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The Journal of School Administration Research and Development

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Welcome to the Principal Research Center's first issue of the peer-reviewed Journal of School Administration Research and Development (JSARD), an open access, online and print publication. The purpose of the JSARD is to support the mission of the Principal Research Center Inc., which advocates for the highest quality 21st century education of children through the improvement of selection and development of school leaders in our nation's schools. By publishing high quality research and commentaries on school leadership topics, we hope to connect educational stakeholders from universities, governing agencies, school districts, and other educational organizations interested in improving education for children in the United States. Our first issue includes articles from researchers and practitioners on topics including student assessment, school climate as it relates to student achievement, student discipline disproportionality, goal setting, bias against men in early childhood education, and a book review on improving reading in middle and secondary education.

The publication of this journal represents a collaboration between researchers and practitioners currently working in universities, education organizations, and school districts who are actively pursuing the improvement of leadership selection and development in education. As we begin working on the second issue of the JSARD, scheduled to publish in early 2017, we want to thank you for supporting our journal.

Sincerely,

Brandon Palmer
Managing Editor

JSARD

The Journal of School Administration Research and Development

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Q & A Dialogue

with
David Schuler, Ph.D., Superintendent
and
Leigh Wallace, Ph.D., Assistant Clinical Professor

School leadership has been a burgeoning topic in education since the turn of the millennium. There is no shortage of research, articles with best practices, and "how to" books on educational leadership. Unfortunately, the development and selection of school leaders has only recently started to gain the attention of educational stakeholders. Initiatives such as the Wallace Foundation's Principal Pipeline Initiative, which started several years ago, has focused attention on the development of school leaders, while the selection of school leaders is still emerging as a topic of interest.

Numerous educational researchers and experts have long argued for collaboration between universities and school districts to improve how educational leaders are developed and selected. The purpose of this Q and A Dialogue is to connect educational stakeholders with both the practitioner and researcher perspectives on the development and selection of school leadership in order to understand each perspective and develop points of collaboration to improve both.

Dr. David Schuler is the Superintendent of Township High School District 214 near Chicago, Illinois. Township High School District 214 is recognized as a Blue Ribbon High School District by the U.S. Department of Education. Dr. Schuler also serves as president of the American Association of School Administrators (AASA) and represents the practitioner perspective for this Q and A Dialogue.

Dr. Leigh Wallace, Assistant Clinical Professor of Administrative Leadership, also currently serves as the program coordinator for Administrative Leadership and Supervision at the University of Wisconsin-Milwaukee. Dr. Wallace's research interests include the role of the principal and assistant principal; district level leadership structures; and equity, access, and the achievement gap. Dr. Wallace represents the

researcher perspective for this Q and A Dialogue.

Q1: There is sudden interest among educational stakeholders in the preparation and development of school principals. What in your opinion is driving this interest?

DS: I think there are a number of reasons for the interest in the preparation and development of school principals. There has been significant research from Robert Marzano, the Wallace Foundation, and the 2010 research study from the University of Minnesota and the University of Toronto, among others, that tightly link school leadership to improved student learning and student achievement. The research supports what most of us in the field have known for years: principals really matter when it comes to teaching and learning. I would say it is awesome to see this new focus on principal development. I also think including school and district leadership as priorities in the Race to the Top applications and state waivers highlighted the importance of the role of the principal.

LW: Given the increased pressure on schools and individual teachers to increase student outcomes, reduce the achievement gaps among different groups of students, and prepare students for post-secondary options, it only follows that while teachers are being more carefully "evaluated," the same will be expected of school building principals. Those who are truly invested in successful schools and developing effective leaders see this as an important opportunity and an area that requires our attention and focus. MOST principals (and assistant principals) will tell you that once they become an administrator—usually after their first or second year on the job—there is little or no support offered to them as it relates to their professional growth. We have found that much of what constitutes principal professional development is really little more than obligatory meetings with mentors

who are mismatched in terms of experience and context, and the meetings do very little to coach and truly support the new principal. As principals are facing even more stringent evaluations themselves, their participation in such activities is rarely meaningful or growth oriented.

So, what's driving the interest? I'd like to believe that it is a sincere belief and understanding that principal leadership matters and it is time for society to invest in principal and leadership development and support. Given the significant need for qualified principals—especially in our urban schools—this focus has the potential to develop leadership capacity and ensure that administrators are prepared to manage the day-to-day operations; guide instructional improvement; and create a culture of trust, academic optimism, and collective efficacy.

Q2: Researchers and scholars have linked the principal with student achievement and school success for decades. Based on your knowledge and expertise, in what ways do you believe principals can improve student achievement and school success within schools?

DS: Principals must become the lead learner of their school. It is really that simple. They must ensure that high quality teaching and learning is occurring in each classroom. The Wallace Foundation has done some really incredible work in this area and their research would suggest, and I would completely agree, that principals need to focus on the following five key responsibilities in their role as the lead learner of their respective school:

- Shaping a vision of academic success for all students based on high standards.
- Creating a climate hospitable to education in order that safety, a cooperative spirit, and other foundations of fruitful interaction prevail.
- Cultivating leadership in others so that teachers and other adults assume their parts in realizing the school vision.
- Improving instruction to enable teachers to teach at their best and students to learn to their utmost.

LW: I am first going to give you a very non-academic or professorial response: It really IS a no-brainer that the quality of the building principal is critical to the success of the school. My father, a former school superintendent, would always say, "You show me a successful school, and I'll show you a strong principal. You show me a school that is struggling, and I'll show you a principal that just isn't getting the job done. The principal is EVERYTHING."

Those of us in the field of education have recognized this simple truth from the beginning—as classroom teachers, administrators, scholars, or preparation faculty. I can't help but go back to the 1982 Effective Schools Research work done by Ron Edmonds and Larry Lezotte. Their work highlighted the importance of an effective school leader and how leaders create the culture and climate critical for meaningful teaching and learning to take place—from the focus on instructional leadership, monitoring student progress, maintaining safety, connecting with families, and protecting student time on task . . . I'm sure I left out a few—but, really, this is such a significant body of work and truly worth a second look (or a first one if you haven't explored it yet).

Recent research also supports the assertion that building-level leadership behaviors can make a difference in student achievement. In fact, Karen Seashore-Louis and her colleagues identified three key school leadership behaviors—specifically those of the principal—that indirectly influence student achievement based on their impact on teachers' work: 1) instructional leadership, 2) shared leadership, and 3) trust. Also, as a critical component of principal leadership, we have to maintain our focus on equity and justice for all students when it comes to the systems we create in our schools, the opportunities we offer students, and the subtle, or not so subtle, messages we send to students about who should be—and can be—successful.

Principals need to get out of their offices—spend time in classrooms, in the building, and throughout the community. They have to be visible and know what their teachers need and make it a point to secure those resources for them—whether it is time, professional learning, support, or materials. One of Michael Fullan's new texts, *The Principal*, talks about creating "learning leaders" that combine the role of the effective manager, instructional leader, and transformational leader . . . That is another way to envision the work.

Q3: Despite recent interest in the preparation and development of school principals, principal selection has seldom been investigated by researchers. Subsequently, principal selection methods have not evolved with the importance of the role of the principal. Why do you think the improvement of principal selection has not been given the same attention as the development and preparation of school principals?

DS: That is a great question. I think it has taken awhile for practice to catch up with the research. I think many of the selectors of principals did not fully

comprehend until fairly recently the critical importance of a principal being the building's instructional leader. As a result, selections may have been made based on other priorities. It is interesting that you ask this question, as the Wallace Foundation has created a Principal Pipeline Initiative in which they talk about school leadership often being overlooked as an education improvement strategy even though the research is very clear in that space. According to their work, the principal is the most important factor in determining whether a school can attract and retain high quality teachers. I'm also a huge fan of David Cottrell's book *Monday Morning Leadership,* where he talks about the imperativeness of 'hiring tough, hiring right'. Too often, many people hire based on convenience, comfort, or familiarity. Our students need us to commit to creating a recruitment and selection process that ensures we have the best instructional leader possible in each of our nation's schools.

LW: Let's face it: Principal selection is a highly political endeavor! It's not about the "methods" we use to select the best possible candidate, but whether or not we are WILLING to select the best candidate! I am always amazed at individuals that look great on paper and interview well but are, as I like to say, "a mile wide and an inch deep." How can we find truly exceptional candidates for principalships? Especially given the complex, incredibly stressful, high-stakes nature of the job. I remember the NASSP's "Principal Assessment Center" and believe that similar models can be used as a part of the interview process to determine how a candidate presents themselves over a period of time and a variety of situations. There is also a need for more deliberate succession planning for principalships. While vacancies can't always be anticipated, districts can engage in "shoulder tapping" of their teacher leaders and assistant principals to groom them for the principalship within the district. I would assert that many districts lose highly competent leaders because they don't—or won't—recognize talent. Also promising leaders may become discouraged when leadership is lacking, but continue to be allowed to either maintain the status quo or eventually "move up the chain."

I am also a big believer in finding "fit." We have our students engage in Gallop's "Strength Finder 2.0" instrument to determine their strengths and reflect on the type of team they want to create and be a part of as a leader in order to excel. I always tell them you can't always wait for the "perfect" position to come along, but it would be foolhardy to take a position where a good fit doesn't exist. Finding the right environment and school culture is one way to ensure better outcomes for new and experienced leaders. Change agents will certainly feel stymied in a district where the status quo prevails and there is little or no support for innovation.

Q4: Principal selection researchers and selection personnel have both questioned the reliability of selection methods in predicting the success of school principals. What do you think can be done to improve the reliability of principal selection methods?

DS: As mentioned earlier, I think the selection process has to be purposefully and strategically developed to ensure that the process identifies the strongest instructional leader for the building. Communication, general competency, and building relationships are important, but instructional leadership must be the primary determining factor in selecting a school principal. I recently was part of a webinar hosted by AASA and Learning Forward to discuss the new Model Principal Supervisor Professional Standards that were released in December 2015 by the Council of Chief State School Officers (CCSSO). Having professional standards for those of us who supervise principals is awesome. We need to continue to look for ways to showcase and share those standards to ensure that principal supervisors are using them in the principal selection process as well as in how to best support principals based on research.

LW: I have to concur with Dr. Schuler. Districts have to be deliberate and strategic about the hiring process. I would also assert that they must have a clear district mission and vision focus in place as well. Again, as my father always said, "If you don't know where you're going, any road will take you there" (Actually, I think maybe he borrowed that from the great Lewis Carroll). But, really, it makes sense. If we want principals to be successful, they need to understand what the district expects of them and what the "guiding light" or "compass" is as it relates to the mission and vision.

In addition, it is essential that principals have clear job descriptions aligned with state and national leadership standards. I recently completed a document analysis of 30+ formal, board-approved high school assistant principal job descriptions and found they lacked connection to ANY of the leadership standards (state or national) and were incredibly vague and task oriented. The role was really more about the "other duties as assigned." If principal job descriptions are similar, it is likely that role ambiguity can lead to frustration and a clear lack of direction.

Q5: In what ways can researchers and practitioners collaborate to improve the preparation, selection, and development of school principals?

DS: There must be opportunities for those conducting the research in this space like CCSSO, the Wallace Foundation, AASA, Learning Forward, and others to host avenues for information exchanges and other professional development activities for principal supervisors to share the research and recommendations surrounding the preparation, selection, and development of school principals. I also think there needs to be more writing published in professional journals about this topic. Not every principal supervisor can travel to attend a meeting, but most of us read professional journals, and it would be awesome to see some articles on this topic in our professional journals.

LW: Universities have a great deal to offer districts as it relates to leadership preparation and development, and conversely, university faculty at all levels can learn from practitioners and use these relationships to stay abreast of what is actually happening in the field. Often, the criticism of university programs is the disconnect between what we know and teach and what the practitioners already know and need to learn. As university faculty, we need to be mindful of "bridging the gap" between theory and practice—principals need to understand the WHY and the HOW, but we have to make it relevant to their work. Creating, nurturing, and maintaining partnerships with local districts are promising practices as is developing collaborative action research. Working together, I believe universities and districts can create (fundable) partnerships—we just have to make the time and commitment to do that work together. These might be "pipeline" programs or sustained professional development offerings. The conversation has to occur, but the possibilities are infinite.

