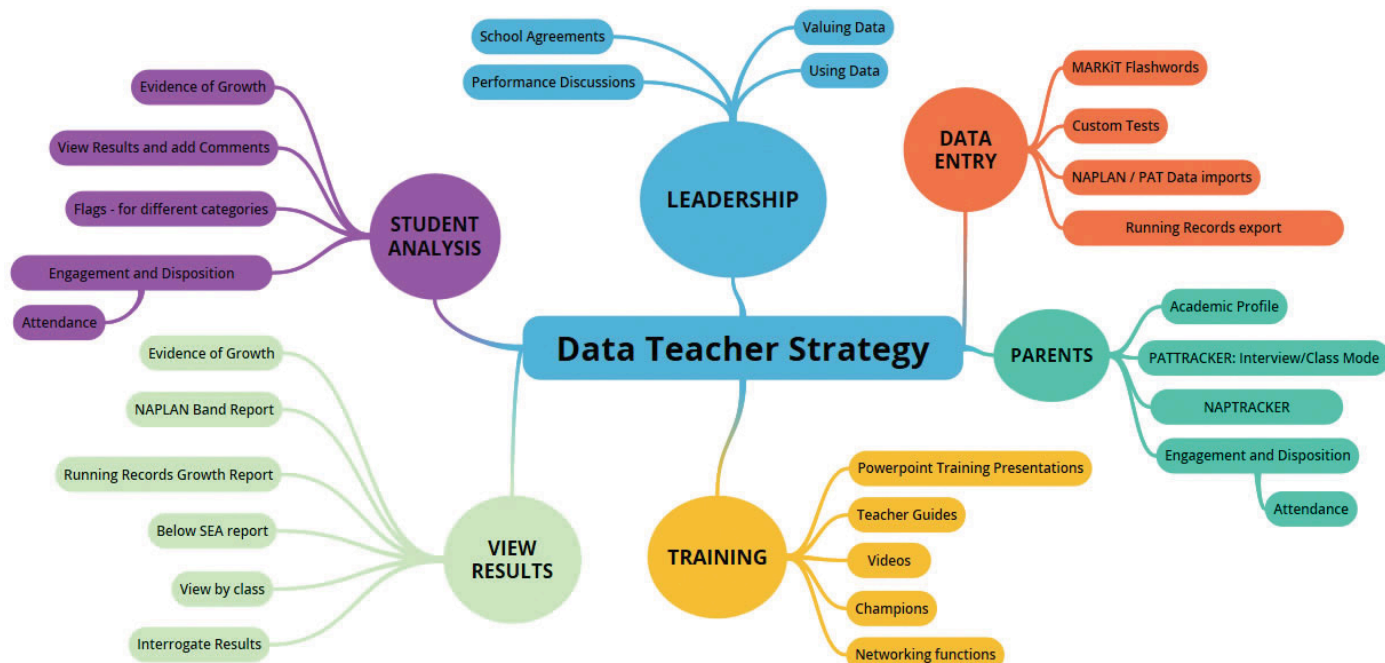


Mining the data to identify learning opportunities

Just as playground duty is a requirement of working in a school so too should good data collection processes and evidence-based decision making – **Michael Tunks**



Developed over several years by Impromation, MARKiT is an online markbook currently in use by over 100 schools in South Australia and New South Wales to collect data sets including school assessments, standard test results like ACER and NAPLAN, report grades as well as supplementary data including attendance and mind-set survey results.

Director Michael Tunks says that, in response to schools wanting to increase the engagement of their teachers with the data they collect, MarKit has evolved from an executive-centric model to teacher focused.

“Through conversations with schools that are using data well to increase the engagement of their teachers, we created a mind map of processes.

“The resounding consensus we heard was that it takes good leadership and expectation. Data collection and analysis is a requirement of good teaching practice. If teachers are not using data to inform their decisions – what are they using? Just as playground duty is a requirement of working in a school so too should good data collection processes and evidence-based decision making.

“Teachers may feel uncomfortable and feel they may be judged by the data – but good leadership provides supportive environments and guidance. Data is not used to judge teachers but to identify learning opportunities for students.

“The schools we spoke to admitted there can

be a negative attitude towards data collection and its use but once teachers see the purpose is to improve school-wide performance, attitudes change and the most negative teachers can become the greatest advocates.

“But data also needs to be seen to be used. Just collecting it is seen as a purposeless waste of time but data that is examined at staff meetings and discussed with supervisors becomes invaluable.

“Staff agreements around timely data collection; discussions about data that it values; and transparent decision making based on collected data are key elements in winning staff over.

“Action has to be taken on the data and it needs to be used properly otherwise there is no point in having it.”

