Catholic Education
Diocese of Parramatta

Submission to the Education Evidence Base Public Inquiry

Catholic Education Diocese of Parramatta

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1   Introduction

Catholic Education Diocese of Parramatta (CEDP) provides quality learning and teaching for 45,000 students in 56 primary schools, 22 secondary schools, two trade training centres and four early learning centres across Western Sydney. CEDP employs approximately 6,000 teachers and staff in an area that reaches from Dundas Valley, west to Katoomba, south to Luddenham and north to Richmond.

CEDP supports the Productivity Commission's Inquiry into the National Education Evidence Base. CEDP has developed a strong data strategy based on a 'system to student' in three steps vision. This is based on the principle that granular data, that is, specific data about a school or student, is more useful in generating insights than system or national level data.

This paper argues that government involvement in a national education evidence base and subsequent education policy should be focused on creating an environment where educators are encouraged to engage with real time, dynamic, granular data at point of need to improve student learning, in addition to a focus on national aggregate data sets. Aggregate data sets have a place, however they cannot be the only driver of policy development: it is the granular data that is the most powerful and valuable in relation to improving student learning.

CEDP will argue the following in this submission:
1. Granular data is more important than aggregate data sets and this has to be taken into account in the policy development process.
2. Data needs to be used to encourage an open dialogue between policy makers, education systems and education leaders rather than for comparative and punitive purposes.
3. The national education evidence base should be used further for longitudinal research.
4. Government needs to target investment into system level technology solutions that allow education systems to capture, analyse and generate insights from data presented in a visually appealing and dynamic way.
5. Government needs to support the broadening of the assessment base to include non-cognitive skills.

2   Important of granular data

Aggregate collection of data has value to generate evidence. However, actionable insights for school improvement and monitoring learning outcomes are more feasible and possible through granular data. This submission argues that it is the personalised angle of the data that is the most important feature in monitoring learning outcomes and this is missing from an aggregate evidence base. Policy development based on this aggregate evidence base therefore may not have a direct impact on student learning and outcomes.

The aggregate data collected by the government is static and as such loses most of its value as contextual conditions of schools are seldom factored in. In contrast, data that is granular, real time and context specific has the most value as it allows for insights to be generated by teachers and educators on an at need basis to drive school improvement and better learning outcomes for students.

However, granular data only adds value if it is visually interactive and dynamic. It is integral that the way data is presented is considered. The story of the data has to be presented in an easy to understand way.

Any development of a national education evidence base to inform policy development must take into account the uses of aggregate versus granular data. Improvement to student learning will come through insights generated from granular data and therefore aggregate data should only be used to identify trends rather than as the sole driver of policy development. Policy instead must be based on the best evidence and research on effective learning and teaching.

3   Open dialogue and collaboration

The national education evidence base is currently primarily used for comparative and sometime punitive purposes. NAPLAN and PISA results are routinely used by the Federal Government to justify short term policy 'solutions' that are not research or evidence based. For the most part, the current data that is collected has very little impact on policy development and is primarily used for regulatory purpose, for example, increased reporting to different stakeholders.

As such, the current policy mindset is about regulatory intervention rather than improvement. Policy makers use the levers of more testing and more reporting in the hope of driving improvement however this kind of intervention does not work. If data is only used for comparative and punitive purposes, little can be done in the policy space to improve student learning outcomes.

Instead the national education evidence base should be used to create an open and frank dialogue between policy makers, educational leaders, principals and teachers. It is only in an environment of collaboration and support that data that can be used to personalise and improve student learning.

CEDP's data strategy is shifting the organisational culture towards this collaborative and open mindset, with a shift in role for system leadership from supervision to shared dialogue. Data is shared and used between system leaders and principals to generate insights about student learning.

4   Longitudinal data and research

CEDP asserts that one of the best uses of a national education evidence base is in longitudinal research to discern long term trends. A national education evidence base needs to be made available for this type of research, to provide insights through tracking a cohort of students from early learning to post school destinations.

5   Targeted investment

The Federal Government mostly collects demographic and census information and data on specific educational milestones such as NAPLAN and attendance. These data sets in isolation provide few insights into student learning. It is through taking a holistic view of student achievement using multiple lenses to bring more context and specificity that student learning can be improved.

CEDP uses the lenses of *school performance, student performance, resourcing and regulatory, community and culture, family and religion* and *teacher development* to create a holistic picture of student learning. Insights into student learning are generated through the relationships between attendance, enrolment history, school assessment and national tests, not just singular data sets. Governments have little scope to do this due to a reliance on aggregate data sets.

Governments, however, can have a role in encouraging system level use of granular, contextualised and real time data through targeted investments in technologies for system

use. For example, CEDP uses the software *Tableau* to present data visually and dynamically and to ensure that it is current and refreshed in real time. The power in data sets lies at the system and school level, rather than at the national level. Therefore targeted subsidies for systems and schools to invest in software analytic tools such as *Tableau* can prompt the most effective use of data.

Federal government should be encouraging the engagement of self service analytics at the point of learning so there is culture of using data to improve processes without too many layers of management involved.

6   Broadening the assessment base

A discussion about the National Education Evidence base also needs to include a discussion of the current state of student assessment and the current focus of national testing. There is a need to move from a narrow understanding of assessment, that grades student performance between 0-100 or A-E, to a broader understanding that looks at how we can capture a range of information and data on student performance. A broader understanding of assessment adds a level of complexity to the task but ultimately creates a richer picture of student performance and achievement.

This submission acknowledges that students' literacy and numeracy skills must continue to be assessed and that data continues to be collected on these measures. However, literacy and numeracy to the detriment of other skills is not the answer, especially as the nature of learning and the needs of students continue to change in the 21st century. Hence, there is a need to broaden the understanding of assessment to inform the education evidence base.

The OECD report *Schools for 21st Century Learners* notes that 'the kinds of skills that are easiest to teach and test are also easiest to automate, digitize and outsource' (Schleicher, 2015, 12). Policy makers must ensure that in relation to assessment, we are measuring what we value, not valuing what we measure. This requires looking at what skills students will need in the 21st century, such as collaboration, communication, critical thinking and creativity and how these skills might be assessed.

Essential to this is investment in assessing students in real time through mobile technologies. As previously noted, improvement to student learning is through school and teacher level engagement with real time data, rather than an aggregate national educational evidence base.

In terms of a national education evidence base, an important additional aspect will be the inclusion of aggregate data on health and other wellbeing indicators to discern trends and link health, education and community services policy. The inclusion of trends in mental health, suspensions, attitudes to schooling and other health indicators can help government create a more holistic picture of the external forces that have an effect on student learning. Although this data will not give any direct school improvement value, it can be used to discern societal trends and create a holistic policy response.

7   Privacy

CEDP acknowledges that privacy is a concern when collecting student data, especially real time data through mobile devices. It is integral that these privacy concerns are not overlooked in the national dialogue and that steps to ensure the privacy of students and families are undertaken in the collection of this data.

8   Conclusion

CEDP notes that the role of government in a national education evidence base is to collect aggregate data sets to determine long term societal trends. The role of systems and schools is to engage with visually appealing and dynamic data sets to generate insights about student learning, in which government's role is fairly constrained.

CEDP underlines that a major problem is the mindsets of policy makers which focus on regulatory intervention and punitive measures based on aggregate data sets rather than encouraging collaboration and open dialogue to generate insights from granular data sets. Government energies would be better spent subsidising and supporting technology investment and data analytics at a system and school level.

Self service data analytics at point of need to generate insights about student learning without too many layers of management and government involved is the most integral aspect of a data strategy and should be used to guide government involvement in this area.