Summary

The Q and A Dialogue presented two unique perspectives on the development and selection of school leadership. According to both Dr. Schuler and Dr. Wallace, interest in the development and selection of school leaders is tied to the realization that school leaders affect student outcomes. Numerous researchers over an extensive period of time have linked the principalship to either school success or improved student achievement. The link between school leadership and student achievement has been well established and will continue to be examined.

What can school leaders do to improve student achievement? Dr. Schuler and Dr. Wallace point to school climate as a factor in improving both teaching and learning. Additionally they also mentioned building leadership capacity in others and engaging in shared leadership practices as other avenues principals can use to improve student academic achievement in schools.

Despite national research in 1983 by Baltzell and Dentler that demonstrated significant selection issues in the United States, principal selection has seldom garnered the attention or concern of educational stakeholders. Dr. Schuler acknowledged that practice has trailed research, but as the principal's critical role has been realized, selection procedures should be strengthened to ensure the best educational leaders are at the helm of our nation's schools. Dr. Wallace stressed that selection of the best candidate is mostly a matter of will—selectors must be willing to select the best candidates for the principalship. She also suggested using assessments similar to the NASSP's Principal Assessment Center, which was in use decades ago, and she also discussed the use of succession planning as strategies to develop high quality school leaders.

Principal selection methods can be strengthened and predictability can be improved when methods focus on educational leadership. Principal selection methods should be "purposely and strategically developed," and tied to national and state standards, according to Dr. Schuler. Dr. Wallace supported this position and also believed a clear district vision and mission to focus efforts in selecting school principals is necessary.

Collaborations between research and practitioners can occur through multiple avenues. Dr. Wallace suggested partnerships between universities and practitioners could develop and maintain "pipeline programs." Dr. Schuler suggested researcher-practitioner collaboration could be improved by sharing research through hosting information exchanges sponsored by educational organizations such as the AASA or other school leadership organizations. He also stressed the need for more published research on the selection and development of school leaders.

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If you are interested in participating in a future Q and A Dialogue article featured in the *Journal of School Administration Research and Development,* please email editor@JSARD.org and include a brief letter of interest with the following information: name, title, organization, and area of expertise.

The School Climate - Student Achievement Connection: If We Want Achievement Gains, We Need to Begin by Improving the Climate

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ABSTRACT: This study examined the relationship between school climate and student achievement ratings in urban school districts in five states (N =230). Many educators view school climate and student achievement as separate considerations. However the results of this study suggest that climate and student achievement were highly related. In fact, the quality of the climate appears to be the single most predictive factor in any school's capacity to promote student achievement. The findings of the study suggest a series of general and theoretical implication for the field of education. It appears that the use of practices that promote a "psychology of success" lead to greater achievement and higher quality climate, and those that promote a "psychology of failure" lead to under-performance.

Key words: student achievement, school climate, psychology of success

Many educators view school climate and student achievement as separate considerations. For some, the idea of promoting a high quality climate can seem like a luxury in the face of the current high stakes assessment environment in which student achievement gains are paramount. However, the results of this study suggest that climate and student achievement are related. In fact, the quality of the climate appears to be the single most predictive factor in any school's capacity to promote student achievement.

The school climate-student achievement connection has been well-established in the research (Freiberg, Driscoll, & Knights, 1999; Hoy, & Hannum, 1997; Kober, 2001; Loukas, & Robinson, 2004; Norton, 2008; Shindler, Jones, Taylor, & Cardenas, 2004). While this relationship would not be news to most school administrators or teachers, considerations of climate are most often viewed as secondary.

Likewise few would endorse neglecting the quality of the climate at one's school, yet a minority of schools have systematic approaches to promoting or maintaining the quality of their climate. In many cases, the reason for the casual approach to climate is that it is not well understood or is viewed as a discrete consideration—unrelated to such things as pedagogical practice, achievement goals, curriculum, and teacher development. When school climate is defined narrowly, it can appear as a relatively independent factor. However, when viewed contextually, it becomes clear that it is related to *everything* else. In a study of urban public schools, Jones, Shindler, Cardenas, and Taylor (2003) found that all of the various aspects of climate were correlated to one another at most schools. Where one variable was found to be either high or low, the others were as well. In other words, no cases were found in which one variable, such as the discipline culture, was low and another, such as student interactions, was high.

While more direct methods of intervention with the goal of improving student achievement make sense, if the basic structure of a school is dysfunctional, its capacity to promote its desired goals is limited (Fullan, 2003). Examining student achievement trends from the past few years, data shows what could best be described as stagnation in the effort to improve test scores and decrease of the unacceptably large size of the achievement gap (National Assessment of Educational Progress, 2008). This may suggest that the common practice of adding isolated or piecemeal reforms has not produced the kinds of results that were hoped for (Norton, 2008). Placing climate at the heart of the reform process may provide the mechanism to situate

problems and solutions more effectively so that they can be better diagnosed, assessed, and mapped.

Purpose

The purpose of this study was to explore the relationship between student academic achievement and various elements within the domain of school climate, and to examine the nature and potential causality of that relationship. The study also sought to derive implications for practice, including a possible fundamental conceptual framework for climate quality and function and an operational roadmap for moving from a less functional to more functional climate.

Methodology

The study examined school climate and achievement at 230 urban public schools. The purposive sample of schools was drawn from districts in five states reflecting regional diversity, yet all districts contained schools with a range of achievement levels as well as diverse ethnic and socio-economic communities. Each school assessment team administered the Alliance for the Study of School Climate (ASSC) School Climate Assessment Instrument (SCAI). The team at each school incorporated a standard protocol and surveyed a minimum number of participants (N= 30+ students, 10+ teachers as well as 10+ staff and parents, with most sample sizes being much larger). Academic Performance Index (API) and Similar School Rating (SIM) scores (published by the state) were used to measure student achievement in California. Relative achievement test score percentile rankings were used in all other states.

The SCAI was designed to achieve an in-depth examination of the health, function, and performance of each school. While the term "school climate" was judged the best description for the intent of the instrument, it examines the construct of climate broadly, and includes eight distinct dimensions:

- School appearance *and* physical plant

- Faculty relations

- Student interactions

- Leadership decision making

- Discipline environment

- Learning environment

- Attitude *and* culture

- School-community relations

Items within the SCAI are structured to reflect three levels: high-, medium-, and low-functioning, and descriptive language is used to explain each level of each item. Participants are asked to rate their experience of their school on each item. Example items from the SCAI can be seen in Figure 1. High, medium, and low level items in the SCAI correspond to overall levels of school function and performance. Table 1 depicts the characteristics of these three levels. At the core of what defines a high functioning school is a high degree of organizational intentionality, collaborative effort, reflective practice, and a pervasive orientation toward achievement that could be classified as a "psychology of success (POS) (Table 2). Social contexts such as schools tend to promote either more POS or more "psychology of failure" (POF). Every pedagogical and administrative action could be judged to promote either more POS or POF. Therefore, items within the ASSC-SCAI reflected this construct theoretically as well as its practical indicators.

Success Psychology as a Conceptual Framework

As we examine the idea of a "psychology of success" what becomes evident is that several familiar concepts are rooted in this common phenomenon. The concepts of self-esteem, achievement psychology, intrinsic motivation, needs satisfaction, and success psychology are all rooted in the same fundamental components. They are:

- Growth versus fixed ability orientation as related to one's self-efficacy

- A sense of belonging and acceptance versus alienation and worthlessness

- Internal versus external locus of control

Paring the research in this area down, these three essential factors emerge to explain the degree to which a student has a psychological orientation toward success or failure. Moreover, there are a large number of studies to indicate that each of the three factors is correlated with academic success (Auer, 1992; Benham, 1993; Dweck, 2000; Klein & Keller, 1990). As we examine each factor independently, their efficacy becomes more evident.

Growth vs. Fixed Ability

Carol Dweck (2000; 2006) and her colleagues in their research over the course of 30 years have developed a very useful paradigm with which to examine academic self-concept, achievement, and motivation. They have demonstrated in a series of studies with students (Dweck, 2000; 2006) that future success is not

5. Discipline Environment		
Level 3	*Level 2*	*Level 1*
High **high-middle**	**middle** **middle-low**	**low**
5.c------------o----------------------- 0 ----------------------- 0 ----------------------- 0 --------------------- 0 ------------------		
Most teachers use effective discipline strategies that are defined by logical consequences and refrain from punishments or shaming.	Most teachers use some form of positive or assertive discipline but accept the notion that punishment and shaming are necessary with some students.	Most teachers accept the notion that the only thing the students in the school understand is punishment and/or personal challenges.
5.e------------o----------------------- 0 ----------------------- 0 ----------------------- 0 --------------------- 0 ------------------		
Maximum use of student-generated ideas and input.	Occasional use of student-generated ideas.	Teachers make the rules and students should follow them.

Figure 1. A sample of three items from scale 5 (Discipline Environment) of the ASSC School Climate Assessment Instrument (SCAI).

Table 1

Theoretical Construct for Each of the Three Levels of the ASSC School Climate Assessment Instrument (SCAI).

	Level 3	Level 2	Level 1
System	Intentional	Semi-Intentional	Accidental
Ethos	Sound vision translated into effective practice	Good intentions translated into practices that "work"	Practices defined by the relative self-interest of faculty and staff
Effect on Students	Liberating	Perpetuating	Domesticating
	Experience changes students for the better	Experience has a mixed effect on students	Experience has a net negative effect on students
Staff relations	Collaborative	Collegial	Competitive
Psychology of Achievement	Promotes a Psychology of Success (POS)	Promotes a Mixed Psychology	Promotes a Psychology of Failure (POF)

Table 2

Sub-factors for the Theoretical Construct of Achievement Psychology.

Psychology of Success (POS)	Psychology of Failure (POF)
Internal locus of control	External locus of control
Belonging and acceptance	Alienation and worthlessness
Mastery orientation	Helpless orientation

as much the result of talent (i.e., fixed ability factors) or current level of ability as it is the result of the orientation-cognitive strategy one uses to approach learning tasks (i.e., a growth mindset). Research of others along with personal reflection support the notion that the level of one's sense of competence (or self-efficacy) will relate to the level of self-esteem. We of course want our students to experience healthy levels of self-esteem. However, the different cognitive strategies that one might choose to use to attain that sense of competence will not accomplish the same result, especially in the long term. Dweck (2000) offers a useful lens for distinguishing two contrasting cognitive strategies for feeling competent and how they have dramatically different results over time. When a student uses a growth orientation, they view a situation as an opportunity to learn and grow. They do not see their performance within a situation as a measure of their innate ability as much as a measure of their investment — better results require more practice. Students who approached tasks with a fixed-ability orientation viewed the context as a reflection of how much ability they innately possessed in that area. The result is a student who is looking for situations that will not challenge their fragile self-image or make them feel "dumb." Dweck (2000) found that students with a growth pattern were more likely to persist in the face of failure and experience higher levels of academic achievement. The gap in achievement between the growth and fixed students was found to expand as students got older (Dweck, 2000).

Acceptance and Belonging vs. Alienation and Worthlessness

This second factor within the framework for "success psychology" reflects the degree to which any member feels wanted and part of the group and the degree to which one likes and accepts one's self. The more one feels accepted and acceptable, the more one will be able to express one's self, act authentically, and be fully present to others (Osterman, 2000). Self-acceptance is in contrast to self-aggrandizement, or a compulsion to please. A sense of belonging and acceptance is essential to a young person's mental health and ability to trust and take risks (Shann, 1999; Shindler, 2009). It comes in part from accepting messages from influential persons, practicing a positive approach and attitude, experiencing emotional safety, and feeling a part of a community.

Research has shown a relationship between a sense of belonging with acceptance and self-esteem (Osterman, 2000; Shann, 1999). Moreover, building a sense of classroom belonging and the sense of self and

peer-acceptance has been shown to promote higher achievement (Dembrowsky, 1990; Sanders & Rivers, 1996).

Internal vs. External Locus of Control

The third factor in the construct of "success psychology" is defined by one's sense of internal causality and orientation toward personal responsibility. The more internal locus of control (LOC) we possess, the more we feel that our destiny is in our own hands. It could be contrasted to an external LOC or an orientation that views *cause* as an external factor and one in which life "happens to us." An internal LOC can be defined as the belief that one is the author of his or her own fate. An internal LOC comes from having a casual understanding of behavior and effect. It is learned from freely making choices and taking responsibility for the consequences of those choices. Through responsible action and accountability for those actions, the young person learns to attribute the cause of success or failure internally. Consequently, he or she feels a sense of power and responsibility and is able learn from his or her life experience. Another term we could use for internal LOC is "personal empowerment."

