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Practitioner's Guide to Curriculum-Based Evaluation in Reading

Foreword by Matthew K. Burns

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Foreword

Almost every school in the country has a problem-solving team, and research has shown that effective problem-solving teams can improve both student (e.g., improved reading skills, reduced behavioral difficulties, etc.) and systemic (e.g., reduced number of students retained in a grade, fewer students referred for special education, etc.) outcomes (Burns and Symington, 2002). Yet, there continues to be a well-documented deficiency in student reading and math skills in this country. How is that possible? If almost every school in the country is convening a group of skilled professionals on a weekly basis to brainstorm ideas for students who are experiencing difficulties, then why is it that children continue to demonstrate skill deficiencies at an alarming rate?

The answer to the above questions is a complex one that goes well beyond the scope of this book. However, I suggest that three reasons why problem-solving teams have not led to more global positive outcomes are because most school personnel (a) have unfortunate misconceptions about assessment, (b) do not understand problem-analysis, and (c) do not contextualize the interventions within a broader system. I will discuss these below.

Assessment

Assessment is fundamental to effective instruction and intervention. Unfortunately, most teachers and school personnel today hear the word assessment and immediately think of state accountability tests. When education first began in this country, the goal of assessment was to identify the extremely high and low students in order to rank them, and that remained a primary goal for decades (Reschly, 1996). The recent accountability movement brought assessment back to the forefront of educational debates, but the focus was again on determining the haves and have-nots. There certainly is a need to determine who has proficient skill, but that is a summative decision that has little utility for instruction and it is not consistent with the definition of assessment.

A subtle yet important contribution that Harlacher, Sakellaris and Kattelman make in this book is that they define assessment as “the process of gathering information to make decisions”, and use that as the framework for the entire book.

Many school-based professionals confuse the term ‘testing’ with assessment. There are several types of data that can be used within any assessment process, one of which may be standardized norm-referenced tests or data collected to judge student proficiency. What matters most is not the type of test used, but that the data match the purpose for which they are used. There are many high quality measures that may provide excellent summative information, but do little to inform instruction. There are also tools that provide excellent instructional information, but the data lead to inaccurate screening decisions. As the authors point out, assessment should be a dynamic process that is guided by the question being asked. It seems that few school-based professionals truly understand how to select the appropriate data to address the question and often rely on commercially prepared tests because those are mandated by the district in which they work.

Problem Analysis

“Which intervention should I use?” That is by far the most common question that I hear from school-based practitioners. Most problem-solving teams are quite good at identifying a problem and may even collect data to determine if the problem persists. However, very few fully understand the diagnostic assessment process outlined in this book or are able to examine discrete sub-skills that contribute to a problem. As was somewhat famously stated, most problem-solving teams do not solve problems; they admire them (the actual source of that quote is unclear, but most attribute it to Jim Ysseldyke at the University of Minnesota). In my experience, the essential attribute of an effective problem-solving team is that they use data to analyze the problem and to determine the intervention. When the problem is analyzed, which intervention to use becomes quite clear and the likelihood that the intervention will be successful substantially increases.

Contextualized Within Larger System

Imagine an elementary school with 600 students. On average 20% of the students need something more than effective instruction and curriculum (Burns, Appleton, & Stehouwer, 2005). If there were 600 students, then 120 of them would require some level of support beyond quality core instruction. If the problem-solving team met each week, spent 1 hour talking about 2 students (30 minutes each) every week, and they met 32 times throughout the year, then they would have time to discuss 64 students leaving 56 students out and not having time for any follow-up meetings regarding the students that they did discuss. Of course, one solution would be to meet twice as often, but more than likely school personnel cannot conduct the level of analysis that is needed for effective problem-solving to occur at the individual level for 120 students. First, some lower level of analysis has to occur at the classroom and group level. Stated in language commonly used within Multi-Tiered System of

Supports, you cannot have an effective Tier 3 without an effective Tier 2, and you cannot have an effective Tier 2 without strong core instruction (Tier 1).

Most school personnel do not systematically conduct analyses at Tier 2. Instead, all students receive the same intervention under the idea of standard protocol. However, the term standard protocol does not mean that every student receives the same intervention, it simply means that there are a few highly standardized interventions from which to select for specific problems. For example, a student who needs better decoding skills would likely not benefit from an intervention designed to enhance comprehension. A low-level analysis to determine the broad category of the problem can be used to identify the target of the intervention for small-groups of students, for which a standardized intervention could then be delivered.

