Chapter 6
Leadership to Support and Sustain Data Use in Data Teams

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ABSTRACT
This chapter focuses on how school leaders can support the use of data in data teams with the data team intervention, a step-by-step systematic approach to school improvement. First, the data team professional development intervention is described and an example of a data team in action is provided. Next, the authors closely examine the role of the school leader in supporting the use of data in data teams. Several leadership behaviors that are important to support data teams are described: developing a vision, norms, and goals for data use; providing individualized support; providing intellectual stimulation; creating a climate for data use; and, networking to connect different parts of the organization. Concrete examples are provided with regard to how these behaviors are demonstrated in data teams. The chapter ends with a checklist and reflection tool, which school leaders can use to reflect on their own leadership behaviors with regard to supporting data use in data teams.

INTRODUCTION
Schools have different types of data available that they can use to improve education. Data can be defined as any information that is systematically “collected and organized to represent some aspect of schools” (Lai & Schildkamp, 2013, p. 10). Many types of data can be used to improve education. This data use can involve quantitative data, such as assessment data, parent surveys, and student surveys. It can also involve qualitative data, such as classroom observations and student focus groups. The process of using data to improve decision making in schools is referred to as data-based decision making, or data use for short.

How can data use help schools to improve? Data can be used to further investigate problems, such as under-performance, and gain insight into the causes of these problems. This helps to determine relevant and effective courses of action. Teachers can use data to better adapt their instruction to the needs of
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the students. Moreover, data can be used to determine whether and to what extent particular goals at the school, classroom, and student levels have been reached. Although studies have shown that teachers’ use of data in their decision-making process can improve their teaching practices and increase student achievement (e.g., Lai, Wilson, McNaughton, & Hsiao, 2014; Poortman & Schildkamp, 2016; van Geel, Keuning, Visscher, & Fox, 2016), other studies have found no or only small effects (e.g., Slavin, Cheung, Holmes, Madden, & Chamberlain, 2013; Tyler, 2013). The lack of an effect may be caused by a lack of the level of implementation of data use in schools.

Many schools struggle with implementing data use effectively (Mandinach & Gummer, 2013; Marsh, 2012), often as a result of a lack of requisite knowledge and skills (e.g., Marsh, 2012). For this reason, the authors developed a data team intervention that focuses on supporting schools in the use of data (e.g., Schildkamp & Poortman, 2015). The focus is on data use in teams, because studies show that collaborative data use can reduce teachers’ isolation, enhance their professional growth, and increase and improve their knowledge about teaching (Huffman & Kalnin, 2003; Wayman & Stringfield, 2006). School leaders have an essential role in these data teams, because they can both enable and hinder the use of data in teams (e.g., Datnow, Park, & Kennedy-Lewis; 2013; Schildkamp & Poortman, 2015). This chapter focuses on the role of school leaders in a data team intervention:

- The authors describe the data team intervention for professional development in data use, so that the reader gains knowledge on this specific data use professional development intervention.
- To further increase the reader’s knowledge on the inner workings of a data team, the next paragraph focuses on a case description of a data team in action.
- The next purpose is to inform the reader about leadership behaviors important for data use in general, and for data teams specifically. These leadership behaviors (developing a vision, norms, and goals for data use for school improvement; providing individualized support; providing intellectual stimulation; creating a climate for data use; and networking) are described in depth in the next section.
- The chapter ends with a conclusion, summarizing how leaders can both enable and constrain the use of data in data teams, and the authors provide practical implications in the form of a checklist, so that school leaders can reflect on their own leadership behaviors with regard to data use in data teams.

A DATA TEAM INTERVENTION: PROFESSIONAL DEVELOPMENT IN DATA USE

Data use in schools can be supported by offering professional development for teachers and school leaders in teams (Datnow et al., 2013; Earl & Katz, 2006; Wayman & Stringfield, 2006). Studies show that collaboration is crucial for successful professional development of teachers (e.g., Avalos, 2011; Binkhorst, Handelzalts, Poortman, & van Joolingen, 2015; Borko, 2004), for example in the form of professional learning communities. Collaboration in professional learning communities can lead to increased teacher and student learning (Borko, 2004; Darling-Hammond, 2010; Stoll, Bolam, McMahon, Wallace, & Thomas, 2006; Vescio, Ross, & Adams, 2008). In data teams, teachers and school leaders collaboratively use data to improve education. Data teams are a form of professional learning communities. Important characteristics of professional learning communities are (Stoll et al., 2006; Lomos, Hofman, & Bosker, 2011):
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