOR YEAR 7

2015 is a significant year for Queensland education with the formal move of Year 7 from primary to secondary schooling.

This initiative, decided by the previous Queensland Government and supported by the current Government, will bring Queensland into line with every other State/Territory in Australia except Western Australian and South Australia.

It will also complete a significant and deliberate transformation of the structure of Queensland schooling over a period of eight years which has included the introduction of the Prep year (in 2007), a change to the school starting age (also 2007), the provision of kindergarten (with participation in kindergarten in the year before Prep increasing from around 29% of students in 2008 to 97% in 2013) and “learning or earning” laws which require young people to be in education or training or employment.

These structural changes to schooling have been complemented by other reforms under the banner of the Beattie/Bligh Governments’ ETRF (Education and Training Reforms for the Future) initiative and the Newman Government’s more recent reform agenda, including the introduction of Independent Public Schools and the reduction of red tape.

In fact, if we look back over the past ten years virtually every major aspect of Queensland’s school education system has been reviewed and the subject of reform.

Even the relatively untouched area of senior assessment and tertiary entrance is now the subject of a review announced by the current Minister for Education, Training and Employment, the Hon John-Paul Langbroek. The outcomes of this review being undertaken by the Australian Council for Education Research are expected to be presented to the Minister by the end of this month.

There are good reasons for the substantial changes to Queensland education. For too long Queensland students have lagged well behind their interstate counterparts in educational outcomes.

The impact of these significant structural changes to Queensland schooling is already showing with improvements to educational outcomes as measured by the annual NAPLAN, and an acknowledgement that Queensland has improved outcomes in the early years in particular.

The transition of Year 7 to secondary education is an accepted and sensible follow-on from the introduction of the Prep year in 2007.

Without the change, primary students would be completing eight years of primary schooling. Given the more rigorous Australian Curriculum now implemented in primary schools, it is logical that the Year 7 cohort of students are better suited to the educational challenges presented by the secondary curriculum.

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WHY AND HOW TO USE DATA TO IMPROVE LEARNING

If we want whole systems to succeed with every child—which is indeed the challenge of the 21st Century—then we need collective capacity: and collective capacity involves teachers in each school and between schools engaging in serious conversation of what good teaching looks like and how it is achieved. For that conversation to be successful, evidence is required; and if evidence is to go beyond anecdotal, then good data are essential (Michael Barber, Sharratt & Fullan, 2012).

Since the advent of NAPLAN testing in Australia data has become a focus area in schools. School leaders are collecting data on standardised tests, in-class assessments, absenteeism, behaviour, parental employment and education levels, critical incidents, workplace health and safety issues and a myriad of other topics.

Often this information sits on a database within the school and is available to a limited number of people in leadership and management positions. In recent times, however, the power of data to change teacher practice and improve student learning has come to the fore.

This Briefings paper, in a departure from usual publications where a number of sources of research are presented, reviews a single publication, Using Data to Improve Learning, by Anthony Shaddock, the head of the Inclusion Education Program at Canberra University.

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Independent Schools Queensland has always supported the transfer of Year 7 to secondary, whilst recognising the issues raised by parents such as the need for excellent pastoral care. Families who choose boarding for their children at secondary level face further challenges, not the least of which is the financial impact of another year of boarding fees.

Primary-only schools also face unique challenges as they adjust their operating models and in the case of independent schools, their business models, to account for the loss of a year level cohort.

I can confidently say that independent schools are ready for Year 7 in secondary and are looking forward to welcoming their students into Year 7 in 2015.

Currently, 154 independent school campuses offer both primary and secondary schooling and three quarters of these have been operating an organisational structure where, for many years, Year 7 has been either incorporated as part of secondary or middle schooling.

Independent schools are expecting more than 11,000 students in Year 7 in 2015, in addition to the nearly 11,000 students who will also be entering secondary for the first time at Year 8 (these students are the original cohort to commence the Prep year in 2007). Our newest Year 7s will be part of the nearly 58,000 students across the state entering Year 7 in secondary for the first time.

Independent schools have identified the following four areas as integral to successful transition of Year 7 into the secondary context.