Curriculum-Based Evaluation

The assessment-to-intervention process described by Harlacher, Sakellaris and Kattelman in this book directly addresses the three points described above. Curriculum-based evaluation (CBE) is not new. In fact, it has its roots in precision teaching, which was developed in the 1960s (Lipsley, 1991), and Deno and Mirkin's (1977) seminal *Data-based program modification: A manual*. Ken Howell's book *Curriculum-based evaluation for special and remedial education: A handbook for deciding what to teach* (Howell & Morehead, 1987) was the first written reference regarding CBE, which later became the 2000 book (Howell & Nolet, 2000) that is commonly cited. CBE was used in practice in Iowa and other locations at which Howell trained school staff before either book was published, but the implementation of CBE has not expanded much beyond those initial efforts in the years since. CBE was not widely implemented in the schools partially because it was perceived as a complex process in which few people were trained. The current book simplifies the process and makes it applicable to decisions throughout a Multi-Tiered System of Supports (MTSS) framework. It discusses types of data to be used for specific decisions, lays out a framework with which those data can be analyzed, and details decisions that should be made at Tiers 1 and 2 in addition to Tier 3.

There is more to an effective problem-solving team, or problem-solving process, than problem analysis, but it is the aspect that is most often missing. Moreover, grade-level teams should be engaged in problem-solving procedures for classrooms and groups of students, and the CBE framework outlined here can support that work as well.

Ellis (2005) suggested that educational innovations need to be (a) consistent with theory, (b) supported with research demonstrating its effectiveness, and (c) able to be consistently implemented on a wide-scale basis. CBE is consistent with several theories and the components of CBE have been well researched. More research is needed to examine the CBE Process as a whole, but research efforts have been impeded by the lack of clear conceptualization of CBE. Thus, *Practitioner's Guide to Curriculum-Based Evaluation in Reading* will make consistent implementation

possible and could also increase the likelihood of increased research. I am confident that practitioners will find the procedures easy to implement, especially with the forms and tools that Harlacher, Sakelaris, and Kattelman provide. This book was needed by researchers and practitioners alike, and the authors have filled an important gap with a well-written and useful tool.

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Chapter 1

Introduction

A group of educators are sitting around a table, discussing a struggling student. They review work samples and pass around test scores. Exasperated faces fill the room. There's a sense of urgency because the student continues to experience academic failure and also because there are only 30 minutes left before the school day begins. It took weeks to get everyone in the same room and they are all feeling frustrated and are lacking direction.

They talk about the support the student is receiving and who has been working with him (or her). Explanations for poor performance begin to surface:

- "He isn't motivated."
- "She's always late and never listens to directions."
- "She seems to know it one minute and then the next minute, it's gone."
- "There's just something going on with his processing....he takes *forever* to get it."
- "What about his home life? Such a sad story."
- "I had her brother last year. Same. Exact. Issues."
- "She's such a doll, but she just can't seem to get it."
- "It's the parents. Her homework never comes back."
- "How can I meet his needs when I have 30 other students? I'm supposed to focus on one and sacrifice the others?"
- "She's been struggling since kindergarten!"
- "He's had one-to-one support and he's still struggling!"

It did not take long for the conversation to move from vague descriptions of the problem to discussing all the reasons the student, the family, or the life circumstances are preventing academic success. Then a menu of ideas for how to fix the problem is thrown on the table:

- "Maybe she needs medication?"
- "The parents need to do something at home!"
- "I think it's a disability. We should refer the student."
- "I think he needs to be retained. He just isn't getting it and he is emotionally immature."
- "What about one-to-one?"

- “Has the teacher tried a token economy?”
- “It’s almost the end of the year. He’ll be sunk in middle school. He needs an Individualized Education Program (IEP).”
- “What about putting him in Mrs. Soandso’s classroom? She does so well with these kinds of students.”

Medication, home life, a new behavior plan, switching classrooms, a disability—the suggestions are drastic (disability, retention, and IEP), time intensive (token economy, one-to-one, and change classrooms), and focus on changes outside of the school’s control (medication, parents’ help). The stress of accountability enters the room and ideas for test preparation are discussed. Before they know it, the bell rings, and students are entering the building. They just spent an hour at a table discussing the student and nothing was decided. There is an attempt to gain consensus on a decision as everyone is getting up and heading out the door to their classrooms and offices.

Sounds familiar?

How is it that after knowing, working with, and assessing a student for several years, a school team could still be so uncertain about why a student is struggling and could be so unproductive in an hour-long meeting? Educators put forth lots of effort and dedication to support students, but often do not get the results they want. They spend time in meetings discussing inalterable variables and reviewing data that do not inform instruction. All educators could agree there is not time to spare in education.