Research has drawn a strong relationship between levels of student self-esteem and sense of an internal LOC (Hagborg, 1996; Klein & Keller, 1990; Sharidan, 1991). Moreover, studies have shown repeatedly that students with higher degrees of internal LOC demonstrate higher levels of achievement (Auer, 1992; Park & Kim, 1998). In fact, having high levels of internal LOC have been shown to be an even more significant predictor of achievement than intelligence or socioeconomic status (Hagborg, 1996). In addition, higher internal LOC has also been shown to mediate the stress response (Ayling, 2009). Taken together these three interdependent variables make up a comprehensive explanation for why some students achieve more of their potential and why some contexts promote more students meeting more of their potential. These factors influence students' growth in all aspects of their lives, yet the effect of what takes place in schools make up a significant amount of their influence.

Results

The results of the study confirmed a strong relationship between the quality of school climate and academic achievement levels. Overall, at least seven study conclusions appear to be supported by the data. First, consistent with previous research, the data showed that the quality of school climate decreased as students moved from the elementary to secondary school level (elementary mean = 6.4, secondary mean

= 5.8). Second, achievement was shown to be highly correlated to overall mean school climate (SCAI) (*r* = 0.7). Third, achievement was also shown to correlate with all eight SCAI climate and function indicators, including a very substantive correlation coefficient for classroom discipline practices (*r* = 0.7). Fourth, all eight of the climate factors at each school tended to be highly inter-related. This suggests that factors are highly inter-dependent. Fifth, similarly, when socio-economic status was accounted for, the correlation between the SCAI scores and the achievement scores grew more prominent (*r* = 0.8). Sixth, intra-school data showed similar variation. The experience of climate for students within each school also varied relative to academic track of the student group. Students in lower performing tracks identified different practices being the norm than their higher track peers and experienced lower quality climates.

In general the high correlation coefficients (see Table 3) between school climate and achievement suggest that they are strongly related. While the direction of the causality between the two variables is not entirely indicated by the data, the substantial relationship between climate and SIM rating suggest that a conclusion can be drawn that, to a good degree, better climates led to achievement and were not simply a byproduct.

A scatter plot distribution of each school's SCAI rating (1-low to 9-high) by API scores (200-low to 1000 -high) shows a distinct pattern, as depicted in Figure 2. Higher levels of climate corresponded to higher levels of academic achievement.

When individual school climate ratings are graphed against achievement (i.e., API) scores, the 0.7 correlation can be seen in the scatter plot diagram (see Figure 2). The figure illustrates that as SCAI climate scores increase, so does achievement. In this data set there were no outliers from this trend line. Region A in Figure 2 represents a score combination of low climate and high achievement. Region B represents the inverse: low achievement and high quality climate. Cases in which a school scored in either of these regions of this graph were absent from this set of schools and appear unlikely to exist elsewhere.

Study Implications

The results of the study have both theoretical and practical implications. First, they offer a better theoretical understanding of the nature of student achievement, causes of the achievement gap, and the role that school climate plays. Second, they imply practical considerations for teachers and administrators attempting to increase student achievement and reduce the achievement gap at their schools.

Theoretical Implications

The findings of the study suggest a series of general and theoretical implications for the field of education

Table 3

Correlation Table Achievement by Climate Factors

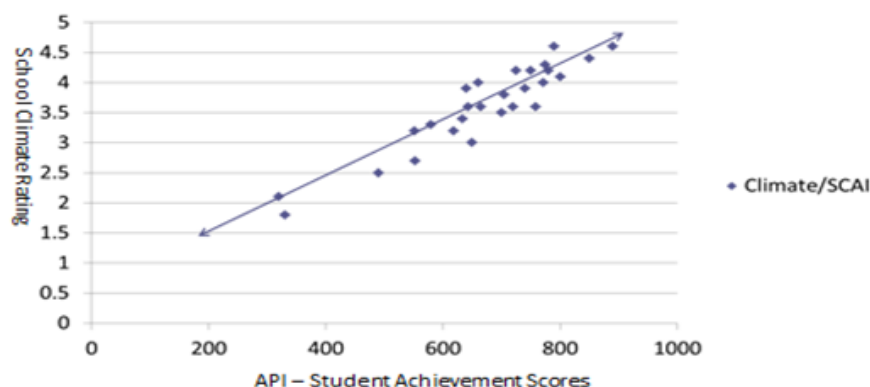|	SCAI - School Climate	API 2011 -14	Scale 4 Leadership	Scale 5 Discipline	Scale 6 Instruction	Scale 7 Att/Cult
SCAI - School Climate	---	+0.7	+0.7	+0.9	+0.7	+0.9
API 2007	**+0.7**	----	+0.5	**+0.7**	+0.6	+0.7
Adjusted Achievement Rating	**+0.8**	----	+0.6	**+0.8**	+0.7	+0.7
Similar School	**+0.3**	+0.1	**+0.3**	+0.1	+0.1	+0.1
Scale 5 Discipline	+0.9	+0.7	+0.8	----	+0.8	+0.8
Scale 6 Instruction	+0.7	+0.6	+0.8	+0.8	----	+0.8
Scale 7 Att/Cult	+0.9	+0.7	+0.8	+0.8	+0.8	-----

Figure 2. School climate score (SCAI) by student achievement (CA API). This line graph derived from a scatter plot of achievement scores by climate/SCAI

including the following:

- It appears higher quality climates lead to higher levels of student achievement.

- High student achievement test score means appear virtually impossible within the context of a school with a low quality/functioning climate.

- Dimensions of school climate were found to be highly correlated at each site indicating that dimensions are strongly interdependent. This implies that change within one discrete dimension will be influenced by the effects of the others.

- It is questionable to assume that implementing isolated, de-contextualized, add-on programs within a school where the climate is of fundamentally poor quality will achieve the desired effect.

- In the absence of a deliberate attempt to improve the quality of the climate and the function of a school, it can be assumed that quality of school climate will continue to get worse on average from grade to grade.

- Surface indicators of achievement may not offer enough information to judge progress toward school improvement. Measures of the systemic function level seem to be necessary as well.

- It appears that the use of practices that promote a "psychology of success" (POS) lead to greater achievement and higher quality climate, and those that promote a "psychology of failure" (POF) lead to under-performance.

- Intentionally using practices that promote climate function and POS and reducing those that promote

POF may likely increase achievement for all groups of students.

Practical Implications

The implications for educational practitioners include the following:

- Consider the consequences of acquiescence to the status quo. Consistent with previous research, the results of this study suggest that the default approach to teaching and school organization has in great measure created the conditions for low achievement and the achievement gap. If we do not make fundamental changes to what are doing, why would we assume that we will get substantially different results from what we have to date?

- Assess your school's climate. It appears that starting with a clear sense of the health and function level of the school is necessary to accurately diagnose what is and is not working. We need to know where we are before we can know where we want to go.

- Identify desirable and undesirable practices. As part of the school self-assessment, it makes sense to evaluate the practices at your school to determine which are promoting either a healthy or unhealthy school climate. Consistent with previous research, the findings of the study suggest that all areas of school performance are inter-dependent. Therefore every neglected or dysfunctional area of school performance is dragging down the larger effort to promote school achievement.

- Classify practices as either POS- and POF-promoting. As a collective set of stakeholders, identify which common practices at the school would best be

characterized as POS promoting and which are POF promoting. The appendices available from ASSC and the book *Transformative Classroom Management* (Shindler, 2009) will be a helpful starting point. However, the more this construct is developed as a personally meaningful concept to each member of the school community, the more effectively it will be implemented.

Below are list of some practices that can be inferred to create either a psychology of success or psychology of failure. Below are examples of some practices that promote a psychology of success:

- Cause-and-effect and clarity

- Process focus (especially with assessment)

- Student collective identity and sense of belonging

- Meaningful work

- Student responsibility, choice, and voice

- Emotional safety

Below are examples of some practices that promote a psychology of failure:

- Comparison and excessive competition

- Public shaming

- Assessment as a form of "gotcha"

- Punishments as consequences

- Meaningless work

- Emphasis on end products

- Colored cards and other gimmicks

- Bribes, praise, and other extrinsic rewards

When most educators examine the POS promoting list, few of the items surprise them. Most schools are attempting to promote at least some level of each of these outcomes. The differences between schools in this regard usually relate to the level of commitment and degree of deliberateness with which they attempt to actualize these outcomes at their site. However, when educators examine the POF promoting list, they recognize many of the items to be common practices used at their schools. In fact, often they find that these POF practices are classified within the taxonomy of what is considered "desirable practice." For example, few teachers are aware that their colored card or names on the board behavior modification systems or their use of personal praise and disappointment are actually promoting a POF, undermining the prospects of each student's long-term achievement and promot-

ing the expansion of the achievement gap. In most cases, the greatest effect on climate as well as achievement will likely come from the practices that schools cease doing rather than what they add to what they are already doing.

Reflect on limiting personal assumptions. When we, or other members of the school, use phrases such as "this is what these students need," we need to reflect on what is being implied. It often implies that we assume that low performing students need to be taught with school level 1/POF-promoting methodologies. The use of these practices can seem necessary, as these students may respond to that form of treatment in a way that makes everyone most comfortable. Yet, the results of this study supports earlier research that suggests that teaching *any* students in a level 1 (i.e., high conformity, lower level thinking, shame-based) context actually promotes lower levels of achievement and an expansion of the achievement gap over time. Unfortunately many well-intentioned teachers are working hard at promoting low achievement and an achievement gap under the assumption that what they are doing is best for the students with whom they work (i.e., they mistakenly assume that region A results are possible). When we use POS-promoting practices, they have the most significant impact on those that lack a POS. When we use POF-promoting practices, we reinforce POF in those that are least resilient and most susceptible to their ill effects. The data from this study suggests that the practices that define the level 3 category in the ASSC/SCAI will lead to the highest level of achievement and greatest level of POS for all students.

Conclusion

We have all heard someone make the statement that in so many words "teaching is not rocket science." Yet, it seems that producing high achievement in traditionally low-achieving schools and solving the achievement gap may be on that order. It may require solutions that require thinking that goes far beyond where common sense has led us up to this point. It may require a broader and deeper perspective on the problem and a rethinking of some basic design thinking in the system. An understanding of the role school climate plays in the development of student achievement appears to be a critical piece of that effort.

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The Relation Between easyCBM and Smarter Balanced Reading and Mathematics Assessments

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ABSTRACT: This study investigated the relation between the easyCBM Benchmark Assessments in both mathematics and reading and the Smarter Balanced assessment, widely adopted across the United States. Data for the study were obtained from a convenience sample of approximately 1,000 students per grade in grades 3-8 provided by two school districts in the Pacific Northwest. Results indicate that the easyCBM CCSS math assessments are a strong predictor of the Smarter Balanced total math score, with correlations ranging from .69 to .84 across grades and seasonal benchmarks. Linear regression analyses indicate that the different easyCBM CCSS math measures account for 68% to 77% of the variance in Smarter Balanced total math score. In addition, all of the easyCBM reading assessments are significantly related to the Smarter Balanced English language arts total score, with correlations ranging from .50 to .69 across grades, measure types, and seasonal benchmarks. Linear regression analyses indicate that the different easyCBM reading measures account for 50% to 62% of the variance in Smarter Balanced English language arts score.

Key words: assessment, student achievement, Smarter Balanced, interim assessment

A significant challenge for school districts as they work to meet federal, state, and local expectations for student learning is accurately identifying students who need additional supports to meet learning expectations. For districts using a response to intervention (RTI) approach, it is common to administer screening assessments, often referred to as benchmark assessments, early in the school year, with the results being used to identify students in need of additional instructional supports. A follow-up assessment is often administered to district students in the winter to evaluate progress as well as to identify additional students who may be at risk and to provide empirical support for decisions to adjust instructional groupings or in-

terventions. In the spring, a third benchmark assessment is normally given, enabling districts to evaluate the effectiveness of their instructional program and track progress made throughout the year.

Most districts that have adopted RTI often use one of several commercially available interim formative assessment systems. One such system, easyCBM, offers both literacy and mathematics assessments with built-in Spanish language supports for students in grades K-8. As of November 8, 2015, the system was used by over 500,000 teachers, representing 4.6 million students in schools and districts spread across every state in the country. They collectively took over 28.2 million measures from grades K-8 in reading and mathematics (Anderson et al., 2014).