Purposeful data discussions

Useful ideas for introducing data discussions in schools can include:

- a regular spot in staff meetings to examine collected data e.g. running records at end of a term
- a quiz approach (especially if familiarising staff with software programs or spreadsheets) – find your class results for xxx; maximum/minimum score
- compile a list of questions staff have about a set of data and leave it until a subsequent meeting and begin with answering their questions

- share success stories about how data made a difference
- share concerns about data – e.g. start with absence data and discuss strategies
- keep it simple and don't overcomplicate the process of data collection
- stress ownership of data. Abrogating responsibility for data collection to an administrative staff member removes the process from its rightful place in the teaching-learning cycle. It's better to have data 'champions' in the school – staff member/s who understand the importance of data and are comfortable with its collection and use; champions work with staff members and don't remove the responsibility from them.

Training

Along with strong expectations that teachers will collect and use data, leaders need to ensure that teachers have the necessary concomitant skills – decisions about what data to collect, how to collect it and when, and where and how to record it should be made collaboratively and teachers should be supported to be successful at it.

If software programs are being used, staff need to be adequately trained to be proficient with its use.

Data entry

Many schools appoint a data custodian who oversees that data is entered on time and in the

proper format. But this role can easily become one of entering data for others who can't or won't or assuming the data responsibility of others. This is particularly prone to happen in schools where data collection is entrusted to administrative staff. In schools where data is valued, expectations are clear and data collection and collation is seen as an integral part of the teaching-learning process.

Viewing and analysing results

Learning how to view and interpret data can be a valuable experience for staff – doing this together in short dedicated time slots where questions are encouraged and observations accepted. Some people prefer viewing data in tables and spreadsheets while others prefer graphs and diagrams so presenting data in a variety of formats can also stimulate interaction with the data.

Tunks says: “Data analysis begins with making observations of the data and asking questions. One school had noticed that a reading program intervention was working effectively for 80 per cent of students but not at all for the others. They questioned this in staff discussions until someone realised that students with

dyslexia were a significant proportion of the 20 per cent and so a more appropriate intervention was sourced.

“This same school also noted that their reading results were peaking at Year 5 and then tapering off rapidly. They reasoned that measuring reading proficiency had become based around a read-then-test mentality and not reading for engagement. They are now developing strategies for improving reading engagement and rearranging books in the school library to promote engagement.”

Sharing the data with students

Discussing results with students can often reveal insights into why and how they learn and can also motivate them to greater effort and goal setting.

“We spoke with a school that has regular performance discussions with students and asks them why they think their results are trending the way they are,” Tunks says.

“Feedback from these discussions informs teachers how to better manage individuals and groups of students to improve their performance.

“One teacher said: ‘The students see their

results and have a true vision of where they are at rather than the thought process of ‘I’m dumb at everything!’” Often such factors can be more dispositional than academic which raises the question of what data should schools be collecting and using for decision-making.”

What data?

Tunks says that in some schools attendance data is more important, in others it is academic data, sometimes socio-economic data may inform decision making. Student mindset data can form a helpful backdrop against which academic data is more informative. Each school needs to make decisions about what data is valuable for their situation.

“The message is clear from successful data-consuming schools,” he says “Set strong leadership expectations; keep it simple but required; be supportive not judgemental; involve teachers in data based decision making.

“This is a developing process that will take time to proliferate through the school body but as one executive teacher summed up the process, ‘the effort has been outstandingly beneficial and we are now well past the point of no return.’”

i-Theatre brings storytelling to life for digital early learners

I-Theatre draws on the ancient art of storytelling utilizing new digital media to provide a powerful framework to combine childhood media education with a truly multisensory experience. This combination is a powerful way to incorporate art and design with STEM and STEAM education.

The culmination of an intra-European research project, i-Theatre extols the benefits of storytelling as a learning methodology. It is a unique learning system for early years and primary aged children that facilitates story-creation and multimedia storytelling. Suited to any educational context where learning-through-play is a theme, i-Theatre engages students using a multi-sensory approach.

To create a story using i-Theatre, children first produce the characters, backgrounds, and other content for their stories using traditional media such as paper, pencils, markers, etc. Hardcopy materials are then converted to digital content using the unit's built-in scanner and stored for later use.

Children use a variety of physical chip-embedded objects such as wooden shapes, durable function cards, and scene recording boxes to interact with i-Theatre in a sensory-rich manner that facilitates the development of social and emotional skills, cause and effect, sequencing, collaboration, creativity, fine motor skills, independence and other vital skills.

Lessons may also include the creation of storyboards to map out and plan their productions. Stories are brought to life by children manipulating their content on screen and recording sounds and their voices for characters and narration. Later, stories can be played back through the i-Theatre's screen, projected onto a larger screen, or exported via USB to be shared with friends and family.

Learning frameworks

The collaborative nature of storytelling combined with i-Theatre's mix of digital and tangible elements allows children to: “resource their own



learning through connecting with people, place, technologies and natural and processed materials” (Early Years Learning Framework). Building on the framework, i-Theatre fulfils many requirements of the Australian Curriculum from Foundation to Year 2. The underpinning methodology pays homage to the Italian holistic early learning pedagogies of Reggio Emilia and Montessori.

Document and evaluate

The digital archive of multimedia created by students makes it easy to document and evaluate their learning and share material with parents.

iTheatre is available exclusively in Australia and New Zealand from The Brainary. Tel: 03 5229 2260 and www.brainaryinteractive.com