The results of sitting through meeting after meeting without generating practical or effective solutions are frustration, burnout, and no change in student performance. This book is about stopping that unproductive process. It provides educators with a problem-solving process called curriculum-based evaluation (CBE) which is a practical, ongoing process that uses assessment to identify missing skills and to inform and evaluate an intervention plan.

1.1 Outline of the Book

This book is divided into three sections (a fourth section contains supplemental material including appendices, a glossary, and topic index):

1. The background of education and conceptual basis for CBE
2. Using CBE to assess reading
3. Making educational decisions within the CBE Process

The first section of the book discusses the current state of education to establish the need for an effective problem-solving process and describes how CBE fits in a school system. We review the National Assessment of Educational Progress (NAEP) results, which show that over half of students in the fourth and eighth grade are scoring below proficient. Over 90% of fourth- and eighth-grade students

who have disabilities or are English language learners score below proficient on the NAEP (National Center for Educational Statistics 2011a, b). Three practices that can lead to improved outcomes for schools are presented. An overview of the problem-solving model, which facilitates and enables school improvements, is presented (see Greenwood et al. 2008). Schoolwide problem solving is the focus of Chapter 3 and individual problem solving with the CBE Process is the focus of Chapters 4 and 5.

Chapter 3 provides the foundation for CBE, through a discussion of educational reform and Multi-Tiered System of Supports (MTSS). MTSS is a multi-tiered, schoolwide model of service delivery providing a continuum of evidence-based supports with frequent data-based monitoring for instructional decision making aiming to improve academic and behavioral outcomes (Barnes and Harlacher 2008; Horner et al. 2005; Kansas MTSS, n. d.). The principles behind MTSS are outlined and then details about critical features are provided. MTSS sets the stage for the use of CBE. CBE is used most effectively and efficiently in a collaborative, problem-solving, school culture.

Chapter 4 defines CBE, and discusses the assumptions behind CBE. Learning is viewed as an interaction between the learner, the curriculum, and the environment (which includes instruction). CBE includes consideration and assessment of all those components using low-inference assessments (low-inference means that the gap between the results and interpretation of the results is small; Howell and Nolet 2000).

The second part of the book focuses on the actual implementation of CBE in reading. In Chapter 5, the steps of the CBE Process are detailed. CBE's alignment with the problem-solving model is illustrated and an assessment framework for conducting CBE [review, interview, observation, and testing (RIOT)/instruction, curriculum, environment, learner (ICEL)] is provided (Christ 2008). Chapters 6 to 8 walk through use of reading CBE in daily practice and provide step-by-step directions for using CBE to assess decoding, early literacy, and reading comprehension. Explicit directions, reproducible handouts, and instructional strategies based on the results of the CBE Process are provided. Those chapters guide the CBE Process and result in practical recommendations.

The third part of the book describes how to make educational decisions with CBE. Chapter 9 provides guidelines for progress monitoring, goal-setting, and instructional decision making. Finally, answers to frequently asked questions about CBE are provided in Chapter 10.

This book provides educators with a practical tool that is an extension of the belief that all students can learn, given the right instructional support. CBE facilitates identifying student needs and instructional supports to address them. The CBE Process focuses school teams in a way that increases their efficiency and effectiveness in improving outcomes for all students.

Part I
Background of Education and
Curriculum-Based Evaluation

Chapter 2

History of Education

2.1 Chapter Preview

To illustrate the need for a problem-solving approach in schools and for the use of curriculum-based evaluation (CBE), the present state of education, including statistics about student performance and explanations for low school performance, is discussed within this chapter. Strategies for improving outcomes in schools are discussed and the problem-solving model (PSM) is introduced. The PSM can be applied at both the systems and individual levels, with the system laying the foundation of support for the individual.

2.2 The State of Education

It is no secret that schools are struggling in the USA. Any educator can attest to the challenges that schools face and the unsatisfactory outcomes for students. For instance, the 2011 National Assessment of Educational Progress (NAEP) results indicated that only 34 % of fourth-grade students in the USA scored at or above proficient (see Table 2.1). Massachusetts was the top-scoring state with 51 % of its fourth graders that scored at or above proficient. So the *best* state had only half of its fourth graders at a proficient level in reading. The lowest state was Mississippi with only 25 % of its fourth graders at or above proficient in reading. Eighth-grade students' scores on the NAEP were similar, as the percentage of students scoring at or above proficient also was 34 %. The highest state again was Massachusetts with 46 % of eighth-grade students proficient in reading and the lowest was Mississippi with 21 % of eighth-grade students at or above proficient [National Center for Educational Statistics (NCES) 2011a]. Mathematics scores on the NAEP are relatively higher, with 40 % of fourth-grade and 35 % of eighth-grade students scoring at or above proficient (NCES 2011b).