The easyCBM assessments are an integral part of many school districts' RTI processes (Alonzo, Tindal, Ulmer, & Glasgow, 2006). In RTI, districts administer screening assessments, also known as benchmark assessments, three times each year, using the data to identify students at risk who might benefit from additional supports and targeted interventions. Although the system includes both benchmarking and progress monitoring assessments, only data from the benchmark assessments are included in this study. This is because the progress monitoring assessments tend to be administered only to those students identified as at-risk, whereas the benchmark assessments are universally administered to all students enrolled within a district.

The easyCBM assessment system includes two types of mathematics tests: one type which is aligned to the National Council of Teachers of Mathematics Focal Point Standards and another which is aligned to the Common Core State Standards in Mathematics (CCSS Math). The easyCBM CCSS Math benchmark assessments consist of 40 (grades 4-5) to 45 (grades 6-8) selected-response items in which students are presented with a math problem and prompted to select

the best answer choice from three possible solutions.

These measures are designed to be taken online, although paper-pencil administration options also exist. The assessments are administered to students by their classroom teachers in either school computer labs or in regular classrooms using laptop computers provided by the school. Students earn one point for every item they answer correctly. Partial credit is not awarded; thus, possible scores range from 0-40 in grades 4-5 and 0-45 in grades 6-8. The CCSS Math measures are reported to have strong reliability evidence, with Cronbach's Alpha ranging from .90 to 95 and split-half reliability ranging from .79 to .95 in grades 4 through 8 (Wray, Alonzo, & Tindal, 2014).

In addition to the math tests, the easyCBM system provides a variety of reading assessments. The passage reading fluency (PRF) assessment consists of original works of narrative fiction, ranging in length from 250-350 words. Students are asked to read aloud from stories presented on a single-sided sheet of paper while assessors follow along on their own copy. Assessors mark any word read incorrectly or skipped, while students read aloud for 60 seconds. Self-corrections are not counted as errors. At the end of 60 seconds, assessors mark the last word read and subtract the number of errors to compute the final score of correct words read per minute. Prior studies have reported alternate-form reliability ranging from .87 to .96 (Alonzo & Tindal, 2009) and .83 to .98 (Alonzo, Lai, Anderson, Park, & Tindal, 2012) and test-retest reliability ranging from .86 to .96 (Alonzo et al., 2012). The correlations between PRF and the Oregon Assessment of Knowledge and Skills (OAKS), the state test used in Oregon prior to adoption of Smarter Balanced (SB), were generally high, ranging from .55 to .69. Anderson, Alonzo, and Tindal (2011) reported correlations between the winter PRF measure and the spring state test used in Washington State prior to the adoption of SB, the Measures of Student Progress (MSP), ranging from .46 to .64.

The easyCBM vocabulary assessments are selected-response items where students are presented with a sentence with a missing word or phrase, or one in which a word or phrase is bolded and students are asked to select the answer option that best fits the specific prompt from three possible answer choices. Students earn one point for every correct answer they provide for a total possible score of 0 to 20. These assessments are designed for online administration with responses automatically scored by the computer but are also available in a paper-pencil format. Cronbach's Alpha for the easyCBM vocabulary measures ranges from .76 to .84, with a median of .81 for all vocabulary measures in both the fall and winter. Split-half reliabilities ranged from .61 to .75 for the first and second half of the measures, with a median of .66 and .69, respectively. The correlation between the two halves ranged from .58 to .72, with a median correlation of .64 (Wray et al., 2014).

The easyCBM Multiple Choice Reading Comprehension (MCRC) measures consist of original works of narrative fiction ranging of approximately 1,500 words in length, followed by 20 selected-response items in which students select the answer choice they believe is the best option out of the three possible responses. Students earn one point for every correct answer they provide for a total possible score of 0 to 20. Correlations between the easyCBM MCRC measures and the OAKS, the State tests used in Oregon before SB adoption, ranged from .55 to .67 in the fall and .44 to .61 in the winter (Sáez et al., 2010). They ranged from .52 to .65 in the fall and from .41 to .71 in the winter between the MCRC and MSP, Washington's former state-wide assessment (Tindal, Nese, & Alonzo, 2009).

With the adoption of the SB assessments across numerous states, it is important to evaluate the relation between the SB assessments and widely-adopted interim-formative assessment systems such as easyCBM. This manuscript presents the initial findings of one such study.

Methodology

Data for this study came from a convenience sample provided by two school districts in the Pacific Northwest. All students enrolled in school and present during the three-week easyCBM Benchmark Assessment windows in the fall (September, 2014), winter (January, 2015), and spring (May, 2015) were administered easyCBM assessments. All enrolled students were likewise administered the SB assessments during the testing window provided by the state in the spring of 2015. The data set provided by the districts included easyCBM CCSS math, PRF, vocabulary, and multiple choice reading comprehension (MCRC) as well as SB math and ELA total scores for students enrolled in grades 3 through 8. District 1 provided data for grades 3 through 8, while District 2 provided data for grades 4 through 8. In addition, District 1 provided demographic information, while District 2 (approximately one-fourth the size of the first district) did not. Demographics of the sample are provided in Table 1. Because of the missing demographics from a large proportion of the sample, the percentages for each of the demographic variables are calculated

Table 1

Participant Demographics

Grade	Missing Demo-graphic Data		Female		Hispanic		SpEd		ELL	
	#	%	#	%	#	%	#	%	#	%
3	33	3	492	48	187	18	87	8	67	7
4	328	24	523	50	217	21	100	10	62	6
5	295	23	483	48	159	16	89	9	39	4
6	291	22	505	49	180	17	95	9	27	3
7	280	23	456	48	185	19	78	8	29	3
8	266	20	526	50	192	18	83	8	22	2

based on the students in the sample whose data included full-resolution demographic information. During data cleaning, data from students who were administered the alternate assessment rather than the general education assessment were removed from the dataset prior to further analyses. In all, six students each from grades 4, 6, and 7 and three students from grade 5 were removed from the dataset in this step. Data from all additional students were retained.

Measures

The data set provided for this study included scores from the fall 2014, winter 2015, and spring 2015 easyCBM CCSS math, PRF, vocabulary benchmark assessments. Data were also from the fall 2014 and winter 2015 MCRC benchmark assessments, as well as from the 2015 SB mathematics and ELA total scores.

Data Analysis

For this study, the relations between the easyCBM benchmark assessments and the SB assessments were analyzed using bivariate correlations as well as linear regression. The results for the mathematics assessments are presented first, followed by the results for the individual reading assessments (i.e., PRF, then vocabulary, and finally MCRC), and then the reading assessments as a whole. Scatterplots of the bivariate correlations are also presented. To further aid in interpreting the results, horizontal lines have been added to the scatterplots to depict the cut score for "proficient" on the SB assessment, as well as vertical lines to indicate the scores that correspond with the 50th, 75th, and 90th percentile scores, respectively, on

the easyCBM assessments.

Results

Results for the math assessments are presented first, followed by the literacy assessments. Demographic statistics for the math sample are presented in Table 2 and for the reading sample in Tables 3 through 5 (Tables 2-13 and Figures 1-4 are located in Appendix A and B, respectively).

Relation between easyCBM CCSS Math Benchmarks and SB Total Math

The easyCBM CCSS math benchmark assessments had a moderate-to-strong positive correlation with the SB total math score, ranging from a low of .69 (grade 3, fall) to a high of .84 (grade 6, spring), with the relation getting stronger as grade level increased (See Table 6). Correlation results were then graphed on a series of scatterplots with a horizontal line to delineate the cut score on SB at which a student is deemed proficient and vertical lines to indicate the scores that correspond with the 50th, 75th, and 90th percentile rank, based on the easyCBM national norms published by easyCBM (Saven, Tindal, Irvin, Farley, & Alonzo, 2014). These scatterplots are presented in Figure 1.

At all grade levels, the CCSS math seasonal benchmark assessments were significant predictors of students' performance on the SB mathematics assessment (See Table 7). The proportion of variance on the SB mathematics assessment accounted for by students' performance on the easyCBM CCSS math assessments varied from a low of 68% (grade 4) to a high of 77% (grade 6).

Relation between easyCBM PRF Benchmarks and SB ELA Total

The easyCBM PRF benchmark assessments had a moderate positive correlation with the SB Total ELA Score (See Table 8). Correlations ranged from a low of .56 (grade 8, fall) to a high of .68 (grade 5, fall). The most consistently high correlations were found in grade 5, where the correlation between PRF and SB ELA total score remained in the high .60's across all three seasonal benchmarks.

Correlation results were then graphed on a series of scatterplots, with a horizontal line to delineate the cut score on SB at which a student is deemed proficient and vertical lines to indicate the scores that correspond with the 50th, 75th, and 90th percentile rank, based on the easyCBM national norms published by easyCBM (Saven et al., 2014). These scatterplots are presented in Figure 2.

Relation between easyCBM Vocabulary Benchmarks and SB ELA Total

The easyCBM vocabulary benchmark assessments had a moderate-to-strong positive correlation with the SB Total ELA Score (see Table 9). Correlations range from a low of .58 (grade 4, spring) to a high of .69 (grade 5, fall). Correlation results were then graphed on a series of scatterplots, with a horizontal line to delineate the cut score on SB at which a student is deemed proficient and vertical lines to indicate the scores that correspond with the 50th, 75th, and 90th percentile rank, based on the easyCBM national norms published by easyCBM (Saven et al., 2014). These scatterplots are presented in Figure 3.

Relation between easyCBM MCRC Benchmarks and SB ELA Total

The easyCBM MCRC benchmark assessments had a moderate-to-strong positive correlation with the SB total ELA score (See Table 10). Correlations ranged from a low of .50 (grade 6, winter) to a high of .68 (grade 4, fall and grade 5, winter). Correlation results were then graphed on a series of scatterplots, with a horizontal line to delineate the cut score on SB at which a student is deemed proficient and vertical lines to indicate the scores that correspond with the 50th, 75th, and 90th percentile rank, based on the easyCBM national norms published by easyCBM (Saven et al., 2014). These scatterplots are presented in Figure 4.

All of the easyCBM seasonal benchmark reading assessments were significant predictors of students' performance on the SB English language arts assessment across all grade levels and all three seasons. In the fall, the three easyCBM reading assessments accounted for between 50% (grade 6) and 62% (grade 5) of the variance on the SB ELA assessment, with the three sub-tests (i.e., PRF, vocabulary, and MCRC) uniquely accounting for roughly equal proportions of that variance (See Table 11). In the winter, the three easyCBM reading assessments accounted for between 53% (grade 8) and 60% (grade 5) of the variance on the SB ELA assessment, with the three sub-tests (i.e., PRF, vocabulary, and MCRC) uniquely accounting for roughly equal proportions of that variance (See Table 12).

In the spring, the three easyCBM reading assessments accounted for between 52% (grades 4 and 6) and 59% (grade 7) of the variance on the SB ELA assessment, with the three sub-tests (i.e., PRF, vocabulary, and MCRC) uniquely accounting for roughly equal proportions of that variance (See Table 13).

Discussion

This study provides promising evidence for districts interested in knowing the degree to which the easyCBM assessments provide useful guidance in terms of how well students are prepared for meeting the demands of the Smarter Balanced Assessments in mathematics and ELA. However, it is important to point out several limitations with the current study. The largest limitation relates to the sample used in these analyses. Although the initial results are promising, the sample used comes from only two districts located in the Pacific Northwest (in some cases slightly fewer than 1,000 students for a particular analysis). To the extent that the demographics of the districts supplying the data differ in substantive ways from districts to which the results are being extended, caution is warranted.

Despite this caution related to the sample, this study provides some reason for optimism. The results suggest the relation between the easyCBM CCSS math and reading assessments is actually slightly stronger than that reported in earlier studies examining the relation between the easyCBM assessments and state tests in Oregon (Sáez et al., 2010; Tindal et al., 2009) and Washington (Anderson et al., 2011). Based on these results, districts interested in an interim formative assessment system that can be used to predict performance on the SB assessment should have a degree of confidence that the easyCBM assessments are predictive of students' performance on SB assessments.