- Pastoral Care
- Academic Excellence
- Support Services
- Classrooms and Facilities

PASTORAL CARE
Pastoral care will continue to be a focus for independent schools which are recognised for their strong pastoral care and student wellbeing. Great emphasis is being placed on ensuring Year 7s are welcomed, supported, and nurtured as they transition to secondary schooling in 2015.

ACADEMIC EXCELLENCE
Excellent academic programs will continue to be implemented in independent schools with thoughtful consideration given to aspects such as the curriculum, teaching and learning frameworks and assessment. In addition, the implementation of the Australian Curriculum since 2012 will ensure continuity of educational programs as students transition from primary to secondary school.

SUPPORT SERVICES
Teachers in independent schools are committed to providing excellence in teaching and learning, and a positive learning experience for students. This approach will continue to apply to education programs designed to ensure Year 7 is integrated into secondary schooling. Additionally, teachers in independent schools who will be teaching Year 7 as part of secondary schooling for the first time are being supported with teacher readiness programs, which include mentoring and wellbeing programs.

CLASSROOMS AND FACILITIES
Schools have considered all aspects of infrastructure, from classrooms to appropriate specialist facilities, designated play areas to locker areas and have invested in their classrooms and facilities to make sure Year 7s will feel at home from day one in secondary school.

2015 will be an exciting year for Queensland education. Independent schools are ready for Year 7 and are looking forward to welcoming our newest secondary students.

David Robertson
Executive Director
Independent Schools Queensland

Independent schools are ready for Year 7 moving to secondary in 2015:
- pastoral care
- classrooms and facilities
- support services
- academic excellence

Find and visit an independent school near you:
www.isq.qld.edu.au
Shaddock puts forward the proposition that:

- Good schools are places where everybody learns
- Reforms and initiatives imposed from outside schools and classrooms will have minimal impact unless they are understood, embraced, contextualised and implemented in ways that are meaningful, helpful and productive in individual schools and classrooms
- Educational performance at the macro level will gradually improve when teachers routinely engage with data about teaching at the micro level
- Teachers can and will engage in ongoing, data-based interrogation of their teaching as long as they see the processes are feasible and provide immediate benefits for them and their students.

The proposition suggests that what is needed is ‘ongoing, sustainable, collaborative inquiry that is built into the day-to-day business of schools’. It needs teachers working together in groups or as a whole school to pose questions about teaching and learning, study evidence, gather and analyse data, and reach conclusions about how to change practice to improve student learning; it needs leaders who participate in teacher learning and development and understand that gathering and analysing data are essential leadership skills; and it needs ongoing action research and data analysis by teachers to determine what works for them, in their schools, with their students.

The list of benefits of using data to improve teaching and learning is too long to reproduce in a short paper; however, research evidence (Shaddock, 2014; Sharratt & Fullan, 2012; Masters, 2012; Hattie, 2009; Timperley et al, 2007) identifies some benefits as:

- Improved student learning
- Greater awareness of student progress
- Improved teaching practices
- Improved school performance and capacity
- More effective and focused responses to student diversity
- Improved teacher confidence and professionalism.

Shaddock makes two pertinent points about avoiding the trap of over-thinking the data issue. He says, (1) that evidence-based practices don’t necessarily have to be ‘gold-standard’ scientific studies and (2) excessive time does not need to be wasted to argue over the meaning of such words as ‘data’, ‘evidence’, ‘inquiry’, ‘practice’, ‘improve’ and so on.

The important thing is for teachers to use a common language (or to agree to use Shaddock’s definitions, and move on); and to work together to collect, analyse and integrate several types of data about both evidence-based practice and practice-based evidence.

This involves reading educational research; observing students in their own and others’ classrooms; analysing school data such as NAPLAN results, attendance records, and community feedback; and collecting data about the learning of students in their individual classrooms.

It is also important to engage with the right data for the right purpose. Teachers’ time is too precious to waste on activities that are not well chosen.

Shaddock’s stance is to advocate for action learning. That is, ‘bringing people together to learn from each other’s experience’. There is an emphasis on studying one’s own situation, clarifying what the organisation is trying to achieve, and working to remove obstacles (Kemmis & McTaggart, 2000). He provides a framework for using action learning (see Figure 1) and a written planning template for data engagement.