Given the overall low performance of students on the NAEP, it is not surprising that the average graduation rate is 75.5 % (NCES 2011c; Viadero 2011). However, there is considerable variation among state graduation rates, with Nevada scoring

Table 2.1 Percentage of high school dropout rates and percentage of fourth and eighth-grade students scoring at or above proficiency on the National Assessment of Educational Progress among US students

	Dropout rates	NAEP			
		Reading ^a		Mathematics ^b	
		<i>Fourth</i>	<i>Eighth</i>	<i>Fourth</i>	<i>Eighth</i>
General population	4.1 ^c	34	34	40	35
Students with disabilities	26.2 ^d	11	7	9	9
Students with second language	24.5 ^e	7	3	14	5
Caucasians	2.7 ^c	34	43	52	44
African Americans	6.6 ^c	16	15	17	14
Hispanics	6.0 ^c	19	19	24	21
American Indian, Alaska Natives	6.3 ^c	18	22	22	17
Asian Americans	2.4 ^c	49	47	62	55

^a NCES 2011a; ^b NCES 2011b; ^c NCES 2011c; ^d OSEP 2011; ^e Kim 2011

the lowest at 56 % and Wisconsin the highest at 90 %. The encouraging news is that the status dropout rate¹ of students has declined since 1990, going from 12.1 % in 1990 to 8.1 % in 2009 (Viadero 2011). However, there remains a considerable gap among ethnic groups and event dropout rates,¹ with nearly three times as many Hispanic and African-American students dropping out of high school compared to Caucasian students (see Table 2.1) (NCES 2011c). Viadero (2011) reports that there is a 17.6 % status dropout rate among Hispanic students and 9.3 % among African-American students compared to 5.2 % among Caucasian students and 3.4 % among Asian-American and Pacific Islander students. Additionally, a study by the National Center for Research on Evaluation, Standards, and Student Testing examined dropout rates across three cohorts and discovered that students who speak a second language have a dropout rate of 24.5 %, compared to a dropout rate of 15 % among non-second-language learners (Kim 2011). Job for the Future (n. d.) summarizes the state of graduation eloquently: “For every 10 students who enter eighth grade, only seven graduate high school on time, and only three complete a postsecondary degree by age 26” (p. 2).

As if those numbers are not troublesome enough, a comparison between the USA and other developed countries reveals more dismal findings. UNICEF (2002) examined the performance of teenagers (14 and 15 years old) in reading, mathematics, and science and ranked the United States 18th out of 24 countries after averaging the findings of five different international studies on education (including scores on the NAEP). Additionally, the results of the Programme for International

¹ *Status dropout rate* refers to the percentage of students within a certain age range who are not currently enrolled in high school and have not earned a high school diploma or equivalency. This is different than the *event dropout rate*, which is the percentage of high school students who left school in a given year and did not earn a diploma or equivalency.

Student Assessment (PISA) indicate that the United States is not heading in a positive direction. The PISA is an international assessment administered on a rotating schedule that measures performance of 15-year-old students in the areas of reading, mathematics, and science. Over 65 countries are included and between 4,500 and 10,000 students are sampled from each country. In reading, the USA ranked 15th in 2000 and then ranked 17th in 2009 (Fleischman et al. 2010; OECD 2001). The USA's performance in mathematics also decreased from a ranking of 24th in 2003 and 31st in 2009 (Fleischman et al. 2010; Lemke et al. 2004). Performance in science decreased in the USA from 21st in 2006 to 23rd in 2009 (Baldi et al. 2007; Fleischman et al. 2010).

2.2.1 Students with Disabilities and Second-Language Learners

Performance trends for students with disabilities are even worse. The 2011 NAEP results show that an average of only 11 % of fourth-grade and 7 % of eighth-grade students with disabilities scored at or above proficient in reading. In mathematics, 17 % of fourth-grade and 9 % of eighth-grade students with disabilities scored at or above a proficient level (NCES 2011a). The graduation rates for students with disabilities are somewhat encouraging, depending on your point of view. The percentage of students who exited special education by graduating with a high school diploma increased from 43 % to 56.5 % from 1997 to 2006. The percentage of students who exited special education by dropping out of high school decreased from 49.5 % to 26.2 % in that same time frame (OSEP 2011). The overall graduation rates may be low, but they are trending in a positive direction.

NAEP results for students who speak a second language are equally low. Only 7 % of fourth-grade and 3 % of eighth-grade English language learners (ELLs) scored at or above proficient on the NAEP in reading, and 14 % of fourth-grade and 5 % of eighth-grade ELLs scored at or above proficient (NCES 2011b).