The easyCBM CCSS math tests, in particular, ap-

pear to be very strong predictors of performance on the SB math assessments across all grades examined. A concern that some educators have expressed is that traditional selected response math items, such as those used on the easyCBM CCSS math tests, may not be sufficient for predicting how students will perform on more innovative math items, such as those included on SB. Based on the results of this study, these concerns appear unwarranted.

One consideration that does warrant concern is the higher expectation for performance required to be deemed proficient on the SB assessment than on previous state assessments in both Oregon and Washington and likely in other states as well. Whereas in the past, recommendations for identifying students as low-risk based on their easyCBM performance focused on scores at or above the 50th percentile rank (Anderson et al., 2011; Tindal et al., 2009), visual inspection of the scatterplots suggest that this criteria is insufficient when trying to predict proficient performance on SB assessments. Rather, performance closer to the 75th percentile may be needed for students to consistently be deemed proficient on SB. This finding holds true across all grades, assessment types, and seasonal benchmarks. This finding is particularly interesting in that it highlights the expectations for "above average" performance for students to be considered proficient on the SB mathematics and ELA assessments.

The easyCBM norms were established in 2014 using a nationally-representative sample of students in grades K-8 with demographics matching the demographics of the school-aged population. The samples were drawn in equal proportions from the four regions of the United States used in National Center of Education Statistics reporting (Saven et al., 2014). The scores on easyCBM at the 50th percentile represent the point at which half of the student population would be expected to perform. Based on the results of this study, it is clear that performance at this level is insufficient to ensure students will meet expectations on the SB assessments. The current cut scores for SB assume students who "meet benchmark expectations" will out-perform approximately 75% of their peers. It is beyond the scope of this study to speculate on whether this expectation is a reasonable one. However, it is important that school administrators be aware that expectations for performance level, as well as for content covered, may have shifted.

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Appendix A

Table 2

Descriptive Statistics: easyCBM Mathematics and Smarter Balanced Math

Gr.	easyCBM CCSS Math Fall			easyCBM CCSS Math Fall			easyCBM CCSS Math Fall			Smarter Balanced Total Math		
	n	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*
3	979	25.45	5.23	1028	29.62	5.67	1034	32.97	4.91	1051	2441	70.78
4	1275	25.54	6.13	1322	28.27	5.94	1344	31.10	6.02	1364	2481	74.48
5	1215	23.51	6.08	1252	27.16	6.18	1185	28.66	6.96	1297	2510	83.03
6	1233	24.37	6.68	1286	27.59	7.12	1304	30.26	7.87	1318	2522	89.89
7	1141	23.49	6.77	1176	27.05	8.11	1205	28.28	8.53	1228	2544	98.83
8	1098	22.91	7.64	1213	27.89	8.20	1216	29.15	8.99	1302	2560	109.2

Table 3

Descriptive Statistics: easyCBM Fall Reading Measures and Smarter Balanced ELA

Gr.	easyCBM PRF			easyCBM Voc			easyCBM MCRC			Smarter Balanced Total ELA		
	n	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*
3	977	89.32	37.34	967	14.83	3.92	972	10.83	3.61	1056	2227	77.35
4	1184	108.05	35.49	1181	15.50	3.76	1183	11.71	3.98	1359	2462	81.72
5	1220	140.63	44.03	1201	15.61	3.55	1210	13.12	3.67	1294	2502	85.35
6	1199	143.96	39.38	1240	16.65	3.03	1244	14.19	3.21	1320	2522	83.04
7	1119	153.69	35.58	1137	17.00	2.98	1141	13.55	3.39	1220	2549	89.63
8	1211	173.26	37.65	1236	17.38	2.75	1238	14.07	3.34	1294	2577	90.89

Table 4

Descriptive Statistics: easyCBM Winter Reading Measures and Smarter Balanced ELA

Gr.	easyCBM PRF			easyCBM Voc			easyCBM MCRC			Smarter Balanced Total ELA		
	n	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*
3	1010	124.68	41.91	1019	16.22	3.58	1014	10.47	2.96	1056	2227	77.35
4	1228	134.17	37.12	1229	16.66	3.16	1225	13.54	3.45	1359	2462	81.72
5	1252	154.46	41.93	1244	16.35	3.02	1246	15.21	3.64	1294	2502	85.35
6	1236	160.85	42.22	1284	16.86	3.04	1282	14.23	3.14	1320	2522	83.04
7	1173	171.94	42.02	1177	17.20	2.72	1175	14.24	3.06	1220	2549	89.63
8	1257	170.57	39.59	1262	17.22	2.52	1266	13.09	3.19	1294	2577	90.89

Table 5

Descriptive Statistics: easyCBM Spring Reading Measures and Smarter Balanced ELA

Gr.	easyCBM PRF			easyCBM Voc			easyCBM MCRC			Smarter Balanced Total ELA		
	n	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*
3	1039	121.92	42.83	1024	17.18	2.84	1021	14.00	3.65	1056	2227	77.35
4	1259	141.70	41.94	1249	17.41	2.75	1044	14.32	3.45	1359	2462	81.72
5	1283	166.33	44.14	1276	16.79	3.01	1018	14.42	2.95	1294	2502	85.35
6	1239	173.35	46.33	1288	17.28	3.05	1033	14.73	3.17	1320	2522	83.04
7	1200	165.07	41.35	1150	16.88	3.11	922	11.74	3.10	1220	2549	89.63
8	1259	170.48	37.33	1241	17.49	2.87	1006	12.66	3.40	1294	2577	90.89

Table 6

Correlations (and n) Between easyCBM CCSS Math and SB Math Total Score

	Seasonal Benchmark		
Grade			
	Fall	Winter	Spring
3	.69** (*n* = 974)	.78** (*n* = 1021)	.76** (*n* = 1031)
4	.75** (*n* = 1274)	.74** (*n* = 1321)	.72** (*n* = 1343)
5	.71** (*n* = 1211)	.83** (*n* = 1248)	.78** (*n* = 1184)
6	.73** (*n* = 1231)	.80** (*n* = 1281)	.84** (*n* = 1301)
7	.73** (*n* = 1139)	.82** (*n* = 1174)	.79** (*n* = 1204)
8	.70** (*n* = 1095)	.80** (*n* = 1208)	.82** (*n* = 1210)

**Correlation is significant at the .01 level.

Table 7

Linear Regression Results: Predicting Smarter Balanced Total Math from easyCBM CCSS Math

				Part Correlations		
Grade	R Square	F	Sig			
				Fall	Winter	Spring
3	.70	739.50	.000	.16	.24	.24
4	.68	869.38	.000	.24	.17	.20
5	.74	1015.20	.000	.10	.29	.16
6	.77	1336.51	.000	.10	.16	.29
7	.75	1091.47	000	.10	.24	.21
8	.76	1088.12	.000	.12	.20	.27

Table 8

Correlations (and n) Between easyCBM Passage Reading Fluency and SB ELA Total Score

Grade	Seasonal Benchmark		
	Fall	Winter	Spring
3	.64** (*n* = 976)	.64** (*n* = 1009)	.65** (*n* = 1037)
4	.63** (*n* = 1184)	.62** (*n* = 1228)	.63** (*n* = 1258)
5	.68** (*n* = 1217)	.67** (*n* = 1251)	.67** (*n* = 1279)
6	.59** (*n* = 1197)	.61** (*n* = 1233)	.61** (*n* = 1236)
7	.61** (*n* = 1115)	.62** (*n* = 1167)	.61** (*n* = 1191)
8	.56** (*n* = 1204)	.58** (*n* = 1248)	.60** (*n* = 1247)

**Correlation is significant at the .01 level.

Table 9

Correlations (and n) Between easyCBM Vocabulary and SB ELA Total Score

Grade	Seasonal Benchmark		
	Fall	Winter	Spring
3	.68** (*n* = 966)	.63** (*n* = 1018)	.61** (*n* = 1022)
4	.66** (*n* = 1181)	.61** (*n* = 1229)	.58** (*n* = 1248)
5	.69** (*n* = 1198)	.65** (*n* = 1243)	.62** (*n* = 1270)
6	.61** (*n* = 1238)	.68** (*n* = 1281)	.61** (*n* = 1285)
7	.66** (*n* = 1132)	.66** (*n* = 1169)	.64** (*n* = 1144)
8	.62** (*n* = 1228)	.60** (*n* = 1252)	.64** (*n* = 1230)

**Correlation is significant at the .01 level.

Table 10

Correlations (and n) Between easyCBM MCRC and SB ELA Total Score

	Seasonal Benchmark		
Grade			
	Fall	Winter	Spring
3	.62** (*n* = 971)	.63** (*n* = 1013)	.66** (*n* = 1019)
4	.68** (*n* = 1183)	.63** (*n* = 1225)	.60** (*n* = 1043)
5	.67** (*n* = 1209)	.68** (*n* = 1245)	.65** (*n* = 1017)
6	.58** (*n* = 1242)	.50** (*n* = 1280)	.62** (*n* = 1032)
7	.63** (*n* = 1136)	.57** (*n* = 1167)	.61** (*n* = 919)
8	.64** (*n* = 1230)	.56** (*n* = 1256)	.64** (*n* = 998)

**Correlation is significant at the .01 level.

Table 11

Linear Regression Results: Predicting Smarter Balanced Total ELA from easyCBM Fall Reading Measures

				Proportion of Unique Variance Accounted for by easyCBM Measures		
Grade	R Square	F	Sig			
				PRF	Voc	MCRC
3	.56	403.34	.000	.17	.23	.20
4	.58	539.60	.000	.19	.18	.26
5	.62	645.17	.000	.23	.23	.22
6	.50	386.29	.000	.23	.21	.20
7	.57	485.84	000	.23	.23	.23
8	.53	451.83	.000	.19	.21	.29

Table 12

Linear Regression Results: Predicting Smarter Balanced Total ELA from easyCBM Winter Reading Measures

Grade	R Square	F	Sig	Proportion of Unique Variance Accounted for by easyCBM Measures		
				PRF	Voc	MCRC
3	.56	410.98	.000	.22	.20	.24
4	.55	495.94	.000	.21	.20	.27
5	.60	621.77	.000	.24	.18	.25
6	.54	483.90	.000	.23	.29	.14
7	.56	487.18	000	.26	.26	.21
8	.53	468.65	.000	.24	.26	.27

Table 13

Linear Regression Results: Predicting Smarter Balanced Total ELA from easyCBM Spring Reading Measures

Grade	R Square	F	Sig	Proportion of Unique Variance Accounted for by easyCBM Measures		
				PRF	Voc	MCRC
3	.56	430.59	.000	.26	.15	.24
4	.52	374.78	.000	.26	.19	.21
5	.57	431.30	.000	.22	.20	.25
6	.52	346.08	.000	.25	.14	.27
7	.59	429.57	000	.24	.28	.25
8	.57	425.37	.000	.24	.23	.30

