Introduction

Each week we receive the *Times Educational Supplement* from England and *Education Week* from the United States. Between us, we also subscribe to several Canadian newspapers, a number of educational journals, and popular magazines from different countries. A quick glance at any of these publications makes it very clear that there is no escaping the presence of data in education. As researchers whose stock in trade is "data," we have become increasingly interested in the role that data have to play in educational change, particularly in how school leaders feel about, understand, and use the mountains of data that are being generated about schools. As we have worked with and talked with educators across the United States, Canada, and around the world, we have been struck by the interest that they show in using data, closely coupled, however, with anxiety and uncertainty.

It is important to start this book by saying that we are data advocates, but we are not data-obsessed. Our interactions over the years with practitioners and leaders in schools have convinced us that data can have a powerful and positive effect on the way decisions are made in schools when they are used as tools for thinking about and planning for change. We are also very cognizant that schools need much more than data to improve. Data form a small but, in our view, essential component of the process of schools becoming functional and valuable players in a knowledge society.

This book, and the workshops that preceded it, emerged from our belief that the real benefits accrue from "getting to know" data as part of an ongoing process of educational change and using it locally to investigate real issues in particular schools as a way of deciding what to do next. We are concerned that schools are being pushed and enslaved by data rather than being steered by leaders, with data providing information that they can use to engage in thoughtful planning and make reasoned and targeted decisions to move towards continuous improvement. Over the years, we have worked with school leaders in a number of jurisdictions, and they have convinced us that they are willing and interested users of

data. At the same time, they have told us that they feel uncomfortable with the sheer amount of data that surrounds them and the expectation that they use it.

We hope that *Leading Schools in a Data-Rich World: Harnessing Data for School Improvement* offers images and stimulates possibilities for school leaders who are struggling to cope with the demands and challenges of making data useful rather than burdensome. It is designed to involve school leaders (formal and informal) in using "evidence" of all kinds to bring increased clarity and coherence to the work that they do every day. We even believe that when leaders get comfortable with the ideas and the processes contained in this book and see how using data can move their schools forward, they will become data advocates themselves.

Leading Schools in a Data-Rich World: Harnessing Data for School Improvement is a combination text and workbook that has been designed to provide insights and examples, as well as tasks and challenges. We think of you not as readers but as participants, rolling up your sleeves and digging into the process. It will be messy, frustrating, and demanding; but it will be rewarding.

USING THIS BOOK

We have structured *Leading Schools in a Data-Rich World: Harnessing Data for School Improvement* so that school leaders, school teams, study groups, and graduate classes can use it as a template to engage in interpreting and using data as part of on ongoing planning and refining process. We have organized it first to "tell" you some useful information and theory about using data and then to "show" you with an extended case study of a school using data. Finally, we provide tools for you to "do it" yourself.

Although the book can be read alone, the process depends on people working together to think, argue, and make decisions. We recommend that it be used by teams or groups who are trying to make sense of using data in their own contexts. You will find that the learning occurs in the dissonance and in coming to understand how and what others are thinking.

At the end of this introduction is the first installment of a case example based on a real school, which we develop throughout the book as the process unfolds. There is also the first of a series of assignments for participants to complete as they work through the book. Each chapter includes questions for reflection and discussion by participants. The Resource section includes task sheets that can be photocopied and used by the group. We suggest that planning groups read through the complete

text as an introduction to the process and the ideas and then start over, using the questions and the assignments as guides for their own work.

Chapters 1 and 2 contain the rationale and background for our conviction that using data is an essential part of leading and learning in schools. In *Chapter 1: Putting Data at the Center of School Improvement,* we describe the ascendancy of data as an element in educational reform, explore the love/hate relationship that leaders have had with data over the years, and address the thorny issue of accountability. We argue that educators can choose to refocus accountability to connect with their efforts at improvement as they move to informed professional decision making based on evidence. In *Chapter 2: Using Data for Informed Decision Making,* we describe what it will take for school leaders to operate comfortably in a data-rich world by defining a set of leadership capacities related to developing an inquiry habit of mind, becoming data literate, and creating a culture of inquiry in their schools.