Achievement results only paint half the picture of the state of public education, as there is a historical concern over the identification of students who require special education services (Merrell et al. 2006; Reschly 2008; Tilly 2008). Special education services are provided to students with disabilities to ensure a free and appropriate public education. Since its inception, there have been fluctuations in the identification rates of eligibility categories. For example, the category of learning disability (LD) currently accounts for almost half (44.6 %) of all students identified as eligible for services. This statistic may not seem alarming in and of itself, but what is alarming is the 272 % increase in identification of LD since the installment of special education. This identification increase can be compared to no change in identification of students under speech-language impairment (SLI), a 25 % increase in identification of students under emotional disability (ED)/Disturbance and a 60 % *decrease* in identification of students classified under intellectual disability. Additionally, health impairment, which is a category for students with chronic health issues, had a 460 % increase in identification rates (US Department

of Education 2012). The changes in rates of students served under various eligibility categories have raised questions about the accuracy and subjective nature of referrals of students to special education (MacMillian et al. 1998; Johnston 2011; Merrell et al. 2006; Ortiz et al. 2008).

Concerns about special education also extend to students with diverse backgrounds, as there is an apparent bias for identification of minority populations (Ortiz et al. 2008; Rhodes et al. 2005). Overrepresentation of minorities in special education has been a concern for over three decades for several reasons, including questions about unreliable and invalid assessments, weak or inappropriate psychoeducational practices, misunderstanding of the needs of ELLs, and a difficulty among practitioners to distinguish typical language development from an LD (Sullivan 2011; Zhang and Katsiyannis 2002). In fact, American-Indian/Alaskan-Native students are 1.56 times more likely and African-American students 1.46 times more likely to be identified for special education compared to other ethnic groups (a risk ratio of 1.0 indicates the risk is similar between two groups). African-American students are 2.28 times more likely to be classified under the category of ED and a staggering 2.75 times under intellectual disability, compared to 0.85 and 0.62, respectively, for Caucasians (OSEP 2011). Sullivan (2011) examined the rates of ELLs vs non-ELLs classified for special education under LD, Mild Mental Retardation (MMR), SLI, and ED categories from 1999 to 2006. She found that ELLs are 1.82 times more likely to be identified for LD compared to non-ELLs. ELLs also were 1.63 and 1.30 times more likely to be classified under MMR and SLI, respectively. ELLs were estimated to be less at risk for ED, as the risk ratio was 0.12 (Sullivan 2011). Samson and Lesaux (2009) discovered a grade-based change in risk for ELLs and special education. They found that ELLs are underrepresented in kindergarten, have similar rates in first grade, but are overrepresented by the third grade compared to native English speakers. This change in representation is believed to stem from the shift from “learning to read” in early elementary grades to “reading to learn” beginning in the third grade (Carnine et al. 2009).

In summary, the majority of students in the fourth and eighth grades are scoring below a proficient range in reading and mathematics. Achievement data for students with disabilities and ELLs are lower. Graduation rates are trending upward, but significant variation in graduation rates exists between states and between ethnic groups. Historical trends in eligibility categories show drastic changes in the rates of identification under certain eligibility categories, and students with diverse backgrounds and languages have an increased risk for identification. Given those statistics, it is not surprising that education in the USA ranks in the lower half compared to other developed countries.

2.3 Why are Schools Struggling?

Given the state of affairs in schools, it is logical to ask *why* schools are not doing well. Several possible explanations are discussed next: (a) teacher attrition, (b) a changing student population and pressure for schools to provide more than academic

services to students, (c) isolation among staff and fragmented school structure, (d) a historical focus on labeling and entitlement vs problem solving and instruction, and (e) inadequate educator training in regards to scientific practices and limited use of effective practices.

2.3.1 Teacher Attrition

Poor student outcomes may be related to the turnover of newly employed teachers and the retirement of veteran teachers without a substantial workforce to take their place (Carroll and Foster 2008). A remarkable 33 % of new teachers leave the profession in their first 3 years of employment and 50 % leave within 5 years (Gonzalez et al. 2008; Wolfe 2005). More modest estimates of teacher attrition among new teachers are between 10 % (Kaiser 2011) and 20 % to 25 % (Grissmer and Nataraj Kirby 1987). Other research has reported that approximately 8.0 % of teachers leave the profession entirely and 7.6 % leave for a new school annually (Keigher 2010). Whether teachers leave because of retirement or because they have taken a position elsewhere, teacher attrition has doubled since 1990 (Carroll and Foster 2008). This constant turnover puts a strain on schools, can prevent continuity from year to year, and reduces the number of veteran and highly skilled teachers within a school (Barnes et al. 2007).