Even though teachers are time poor, he argues that the time spent to get the planning right is worth it. Good planning is flexible and even though the plan is likely to change as the data is collected, analysed and reflected upon, the discipline and focus of a written plan at the beginning is far preferable to simply planning ‘in your head’.

In addition to planning for data engagement, there needs also to be planning for collaboration. Shaddock outlines how to get the best results from collaboration, the ethics and principles for working with others and the politics of groups sharing work and outcomes.

Once again, the research is powerful on the benefits of collaboration. Much of the wisdom about teaching and learning resides with teachers in the classroom and in the staffroom this wisdom remains untapped without regular collaboration. If teachers as a group don’t find an initiative helpful it is doomed to failure, whereas working together has such benefits as:

- increased collegiality and support, particularly for teachers unfamiliar with using data;
- sharing the load;
- sharing ideas and wisdom;
- developing a learning community;
- increasing rigour, credibility and sustainability; and
- increasing the chances that changes will gain traction in the school.

One of the difficulties with data is deciding on the focus area for improvement and on which data need to be collected. One effective way to do this is to begin the discussion by asking the question, ‘What are doing well?’ and following up with questions such as ‘What are we not doing well?’ or ‘What could we do better?’

Shaddock suggests a number of rules in making decisions about a focus area. Well-founded teaching and learning initiatives should
be consistent with the teacher role. That is, they should relate to the National Standards for Teachers, the school code of conduct and the teacher’s responsibilities; be supported by the policies of the school, and state and national government policies; be a school priority; focus on student learning; be pedagogically justifiable; be something that can be changed (for example, teachers can affect the effectiveness of their teaching but they cannot change something like a student’s socio-economic status); relate to something teachers do and care about; be manageable; integrate with other initiatives; and be adequately resourced (Shaddock, pp 47–48).

When the focus area is decided, the next step is to decide on the action to be taken. At this stage, Shaddock says the evidence base needs to be checked – before you embark on action. He gives the example of Year 6 teachers wishing to improve transition for students from Year 6 to Year 7 and points out that at the point before action is taken a review of the research on best practice transition will improve the effectiveness of any changes that are proposed.

Examing research does not mean that a full literature review for a thesis needs to be written. It is simply a matter of reading the research and evidence about the proposed action and checking whether it’s likely to be successful before any intervention occurs.

At this stage of Shaddock’s book, he has set the foundations for implementing teacher initiatives by providing information about how to work with others, decide what to do, and check whether there is evidence that the initiative is likely to work. In the second half of the book he focuses on what he calls ‘the Plan for Using Data.’

He begins with one of the most important aspects of data collection – asking the right questions. This is critical to successful data collection and analysis. For example, what is the purpose of the data collection? What data need to be collected to fulfil this purpose? Who and where should it be collected from? How should it be collected (survey, focus group, interview, audit etc.)?

The data should be relevant to the particular initiative, context specific, focused and personal in the sense that it relates to the behaviour of the people collecting the data not the behaviour of others, e.g. not ‘What must our students do to be more engaged?’ but ‘What can we do to engage our students?’ While ‘what’ questions are useful and important in data collection Shaddock also recommends, ‘Who? Where? When? How?’ and ‘Why’ questions as helpful in making decisions about how to structure action learning and to decide on the types of data to be collected.

Data fall into two categories: quantitative and qualitative. Quantitative data is, broadly speaking, data about entities or variables that can be quantified and counted. Much of this data will already be held in the school in routine collections of information required by the school or by governments. The school census, for example, fits into this category, as does enrolment data, data about parent occupations, in class assessment data, standardised testing data, behaviour incidents and so on.

Qualitative data, on the other hand, is ‘about qualities, descriptions, processes, views and relationships… it is the information you usually get from interviews, focus groups, observations, video footage, reflections, journals, diaries, accounts of personal experience and similar attempts to understand what is happening through experience’ (Shaddock, 2014).

Both types of data have advantages and disadvantages. Quantitative data is usually quicker, cost efficient and easier to collect and much of it may be already available on the school’s database. It is usually easy to summarise, display and analyse. The problem with quantitative data is it only tells part of a story. Shaddock gives the example of student engagement data.