Chapters 3, 4, 5, and 6 focus on a process for thinking about data and about how it can inform and challenge the views that educators hold as they plan and implement school improvement activities. *Chapter 3: Cultivating the Qualities of Data-Driven Leadership* offers a metaphor for using data for improvement in which school leaders are likened to artists. Artists are always driven by data—by the colors, textures, and images that they observe, investigate, and respond to. They use their considerable interpretive talent and experience to draw the salient features to the foreground, emphasize important dimensions, and communicate a mood and a message to the audience. This metaphor of school leader as artist offers an alternate view to an image of leaders as automatons, using data to paint by numbers on a canvas designed by someone far away. Leaders are producers of images of their schools and of their educational futures. *Chapter 4: Developing an Inquiry Habit of Mind* incorporates the first two stages in the painting process—*setting the canvas* and *planning the picture.* It details a planning process based on what leaders already know about their schools and where they want to go with them. In it we continue the artistic metaphor to identify the audiences and purposes that will shape the images to come.

In *Chapter 5: Becoming Data Literate* we describe the next two stages in the painting metaphor—*blocking the canvas* and *creating the image.* It includes a process for moving from planning to identifying the necessary indicators (colors on the palette) and locating actual data sources for this picture, and it provides a framework for interpreting and displaying the data to create the images. In this chapter, we explore issues related to the quality of the image (reliability, validity, integrity, ethics, clarity) in practical terms and help the reader to engage with their original purpose of communicating for the intended audiences. Because

this chapter contains all of the data that H. C. Andersen school has to review with details about their conversations so that the reader can get the full flavor of the interpretation process, it is a very long chapter. We hope you will persevere.

The real learning comes in grappling with the details of data. *Chapter 6: Creating a Culture of Inquiry* describes a continuous process of using the data for planning next steps by moving from the semi-private world of creating knowledge to the public forum of sharing and distributing knowledge and using the feedback and conversations to define the next stage of improvement. *Chapter 7: Sustaining the Process* describes the ongoing process of inquiry as a habit of practice.

THE CASE EXAMPLE

The following case example comes from our experiences with one school as it has evolved in its orientation towards the use of data. This example will be developed throughout the book to show the challenges, dilemmas, insights, and successes that the school faces along the way.

Janet Chalmers is the newly appointed principal of H. C. Andersen Middle School. The school serves 800 young adolescents (Grades 6–8). It is situated in an "inner suburb" of a mid-sized city (pop. 500,000). The community is largely residential with most students living in bungalows, others in high-rise apartments, and some in a number of townhouse developments that were built in the 1970s. The student body is relatively diverse, with about 20 different ethnic groups represented. In recent years, the population has been somewhat transient as new immigrant families move out to more affluent suburbs and are replaced by other new families.

Janet is excited to be coming to H. C. Andersen. The school has a good reputation for school spirit, and the sports teams do very well in city competitions. Academically, they are not distinguished but have been solid in their performance. For a number of years they have been using a middle school philosophy that focuses on engaging the students in school activities and keeping them excited about school.

The staff at H. C. Andersen is cohesive and committed. There are 32 teachers and 8 support staff, plus custodial workers and several itinerant staff such as a psychologist, speech pathologist, and special education support. Some of the teachers have been there for most of their careers, and others have chosen to come to the school because of its reputation.

Throughout the rest of this book, we will use the H. C. Andersen School as an example of ways in which schools can think about, work

with, and use data as a positive force in planning and implementing improvement initiatives.

YOUR ASSIGNMENT

At the same time as we develop the example as an illustration, we have included assignments for you to work with your own data, in your own context. In this first assignment, you are asked to describe your context in enough detail to allow others to imagine what it is like. (Task sheets for use by participants are included in the Resource section.)

Assignment #1

Our School

Use Task Sheet #1 in the Resource section to describe your school. What is your school context? Have all persons in the group privately describe their school as they believe it is seen by others and share their descriptions with one other person in the group. As they share, the pairs should create a composite description, highlighting the similarities and differences in their perceptions. Post the composites on the wall and, as a group, use them to create (1) a description that everyone agrees about and (2) a list of areas of disagreement or uncertainty.