

## Chapter 77

# 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 chal-

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lenge 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).

As indicated in Table 1, it has been seen that these four broad categories of data-sets provide Australian schools with several insights into various aspects of schools that can be measured (Lai & Schildkamp, 2013). However in a number of cases across all three sectors of Australian schooling i.e. public, independent and Catholic, it is more commonly found that these data-sets are used quite narrowly without school leaders and teachers seeing the scope of using these data-sets for a more deeper and analytical evidence based organizational change and development (EBOCD) approach of data-driving decision-making leading to continuous school improvement (Currently the author is working on a case-study research project that looks at how Australian schools (N=10) are using data-informed decision-making practices within their continuous school improvement processes. Findings from this study outlining the use of this EBOCD approach will be presented in future publications).

Hansen, Gentry and Dalley (2003) discuss that a data-driven school will include the following elements: shared leadership and responsibility; a mission that identifies its goal and purpose as a learning community; a cadre of leaders, learners, inquirers, and worriers; the identifying of critical issues, essential questions, and focus problems – problem identification; a planning strategy to collect data and information – problem solving; a process for implementation – action plans; resources and time sufficient to engage and to complete the task; feedback and recycling of the experience; reporting and sharing data and experience and, repeating and continuing the process of data collection, use and change. This concept of a data-driven school sits well within a composite “generic model for managing planned organizational change” suggested by Hamlin (Hamlin, 2001, p. 20). This model when adapted for schools would include six phases: (i) diagnosing and exploring the current organizational state of a school and defining on the basis of data and evidence what the future organizational state of that school would be; (ii) co-creating with school leaders and staff a strategic vision that gives focus to the intended direction of student learning that the school would be moving towards; (iii) co-planning the change management strategy of the school with various internal and external stakeholders; (iv) securing school stakeholder

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