You can measure the level of student engagement by looking at such things as attendance, assignment completion, the number of times a student answers a question in class, all easily quantifiable information, but this information alone won’t answer the more important questions about student engagement. To find this information you will need to collect qualitative data.

Qualitative data is ‘rich’ in that it gives more detail, different insights and personal views. In the case of student engagement, above, it helps to answer such questions as ‘Why are students disengaged?’ and ‘How might we engage them?’ The disadvantage of qualitative data is that it takes longer to collect and analyse and has to be examined for bias. It may be collected through journals, diaries and logs, observations, videos, photography, interviews, stories and reflections, questionnaires and surveys, group data gathering techniques and emergent technologies.

A trap with both types of data is choosing only the data you can use and no more. The temptation to collect as much information as possible even though some of the data are not relevant to the particular question asked is a trap many organisations fall into. Leaving out some types of data is also a trap. Often, for example, schools do not consult students about their education even though this is a very rich source of data. Rudduck and McIntyre (2007) point out that when teachers consult with students, students:

- show greater willingness to learn;
- improve their attendance;
- demonstrate increased motivation and more positive attitudes towards teachers and schools;
- are less willing to be intimidated by demotivated peers;
- increase talk and participation in class; and
- take more responsibility and control over their learning.

Teachers should ask their students about their learning: What are you learning? How are you doing? How do you know? How can you improve? Where do you go to for help? And about their teaching: What...
was I teaching? What did you learn? What would have been a good way for me to teach you? What would be a good a way for me to assess what you learned?

In any case, collecting both qualitative and quantitative data, gives a more complete answer to the question posed. For both types of data asking what, who, when, how, why is a good way to drive collection.

When the data are collected they will need to be analysed. Preferably, the person who collects the data should be the person who analyses it. In this way he or she has a deeper engagement with the data and is able to keep everyone’s attention on the reasons the data were collected in the first place – to improve teaching and learning.

When it comes to analysis of data, everything should be driven by the reason for collecting. That is, the questions posed about teaching and learning. Importantly, it should be stored in such a way that it is secure but easy to retrieve. Data are of little use if they are not easily accessed by everyone who can use the information.

The whole point of analysing data is to make them more interpretable so that decisions can be made about how to improve teaching and learning. Shaddock recommends to ‘always draw a picture of data’ as this makes it easier interpret in a genuine and unbiased way.

When interpreting data use the following strategies:

• is the data relevant, accurate and comprehensive enough to guide decisions about teaching and learning?
• cross-reference the data with other relevant data;
• use common-sense in interpreting the data;
• don’t assume that just because one event occurred after another, or is associated with it, that the first event caused the other;
• try to interpret data as simply and logically as possible and without unnecessary complexity
• resist the temptation to take notice of positive data only;
• look for ‘surprise data’ or data that does not seem to fit; and
• treat results as the starting points for further data-informed inquiry about teaching and learning.

Understanding what is relevant is particularly important when analysing qualitative data. Schools often prefer quantitative data because it is so much easier to analyse and can be done by technology, thus saving teacher time. In order to get the full picture of what is happening, however, qualitative data must also be collected.

Shaddock points out that some of the time used to analyse qualitative data can be saved by only analysing the parts of the data that are relevant to the question being explored and making decisions about whether all of the information collected needs to be transcribed or whether dot points will do.

He describes a number of methods for analysing qualitative data that can be used by people without any highly specialised skills. These include ‘top-down’ analysis which involves deciding in advance the type of information for focus; and ‘bottom-up’ analysis which involves reading all of the data presented and searching for patterns.

One of the chief problems with qualitative data is that it is open to bias. For example, if a person has recently had a bad experience at the school and is the member of a focus group, he or she is more likely to respond negatively to a question than might happen immediately after having a positive experience with the school. Qualitative data is also open to the analyst of the data seeing things that confirm a preconceived notion and ignoring contradictory data. Although it is impossible to remove all bias, it can be limited.

One of the most effective ways to do this is to be aware that bias exists in the first place and is impossible to tune out. It can be recognised and balanced by assembling a diverse group of people and using a balance sheet process that involves withholding judgment. In this process, the CEO puts forward an idea and asks participants in the process to list points on both sides of the idea; that is, what’s good about this idea? What is bad about it?