Appendix B

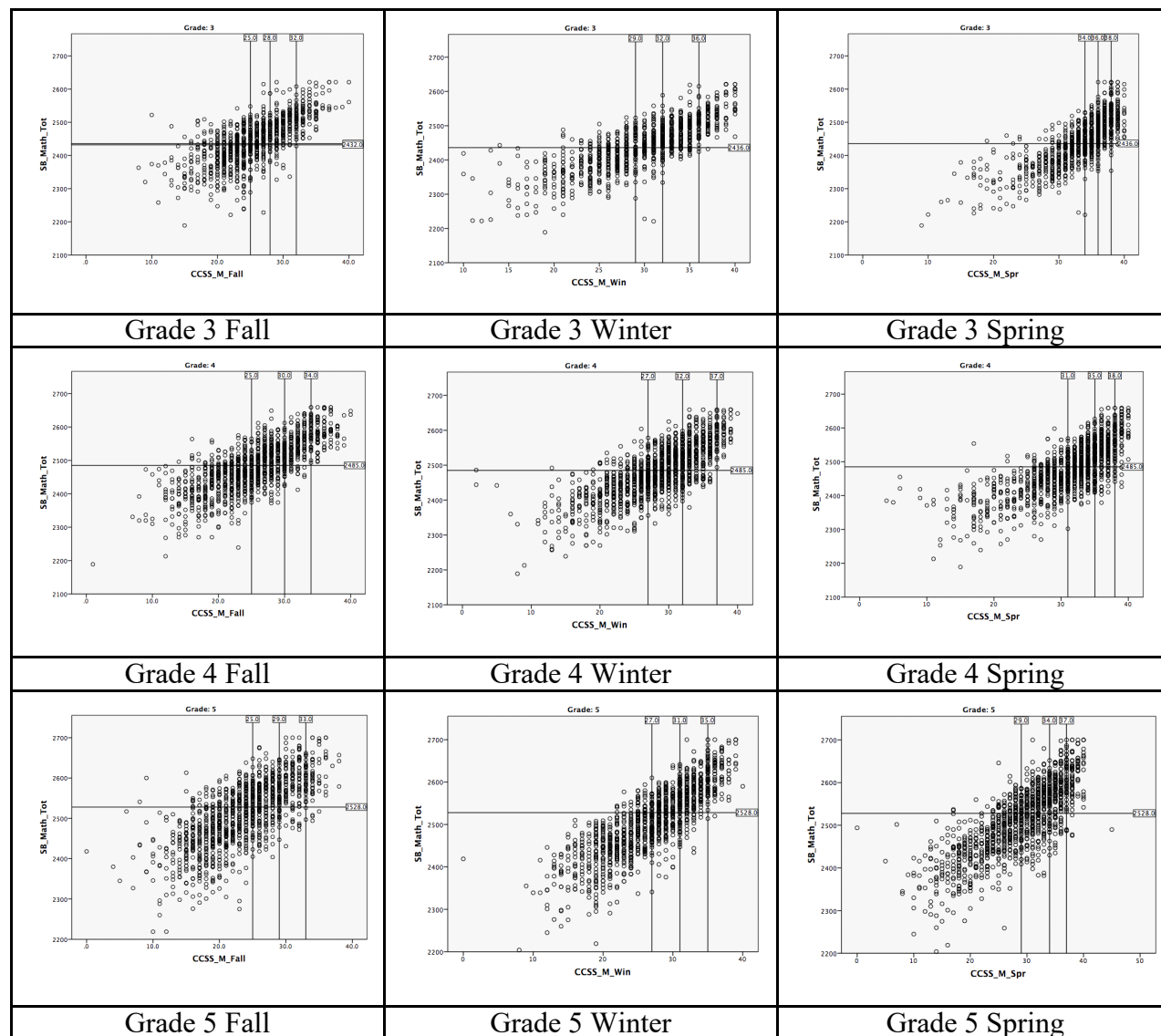| Grade 3 Fall | Grade 3 Winter | Grade 3 Spring |
| Grade 4 Fall | Grade 4 Winter | Grade 4 Spring |
| Grade 5 Fall | Grade 5 Winter | Grade 5 Spring |

Figure 1. Scatterplots Showing Relation between easyCBM and SB Math Total Score (vertical lines indicate easyCBM norms at the 50th, 75th, and 90th percentile, from left to right; horizontal line indicates SB "Proficient" cut score).
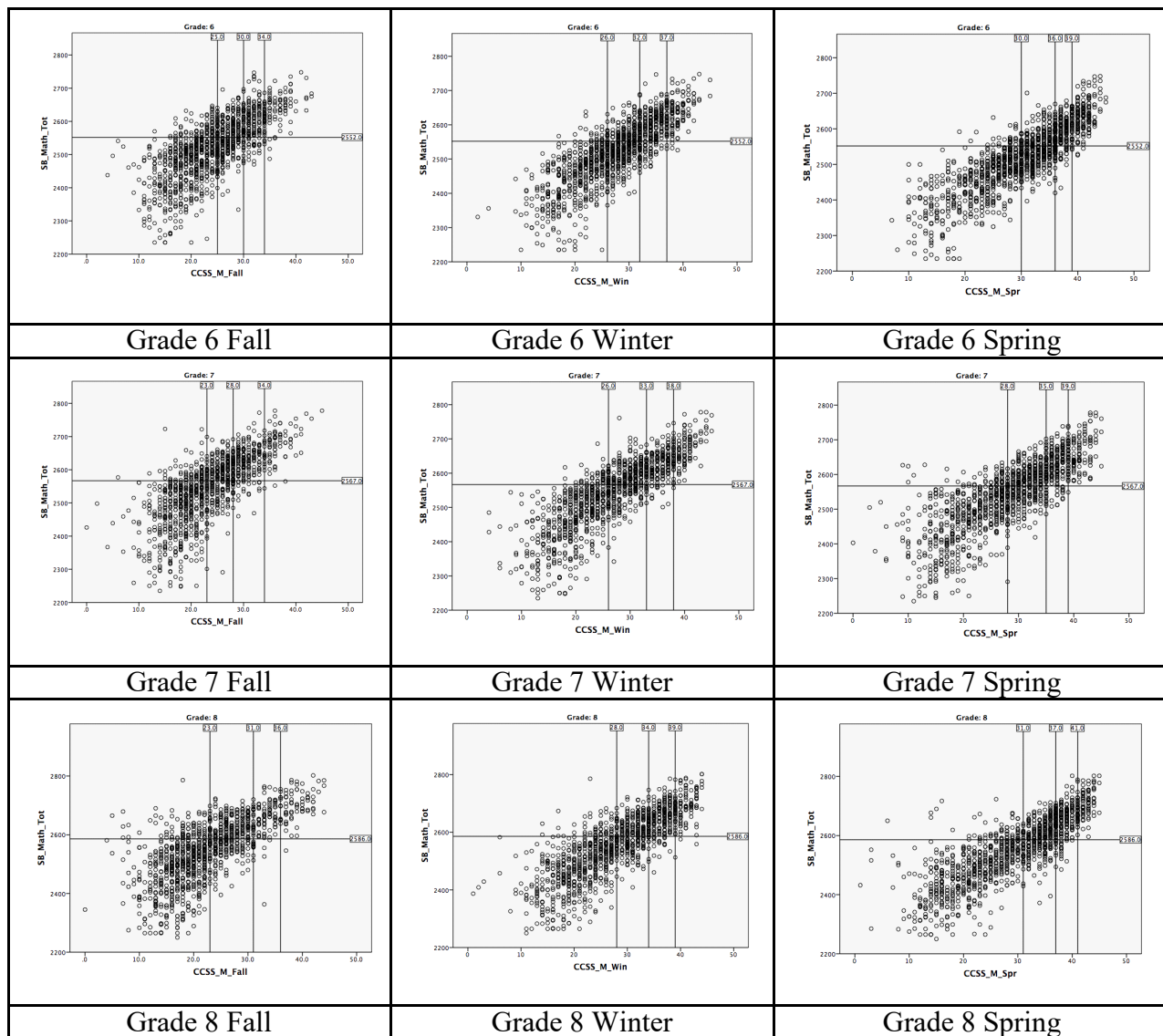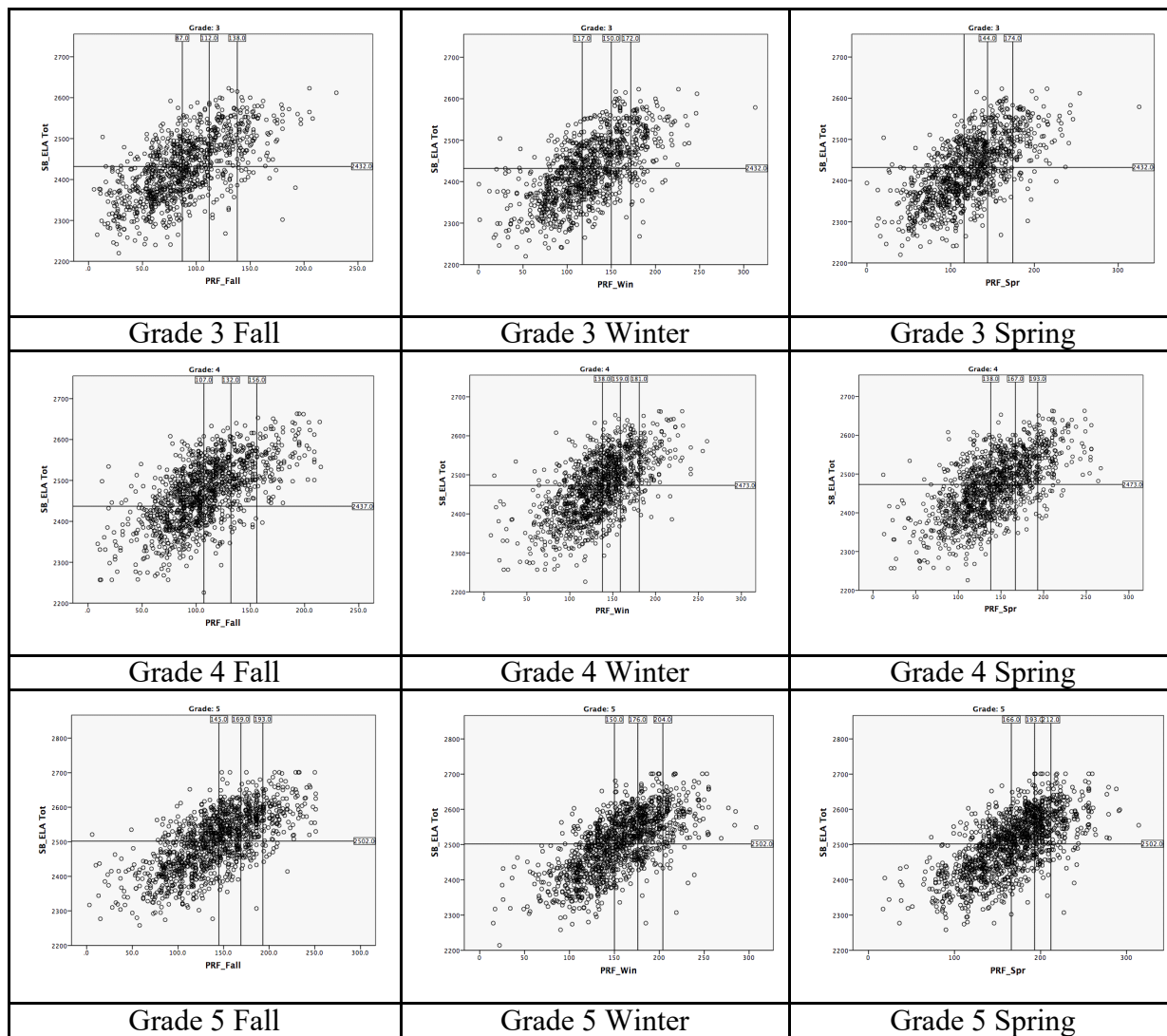
Figure 1 (continued). Scatterplots Showing Relation between easyCBM and SB Math Total Score (vertical lines indicate easyCBM norms at the 50th, 75th, and 90th percentile, from left to right; horizontal line indicates SB "Proficient" cut score).