2.3.2 Changing Student Population

Another reason that schools struggle to perform well may be related to their difficulty keeping up with the rapid change in demographics. No longer is the average student Caucasian and from a two-parent home. Consider the following facts. In 1950, 89 % of the population was Caucasian (Gibson and Jung 2002); today, that number is at 75 % (US Census Bureau 2011a). Additionally, the percentage of students living in two-parent homes held steady around 90 % from 1880 to 1970, but the 2009 census results indicated just under 70 % of children live in two-parent homes (see Fig. 2.1; US Census Bureau 2011b). That change is a decline of 20 % in just over 40 years after remaining consistent for nearly 100 years. In 2010, the student population comprised 60 % Caucasian, 20 % Hispanic, and 14 % African American. By 2050, those rates are projected to be 46 % Caucasian, almost 30 % Hispanic, and 15 % African American (Ortiz et al. 2008). The population is changing, bringing with it different background knowledge, different cultural values, and various primary languages of students. This change in population requires a change in instruction that educators may not be fully prepared to handle (Merrell et al. 2006). Teacher preparation programs have been described as “largely inadequate” in preparing teachers to work with diverse students (Ortiz et al. 2008, p. 1729). Most programs do not have a large percentage of students with diverse backgrounds, nor do they offer more than one course or even one chapter in a book on multilingual assessment and cross-cultural competency (Ortiz et al. 2008; Rhodes et al. 2005).

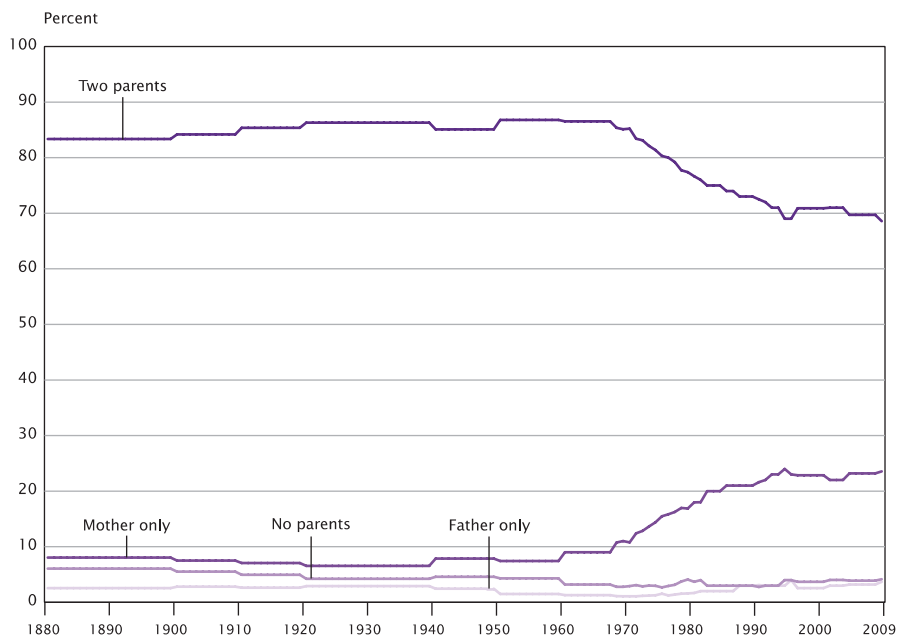


Fig. 2.1 Historical living arrangements of children from 1880 to 2009. (US Census Bureau 2011b)

Consequently, teachers may not be fully equipped to support appropriately the range of diversity in their classroom (Rhodes et al. 2005).

In addition to the shift in demographics is a change in the challenges students face. Aside from academic difficulties, students today come to school with substantial social, emotional, and behavioral needs. These needs are forcing the traditional focus on academics to change. In fact, schools have become the “de facto” mental health delivery system. Of the 20% of children who receive mental health services, 70–80% of them receive that treatment within the schools (Hoagwood and Johnson 2003). Bullying, aggression, and violence are tremendous concerns in schools, and student problem behavior is the number one concern among teachers (Horner et al. 2005; Landers et al. 2008; Sugai and Horner 2006). As a consequence, schools do not have the luxury of just teaching academics and instead, also must focus on the social, emotional, and behavioral health of their students (Horner et al. 2005). Perhaps not too surprising is the idea that disrespect toward teachers from students is a large reason teachers report burnout from their job (Landers et al. 2008). Additionally, not all schools have the same resources to support the issues that students bring. Rhodes and colleagues (2005) point out this disparity between schools, as many children from diverse backgrounds are in schools that have neither the resources nor the low student–teacher ratios of higher income schools. These complex issues from diverse student populations create instructional challenges that influence student outcomes.

