Chapter 10
Investigating the Role of Data-Driven Decision-Making Within School Improvement Processes

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ABSTRACT

This chapter provides a detailed literature review exploring the importance of data-driven decision-making processes in current Australian school improvement processes within a context of evidence-based organizational change and development. An investigation into the concept of decision-making and its effect on organizational culture is conducted as change and development are considered to be the new constants in the current discourse around continuous school improvement in schools. In a close examination of literature, this chapter investigates how key factors such as collaboration, communication, and organizational trust are achieved through data-driven decision-making within continuous school improvement processes. The critical role of leadership in sustaining data cultures is also examined for its direct impact on continuous school improvement processes based on evidence-based organizational change and development practices. Future implications of data-driven decision-making to sustain continuous school improvement and accountability processes in Australian schools are discussed.

INTRODUCTION

In a growing performance-based accountability context, there is a growing canvas of school improvement strategies and a multitude of school data available on the basis of which informed decisions are expected to be made. Data holds a central place in the current discourse on school reform especially amidst the ongoing onslaught of organizational change (Bryk, Gomez, Grunow & LeMahieu, 2015; Robinson, 2017) that most school leaders currently face today where evidence-based or case-to-point data-driven decision-making has been gaining traction. In these changing educational contexts, most school leaders find the task of unravelling these data sets and using it for school improvement is a significant challenge and many have confessed to shying away from it. Research however indicates that through a better understanding of what data-driven decision-making is, schools can and have made better use of their

data for continuous school improvement (Balaco, 2010; Renshaw et al, 2013; Smeed et al, 2011); and, are better able to manage the issues around change and the subsequent developments that schools as strategically oriented learning organizations are going through regularly (Fernandes, 2016). So what is the concept of being data-driven or data-led within schools? According to Lai and Schildkamp (2013), "data in the context of schools is information that is collected and organized to represent some aspect of schools that are being studied" (p.9). The question then arises around what kinds of approaches can be used by schools when certain aspects of these schools are being studied? And, whether there is a certain kind of mindful organizational approach that can be an integrated part of the regular continuous school improvement processes that a school, and particularly an Australian school, can actively engage in?

Most commonly, school data includes any relevant information about different school stakeholders such as students, staff, parents, community, partner schools and networks, linkages etc. These data sets can be derived from both qualitative and quantitative sources and stored in various formats within schools such as physical data, repository e-data or online data (with the latter two data-sets stored or accessed through various learning management platforms currently being used in Australian schools). To date within Australian schools up to 32 different kinds of data sets have been commonly found. Using Bernhardt's (Bernhardt, 2003) theoretical framing, the author has grouped these data-sets into four broad categories that include: demographic data, student learning data, perception data and school processes data (see Table 1).

Table 1. Four categories of school data-sets found in Australian schools

Demographic Data	Student Learning Data	Perception Data	School Processes Data
Student Enrolment data	Student Achievement Reports	School Enrolments and projections	School Self-Review/ Evaluation report
Student Family Occupation	English & Maths Online Interview Data	Annual student attitudes to school survey reports	School Strategic Plan
School entrant health Questionnaire	National Assessment Program – Literacy and Numeracy Data (student tracking data at Years 3, 5, 7 and 9)	Annual parent opinion survey reports	Annual Implementation Plan
Student transfers	Progressive Achievement Test (PAT)– norm referenced test	Annual school staff survey reports	School annual performance plan & report
Student absences	External achievement tests from external other service providers in a number of academic subjects that students sit for if parents approve and pay for them	School resource indicators	School strategic plan & School review report
Individual student engagement data	Student General Achievement Test that tests knowledge in: ■ Written communication ■ mathematics, science and technology ■ humanities, the arts and social sciences	Student anecdotal records collected by various teachers over their time spent at school.	School partnership or linkage data
Individual student well-being data	Year 11 and 12 Examination data for students in university/ alternative streams	Staff development – classroom/ peer observation data	Staff performance management data
Student behaviour management data	Student co-curricular data	School newsletters	Staff recruitment data

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