Figure 2. Scatterplots Showing Relation between easyCBM PRF and SB ELA Total Score (vertical lines indicate easyCBM norms at the 50th, 75th, and 90th percentile, from left to right; horizontal line indicates SB "Proficient" cut score).
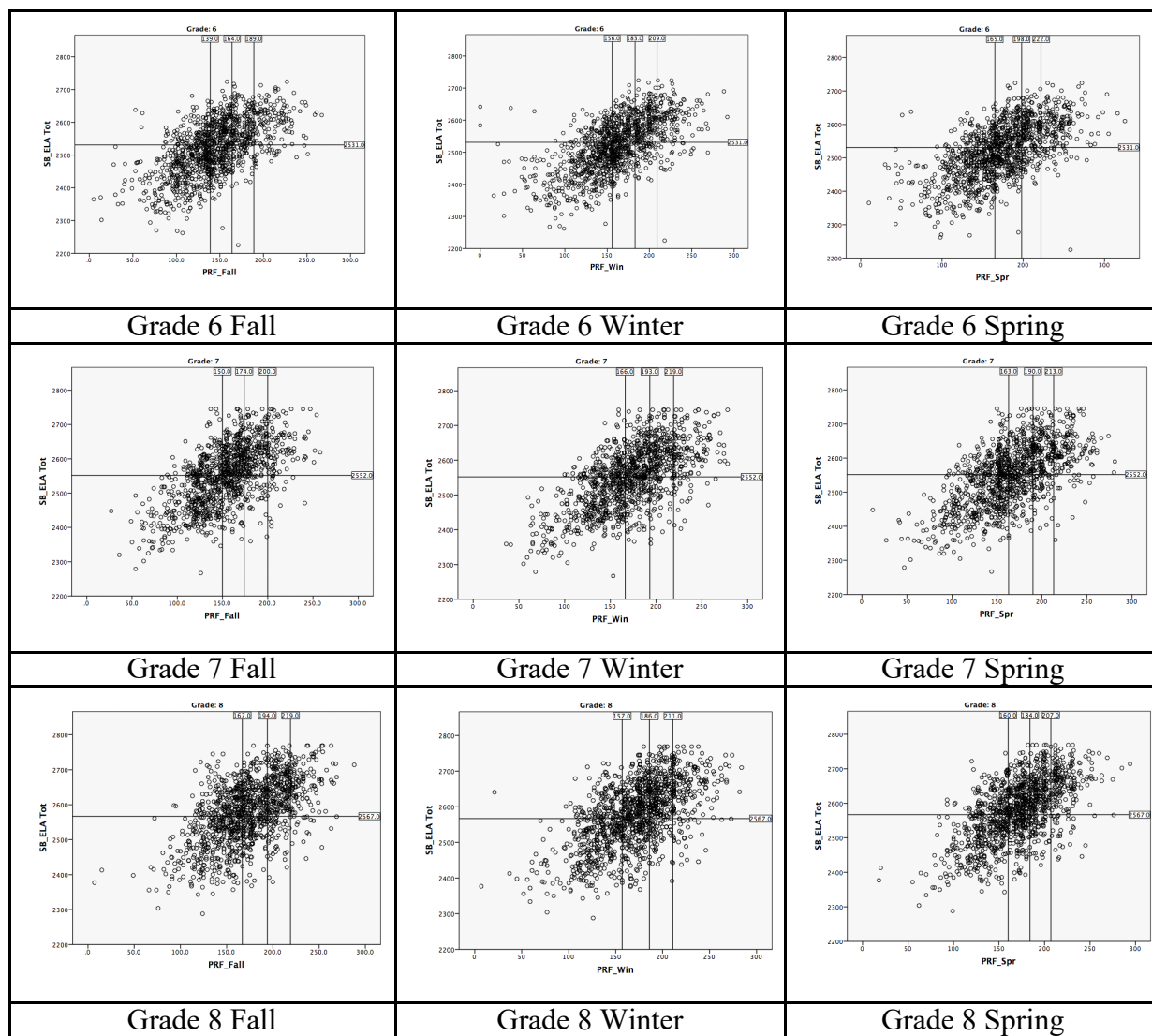
Figure 2 (Continued). Scatterplots Showing Relation between easyCBM PRF and SB ELA Total Score (vertical lines indicate easyCBM norms at the 50th, 75th, and 90th percentile, from left to right; horizontal line indicates SB "Proficient" cut score).

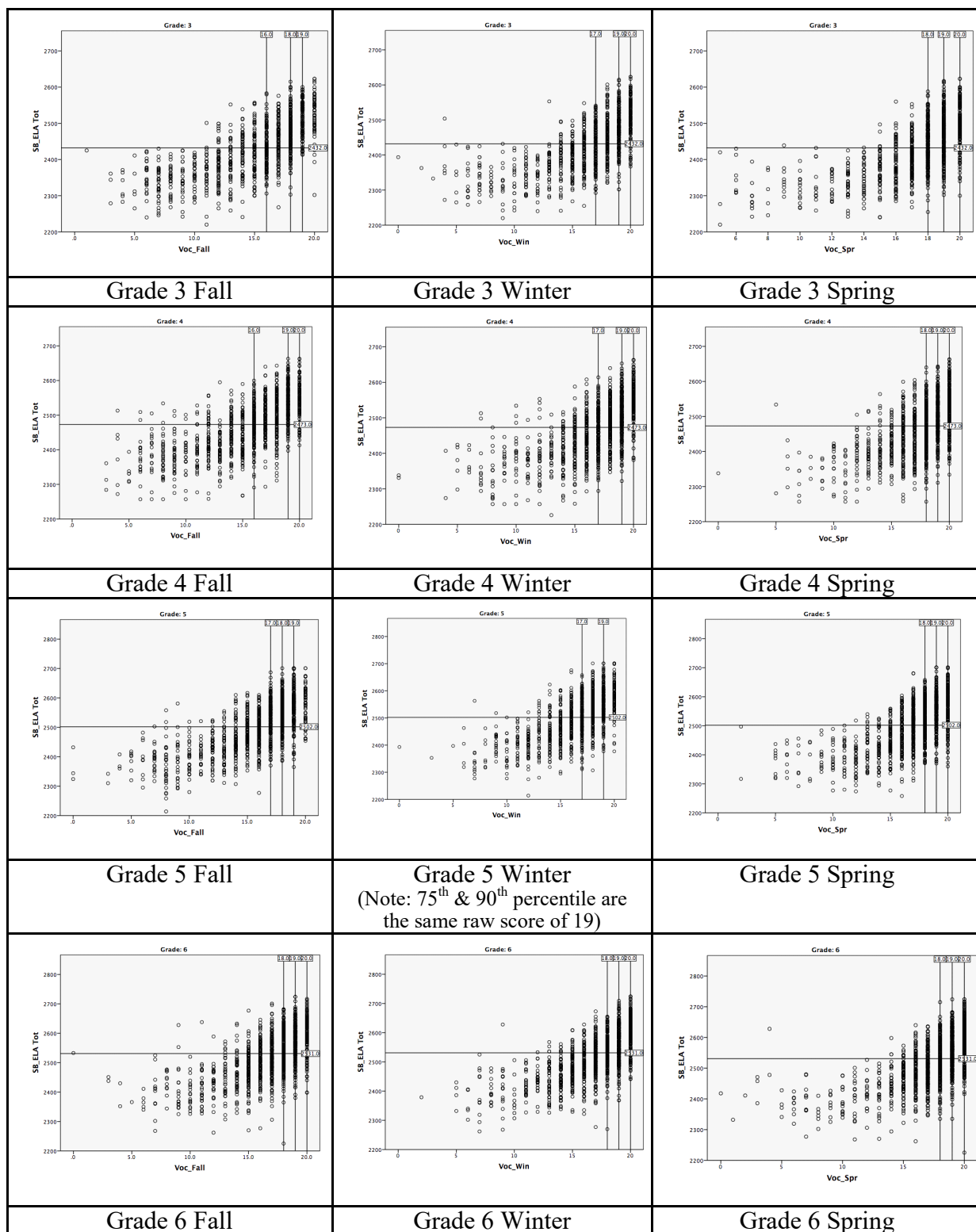| Grade 3 Fall	Grade 3 Winter	Grade 3 Spring
Grade 4 Fall	Grade 4 Winter	Grade 4 Spring
Grade 5 Fall	Grade 5 Winter (Note: 75th & 90th percentile are the same raw score of 19)	Grade 5 Spring
Grade 6 Fall	Grade 6 Winter	Grade 6 Spring

Figure 3. Scatterplots Showing Relation between easyCBM Vocabulary (Voc) and SB ELA Total Score (vertical lines indicate easyCBM norms at the 50th, 75th, and 90th percentile, from left to right; horizontal line indicates SB "Proficient" cut score).
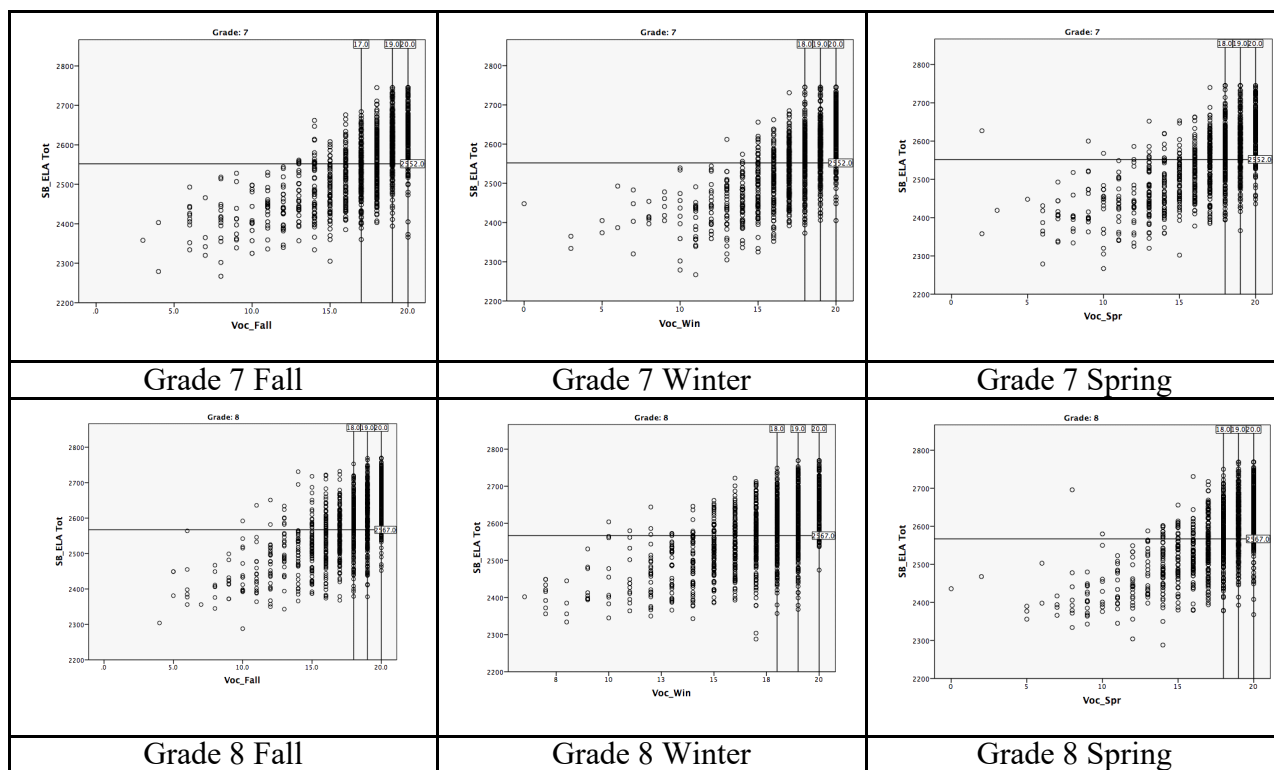
Figure 3 (Continued). Scatterplots Showing Relation between easyCBM Vocabulary (Voc) and SB ELA Total Score (vertical lines indicate easyCBM norms at the 50th, 75th, and 90th percentile, from left to right; horizontal line indicates SB "Proficient" cut score).
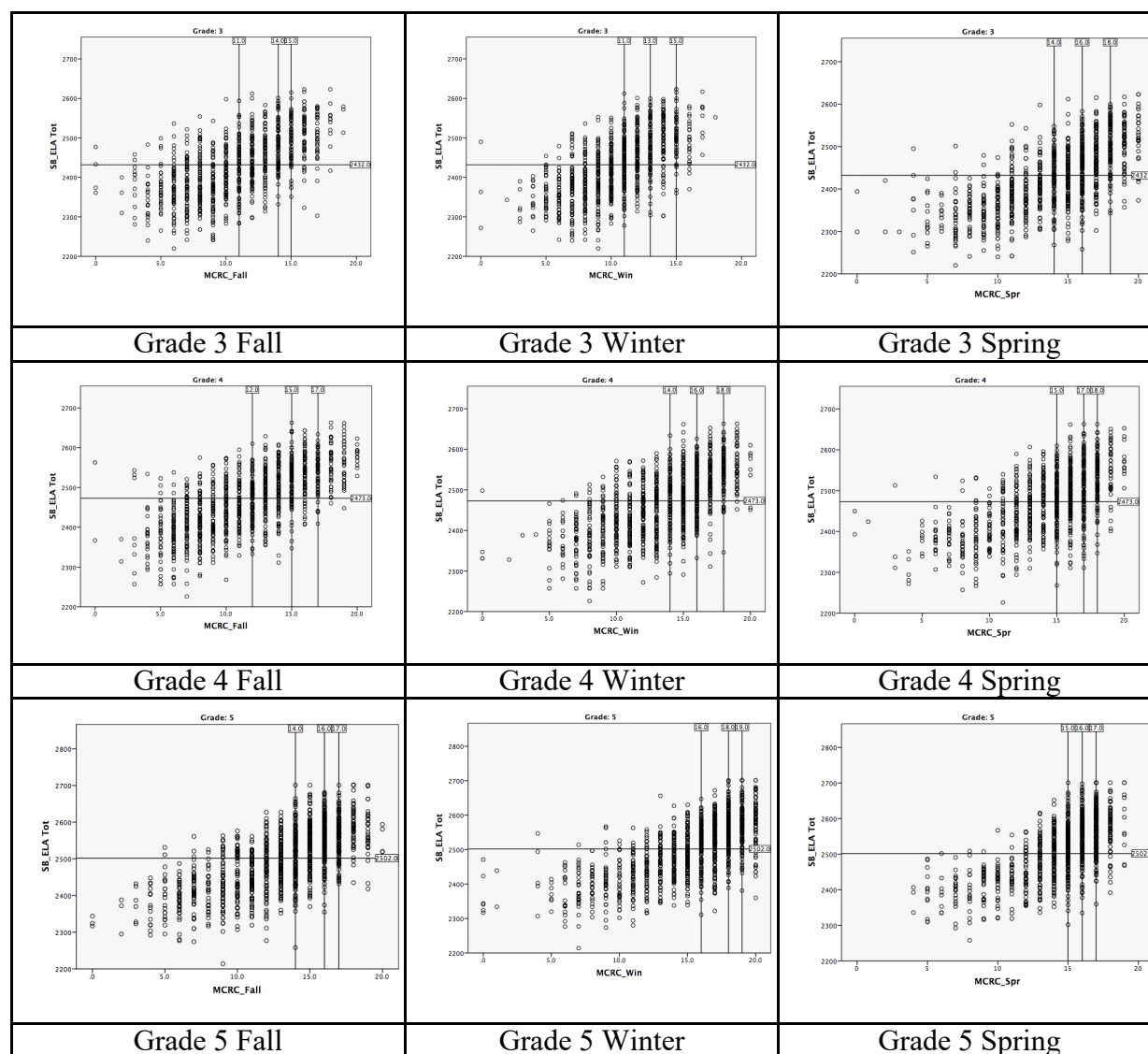
Figure 4. Scatterplots Showing Relation between easyCBM MCRC and SB ELA Total Score (vertical lines indicate easyCBM norms at the 50th, 75th, and 90th percentile, from left to right; horizontal line indicates SB "Proficient" cut score).