2.3.3 Isolation Among Staff and Fragmented School Structure

Another factor contributing to struggling schools is the historical nature of how schools were (and perhaps still are) structured. Elmore (2000) describes a “buffer” in public education that led to an avoidance of scrutinizing instruction and practices in schools. Decisions about what students should learn and how they should be taught were left entirely up to individual teachers. Describing a challenge of education, Hattie (2009) states, “...teaching is a private matter; it occurs behind a closed classroom door, and it is rarely questioned or challenged” (p. 1). This exercise in freedom led to some unintended consequences (Schmoker 2006). Teachers essentially worked in silos, as they taught in isolation with limited feedback or input from administration. Collaboration was low among staff and the result was a loosely connected set of classrooms that varied widely in their practices and effectiveness (Chenoweth 2009; Schmoker 2006; Newmann et al. 2001). As schools felt pressure to improve student outcomes and demands for accountability increased, they would adopt various programs and initiatives that were difficult to integrate. This movement created a fragmented system with teachers pulled in numerous directions (Newmann et al. 2001). Teachers were burdened with various initiatives, resources and time were spread too thin, and as frustration with one initiative mounted, efforts were abandoned to take up another initiative that would hopefully solve the school’s ills (Newmann et al. 2001). Intentions were good, but the disorganized nature of the school system limited the success schools could achieve (Johnston 2011; White et al. 2012).

2.3.4 Historical Focus on Labeling and Entitlement

When the directive to provide all students with an appropriate education arose out of Public Law 94-142, there was a necessary push to identify students with disabilities and provide appropriate services to them. That push may have come at the cost of focusing too much on labels and not enough on effective instructional practices. Special education has been criticized for waiting to provide services until the gap between expected and actual performance is large enough to be called a disability (Johnston 2011; Merrell et al. 2006; Reschly 2008; Tilly 2008). In many cases, a child had to fail for more than 1 year before being referred for an evaluation to consider eligibility for special education services (Nelson and Machek 2007). The result? A problem that is larger than it was when the student was first identified as struggling and a problem that is very difficult to remediate.

The practice of identifying students as eligible for special education services was not only criticized as a “wait-to-fail” model, but also as a process of information gathering that did not inform instruction (Johnston 2001; Reschly 2008). Many of the assessments used to identify students as eligible for special education services were summative and measured aptitude. The results rarely contributed to

a meaningful instructional plan (Braden and Shaw 2009; Johnston 2011; Merrell et al. 2006). Instead, the assessment results contributed global statements about a child's learning capacity compared to a normative sample (e.g., your student scored in the x th percentile) (see Inset 2.1) (Hosp 2008; Ysseldyke et al. 2010). Many teachers were justifiably frustrated when little helpful information was produced from such extensive evaluations and schools were criticized for identifying and admiring students' difficulties in education without offering real solutions (Johnston 2011; Tilly 2008).

2.3.5 Inadequate Educator Training on Scientific Practices and Limited Use of Effective Practices

Another factor contributing to poor school performance is that some teachers are not trained adequately in research-based/effective instructional practices (Johnston 2011). Consider the area of reading. Despite the fact that teaching reading requires knowledge of the "Big 5" areas of reading (i.e., phonemic awareness, phonics, fluency with connected text, vocabulary, and reading comprehension) (Carnine et al. 2009; Hattie 2009), only 15% of teacher-training programs exposed future teachers to those "Big 5" sufficiently (Walsh et al. 2006). The National Council on Teacher Quality examined syllabi from 72 education schools (a total of 227 courses) and discovered that only 23% used textbooks rated as "acceptable" and there was no clear consensus on a seminal text in reading. Out of 227 courses, 154 of them used a text unique to their course, indicating that universities are using a wide range of texts and have not accepted the certainty of empirical research. Texts used ranged from those written based on personal opinion to those with outdated research, and statements in some of the syllabi examined blatantly ignored the reading research. Despite the certainty of the research on effective reading instruction, only one in seven universities taught teachers the science of reading (Walsh et al. 2006).

Inset 2.1 What Is a Percentile?

A percentile is a number used to describe how an individual's score on a test compares to others who took the same test. The percentile indicates the percent of scores or data values in a set that are less than or equal to that value. For example, a score at the 60th percentile is the same or better than 60% of the individuals who also took the test.

If teachers are not trained well, then it is not surprising that ineffective or non-supported practices would continue to be used in schools. Ash et al. (2009) illustrate the lack of use of research to guide practice in the classroom. They analyzed the reading practices of 80 teachers and 27 literacy coaches from elementary and middle schools and found that almost half of the teachers and literacy coaches sampled

used *round robin reading (RRR)*, an ineffective reading strategy in which students are called upon one-by-one to read portions of a text aloud. Of the sample that used RRR, 21 % of them reported being unaware of the research related to RRR, and 30% of them *knew* that the research showed RRR is ineffective, yet they still reported using it.