The important thing is that no-one is allowed to make a judgment on the idea at this stage and, because they don’t have to start the process of justification, participants give their best insights and consider the ideas of others without ‘freezing their opinions’ (Komisar, & Mullins 2009). The process also overcomes the problem of people marshalling the facts to support their case while ignoring those that don’t. It is only after everyone has had their say that a decision is made.

Another way to reduce bias is to ask all participants in a group to reflect on their own biases at the beginning of each meeting. Simply asking people to articulate the experiences which influence them is valuable in counteracting bias; changing the angle of vision to make it wider by creating a reasonably large set of similar endeavours for comparative analysis is also helpful.

Most leaders are biased towards action; that is, they feel under pressure to take action when what appears to be a good idea presents itself. However, actions are often prompted by excessive optimism about the future and especially about our own ability to influence it (think enrolment projections!).

This is particularly so in cultures which suppress uncertainty and reward behaviour that ignores it. For example, a leader who expresses and projects great confidence is more likely to have a decision approved than one who lays out all the risks and uncertainties surrounding it, even though the second decision may be better than the first. Principals and teachers seldom see confidence as a warning sign and, therefore, may not recognise the bias towards overconfidence and over-optimism.

Superior decision making processes counteract action-oriented biases by promoting the recognition of uncertainty. One way to do this is to make a clear and explicit distinction between decision meetings, where leaders embrace uncertainty and encourage dissent, and implementation meetings, where it’s time to move forward. Another way is to use decision making tools, such as scenarios and decision trees that force consideration of many potential outcomes, as a regular part of the process.

In contrast to action biases, stability biases make organisations prone to stay with the status quo. This might be seen in the reluctance to change
school timetables, the tendency to hold onto programs that should be divested, and unwillingness to try something new because it might fail.

One way to review whether or not your school is ‘stability biased’ is to compare decisions over time to see how many fall back to the status quo. A way to overcome this bias is to set ‘stretch targets’ that are impossible to achieve through ‘business as usual,’ thus forcing staff to try new ideas and look at new ways of doing things.

Perhaps, the most common and difficult biases to overcome, interest biases, manifest themselves in ‘silos thinking’ where subject departments, for instance, defend their own interests instead of those of the organisation as a whole. Strong decision making processes are the simplest way to counter interest biases.

For example, before the decision meeting, leaders need to formulate precisely the criteria that will be used to evaluate the decision so there is less chance for vocal participants to make their own preferred action more attractive. Populating meetings with participants whose interests clash is also a strategy to reduce the chances of one set of interests undermining thoughtful decision making.

Finally there are social biases which occur because of deep rooted human tendencies to conform to the dominant view of the group or to fit in with the perceived view of the ultimate decision-maker (while making the assumption that he/she is not open to argument and a change of mind).

While there are tools and techniques available to stimulate debate amongst teams, the commonly accepted behaviour and the culture of the organisation is the main determiner of social bias. Genuine debate requires diversity of backgrounds and personalities in decision-makers, a culture of trust and an acceptance of risk taking and mistake making.

Most critically, it requires leadership that genuinely believes in the intelligence and expertise of its management team and teachers and encourages, and accepts, diversity. Leaders must show by their actions that they are comfortable with dissent and demonstrate that employees can ‘take them on’ and change their minds.

Hand in hand with social bias is the idea that ‘we’ve always done that here’ That is, there can be a strong tendency for people to hold onto the way things have always been and to resist change, particularly if the decision is taken out an ‘historical’ program, aspect or activity of the school. Any leader who has attempted to change school uniform knows how strong the resistance is to change.

To overcome this problem schools need to establish a decision making framework that says there are no preconceived commitments to a historical activity, but that what the school is doing now or has been doing for many years will be discussed on equal terms with other initiatives. This process will only work if there is a balance of people who can champion and advocate the future and those who own and are invested in the past in the decision making group.

When steps have been taken to reduce bias and data have been collected and analysed from external sources, classroom data and insider knowledge of the school Shaddock says it is time for reflection on what conclusions have been drawn from the data. This involves ‘robust professional conversation’ with colleagues and reflection as an individual on the implications of the data and the actions to be taken as a result of the analysis.