Use of unsupported practices is not limited to teachers, and teachers are not to blame for the use of such practices. A somewhat intuitive theory that came out of special education law was that each student has a certain capacity for learning that can be unlocked with the right instructional program. By assessing intrachild and cognitive abilities, educators believed they could provide each child with a specially designed program that would maximize learning, particularly those identified as having a disability. This theory, aptitude-by-treatment (ATI), argued that certain published, norm-referenced tests could be used to predict the success of certain interventions over other ones for particular students. Individualized instruction could then be planned based on the results. Griffiths et al. (2007) summarized the logic of ATI eloquently: “ATI logic contends that certain measured aptitudes (measured internal characteristics of children) can be logically matched with certain instructional approaches to produce differential benefit or learning with the student (p. 15).”

However, over 30 years of research have not supported ATI (Braden and Shaw 2009; Merrell et al. 2006; Reschley 2008; Ysseldyke et al. 2010; Stuebing et al. 2009). Griffiths and colleagues again provide an eloquent (and blunt) statement: “It is a myth among special educators, school psychologists and the neuropsychological field, that modality matching is effective and can improve student learning” (p. 15) (see also Gresham and Witt 1997). Still, the focus on assessing processing and cognitive abilities remains in practice (Fiorello et al. 2006; Restori et al. 2008), despite the lack of empirical support for ATI or learning styles (Braden and Shaw 2009; Pashler et al. 2008; Restori et al. 2008).

These findings illustrate two issues: first, some educators will continue to use disproven practices, even if they know the research, and second, a portion of educators have finished their training program or continue to work without having been exposed to relevant research. Just like other professions, educators require ongoing training on current, evidence-based practices to ensure effective and contemporary practices are used. Ensuring training and implementation of effective practices enables students to have the best chance at success.

2.4 What to do About it?

The purpose of this chapter is not to beat up on public education. The fact that many people work in education because of their resolve, passion, and dedication to helping students is not in question. Instead, the concerns in schools are described to create the impetus for change. The urgency and need for more effective practices in schools must be understood. As educators passionate about our roles, it is unsettling to know that so many students are failing. Even more unsettling is that

use of ineffective practices, making decisions in the absence of good data, and the inconsistency of teacher training all are very real problems today. Continuing to do “business as usual” will result in nothing more than mediocrity. As Mark Twain once said, “If you do what you’ve always done you’ll get what you always got.”

Having been reminded of the challenges educators face, we hope to have sparked enthusiasm for participation in educational reform. This book supports one part of that reform: using assessments that are focused on problem solving and that have high instructional relevance. Assessment should provide information that guides educators in identifying *what to teach* and *how to teach*. We have painted a grim picture of education, but we also offer hope and direction. Although there are many ways schools can improve performance, we outline 3 strategies before offering a conceptual framework for reform and refer to these strategies as *improvement practices*.

2.4.1 Improvement Practice 1: Increase Collaboration Among Staff

Because schools have operated in silos and teachers have historically been isolated from each other (Hattie 2009; Johnston 2011; Schmoker 2006; White et al. 2012), the first improvement practice is to break down those barriers and increase the amount of collaboration among staff (Goddard et al. 2007). DuFour and Marzano (2011) describe *professional learning communities* (PLCs) as one avenue to increase collaboration and support among staff (see also DuFour 2004). PLCs are defined as any combination of “individuals with an interest in education” (DuFour 2004, p. 6). Often, this is viewed as a grade-level or department-level team of teachers and educators. Within PLCs, teams work together to answer three questions:

1. What do we want each student to learn?
2. How will we know when each student has learned it?
3. What will we do when a student experiences difficulty in learning it?

As PLCs answer these questions, they encounter two insights. First, they quickly find out that it takes all of them working together to effectively answer and respond to those questions. No single teacher alone can answer all three of those questions as effectively as the team. After discussing the curriculum and standards that they want students to learn, teachers create common formative assessments (or use ones already created) to answer the second question. To answer the third question, teachers are faced with what DuFour refers to as an “incongruity between their commitment to ensure learning and the lack of a coordinated strategy to respond when some students do not learn (DuFour 2004, p. 8). The result is that teachers realize they must work together to provide additional time to students who have not yet learned the content. Teachers within a PLC become more collaborative and conversations among them focus on data to determine if students have learned the content and on sharing ideas, resources, and support for each other. Collaboration inevitably results in answering the three questions previously.