In the final chapter of Using Data to Improve Learning, Shaddock ‘puts it all together’ with a checklist for making decisions about the action learning team; the initiative to be acted upon; the evidence base; rationale; questions to be asked; the data collection plan; and the professionalism of the people involved.

Finally, he discusses the importance of sustainability and of making data gathering and analysis central to school, teacher and student improvement. In doing this he returns to his original proposition that what is needed for continuous improvement is ‘ongoing, sustainable, collaborative inquiry that is built into the day-to-day business of schools.’

As he puts it:

‘Teachers are extraordinarily busy professionals. ‘Teacher time’ is a scarce resource and not too many are looking around for ways to increase their workload. It is important, therefore, to view engaging with data as integral to teaching and as a major contributor to improving student outcomes and not as an accessory or optional extra.’

BIBLIOGRAPHY


Shaddock, J (2014), Using Data to Improve Learning, Australia: ACER Press.

WHY AND HOW TO USE DATA TO IMPROVE LEARNING

Interesting sites & articles


Anthony Shaddock has written a very readable book about the importance of data, why we need to engage with it and how teachers can develop their skills in analysing data to improve learning for students.

The book includes useful frameworks and templates and walks teachers through both the theory and the ‘how to’.

Explaining Big Data

> [www.youtube.com/watch?v=7D1CQ_LOizA](http://www.youtube.com/watch?v=7D1CQ_LOizA)

Big Data is the next big thing in computing. This video explains Big Data characteristics, technologies and opportunities. [8.32 minutes]

ISQ Research in action

ISQ Self Improving Schools website


This site contains the following resources:

**How can the school use data to improve student outcomes?**

The use of data is a powerful tool to strengthen academic outcomes for all students. Using data reveals those students who are falling behind, those who need extending, those for whom what has been taught has not been understood, and those parts of the curriculum that need revisiting. Data disaggregated by factors such as ethnicity, English proficiency, gender, behaviour referrals and disability status can highlight policies and practices which are not working for particular groups.

Data use informs teacher preparation and training needs, supports revised instructional practices to improve student performance and measures the effectiveness of ongoing academic and social support programs; it makes teachers more accountable to one another through collaborative school improvement work and reflective practice; and it may challenge untested assumptions about some students’ inherent ability.

- **Self-Improving Schools RESOURCE:** [Data Collection & Analysis](http://www.isq.qld.edu.au/using-data)
- **RESOURCE:** [Using Data to Guide Instruction and Improve Student Outcomes](http://www.isq.qld.edu.au/using-data)
- **VIDEO:** [Using Data to Build Better Schools](http://www.isq.qld.edu.au/using-data)

Further Resources:

**RESOURCE:** Paper on the [Breaking Ranks Model](http://rd.acer.edu.au/article/using-data-to-improve-learning) includes how to create information system capacity for data-driven reform and the data elements to include (page 27).

**How can teachers use assessment data to inform planning, teaching and learning, and resource selection and allocation?**

The overall aim of assessment is to make informed and consistent judgments about students’ current learning and to improve future student learning by analysing assessment data.

- **RESOURCE:** [Assessment Advice](http://rd.acer.edu.au/article/using-data-to-improve-learning) - Victorian Department of Education and Early Childhood Development
- **ISQ BRIEFING:** [Authentic Assessment: Assessment for Learning](http://rd.acer.edu.au/article/using-data-to-improve-learning)
- **VIDEO:** [Assessment for Learning](http://rd.acer.edu.au/article/using-data-to-improve-learning)
- **VIDEO:** [Solution Tree](http://rd.acer.edu.au/article/using-data-to-improve-learning), Dylan William, Content then Process
- **VIDEO:** [Principles of Formative Assessment](http://rd.acer.edu.au/article/using-data-to-improve-learning)
- **RESOURCE:** [PowerPoint Presentation from the Victorian Department of Education on Assessment](http://rd.acer.edu.au/article/using-data-to-improve-learning)
- **RESOURCE:** [Discussion starters from the Victorian Department of Education and Early Childhood Development website](http://rd.acer.edu.au/article/using-data-to-improve-learning)