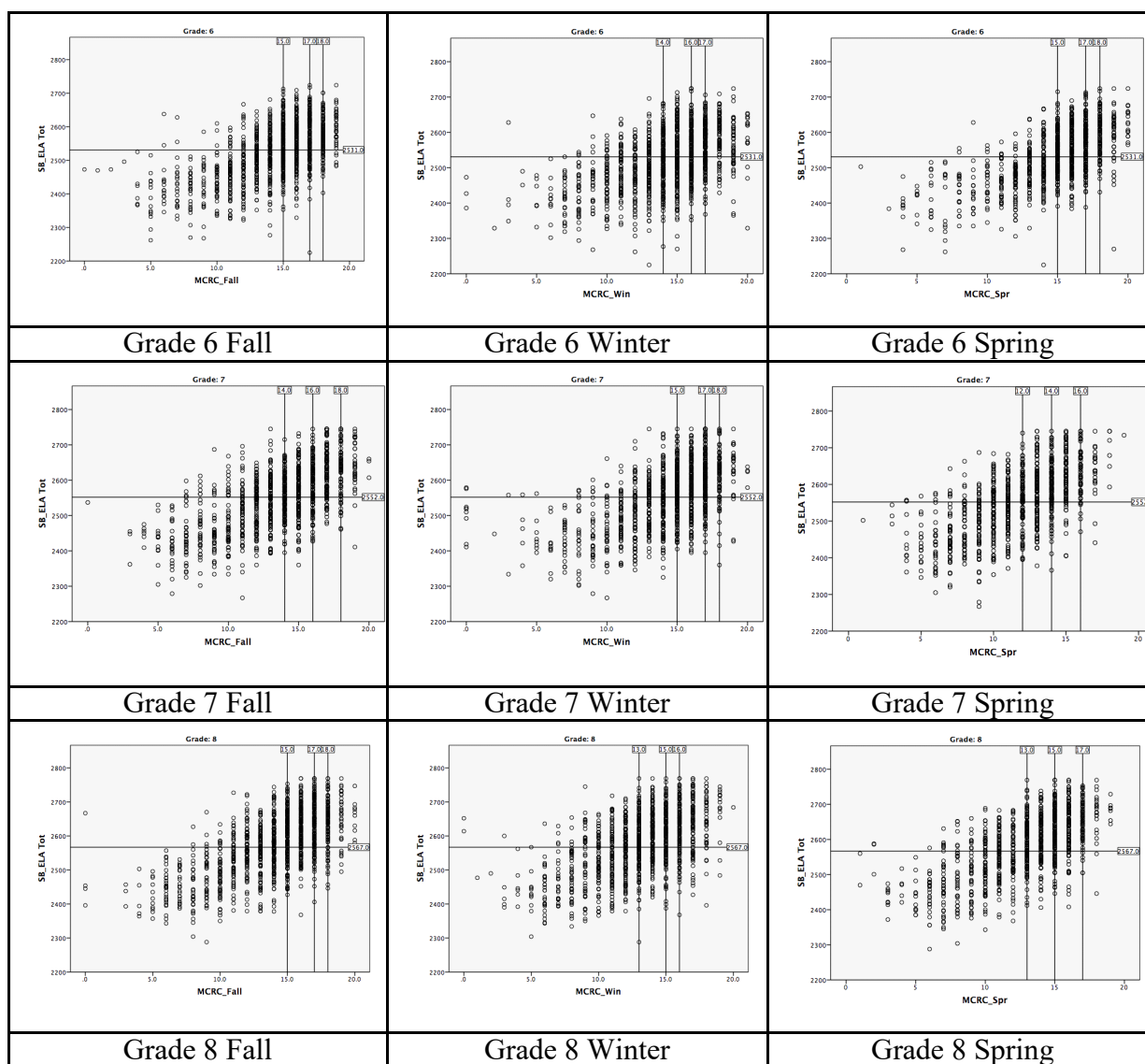| Grade 6 Fall | Grade 6 Winter | Grade 6 Spring |
| Grade 7 Fall | Grade 7 Winter | Grade 7 Spring |
| Grade 8 Fall | Grade 8 Winter | Grade 8 Spring |

Figure 4 (Continued). Scatterplots Showing Relation between easyCBM MCRC and SB ELA Total Score (vertical lines indicate easyCBM norms at the 50th, 75th, and 90th percentile, from left to right; horizontal line indicates SB "Proficient" cut score).

Disciplinary Consequence Differences in Grade 6 Students as a Function of Race, Ethnicity, and Economic Status

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ABSTRACT In this investigation, we used Texas statewide data to determine the extent to which inequities were present in the assignment of school disciplinary consequences. Specifically examined were the assignment of in-school suspension, out-of-school suspension, and disciplinary alternative education program placement to grade 6 Black, Hispanic, and White students by their economic status in Texas public schools. Inferential analyses yielded statistically significant differences for each disciplinary consequence within each ethnic/racial group. Students who were economically disadvantaged received statistically significantly more instances of each disciplinary consequence than their same ethnic/racial peers who were not economically disadvantaged. Of note was the very high numbers of grade 6 students who were assigned these disciplinary consequences. A clear lack of equity was demonstrated in the assignment of disciplinary consequences to grade 6 Black, Hispanic, and White students by their economic status. As such, school administrators and educational leaders are urged to evaluate their own discipline programs to ascertain the degree to which they have equity in the assignment of disciplinary consequences in the students they serve.

Key words: Black, Hispanic, White, in-school suspension, out-of-school suspension, disciplinary alternative education program placement, inequities

Since the 1970s, numerous researchers have documented vast disparities in discipline by race and ethnicity in U.S. public schools (e.g., Allman & Slate, 2011; Barnes & Slate, 2016; Children's Defense Fund, 1975; Henkel, Slate, & Martinez-Garcia, 2015; Jones, Slate, & Martinez-Garcia, 2014, 2015; Hilberth & Slate, 2014). Losen and Gillespie (2012) noted that the suspension rate of students doubled from 3.7% in 1973 to 7.4% in 2010 (Porowski, O'Conner, & Passa, 2014). Most notable is the high suspension rates of Black students, students of low economic status, and students with disabilities (Evans, Lester & Anfara, 2010; Jones et al., 2014, 2015; Sullivan, Klingbeil, & Van Norman, 2013). Black and Hispanic students who are in middle school are three times more likely than White students to be suspended or expelled from school (Dupper, 2010; Raffaele Mendez, Knoff, & Ferron, 2002). Furthermore, at all three school levels (i.e., elementary, middle, and high school), one out of every six Black students was suspended at least once as compared with one in thirteen Native American students, one in fourteen Hispanic students, one in twenty White students, and one in fifty Asian American students (Losen & Gillespie, 2012).

In 2014, the U.S. Department of Education's Office for Civil Rights released civil rights data that were collected from all 97,000 public schools in the United States and its 16,500 school districts for the 2011-2012 school year. Of the 49 million students in U.S. public schools, Black students were suspended at statistically significantly higher rates than were White students. Of particular concern is that the assignment of disciplinary consequences of Black students begins as early as preschool and persists throughout the different school levels. Specifically documented in this report is that Black students constituted 18% of preschool enrollment; however, 42% of Black students were suspended at least once and 48% of these Black students were suspended more than once (U.S. Department of Education, 2014, 2015). Furthermore, Black and Hispanic students and students of low economic status were significantly more likely to be suspended and expelled from school, drop out of school, and have less access to highly qualified teaching staff and rigor-

ous curriculum than White students (U.S. Department of Education, 2014, 2015). This alarming trend is indicative of racial and ethnic disparities in discipline consequences that continue to be pervasive at the elementary, middle, and high school levels and create educational inequities among students of diverse racial and ethnic backgrounds (Henkel et al., 2015; Hilberth & Slate, 2014; Jones et al., 2014, 2015; Shore, 2012).

With reference to Texas, the State of interest in this investigation, Hilberth and Slate (2014) documented that for the 2008-2009 school year, Black students enrolled at the middle school level (i.e., grades 6, 7, and 8) were two times more likely to be suspended and expelled than their White peers. Results from their study revealed an overrepresentation of Black middle school students assigned to in-school suspension, out-of-school suspension, and disciplinary alternative education program placements than White middle school students. This overrepresentation of Black students and the potential academic ramifications are well documented in the literature (Fenning & Rose, 2007; Gregory, Skiba, & Noguera, 2010; Hilberth & Slate, 2014; Jones et al., 2014, 2015; Skiba et al., 2011).

Statement of the Problem

Over the past 40 years, Black and Hispanic students have been overrepresented in the assignment of school disciplinary consequences when compared to White and Asian students (Fenning & Rose, 2007; Gregory, Skiba, & Noguera, 2010; Hilberth & Slate, 2014; Jones et al., 2014, 2015; Shore, 2012; Skiba et al., 2011). Additionally, a disproportionate number of economically disadvantaged urban middle school students have been more likely to receive stricter disciplinary consequences than suburban middle school students (Evans et al., 2010; Noguera, 2003; Skiba, Michael, Nardo, & Peterson, 2002). Overrepresentation of Black, Hispanic, and impoverished students in exclusionary disciplinary consequences have contributed to inequities in education and expanded the achievement gap for students of diverse racial and ethnic backgrounds (Hilberth & Slate, 2012, 2014; Jones et al., 2014, 2015).

Purpose of the Study

The purpose of this study was to examine the extent to which differences in the proportion of Black, Hispanic, and White grade 6 students were assigned to a discipline consequence in Texas public schools. Specifically examined was the impact of student economic status on school assignment of in-school suspension, out-of-school suspension, and disciplinary alternative education program placements for Black, Hispanic, and White students.

Research Questions

The following research questions were addressed in this investigation: (1) What is the difference in the percentage of Black students, Hispanic students, and White students in grade 6 who were assigned to in-school suspension as a function of their economic status; (2) What is the difference in the percentage of Black students, Hispanic students, and White students in grade 6 who were assigned to out-of-school suspension as a function of their economic status; and (3) What is the difference in the percentage of Black students, Hispanic students, White students in grade 6 who were assigned to a disciplinary alternative education program placement as a function of their economic status? These research questions refer to whether similar or dissimilar percentages of students are assigned to a discipline consequence, regardless of their economic status. When dissimilar percentages within each ethnic group are assigned a discipline consequence by student economic status, then inequities would be present.

Definition of Terms

For purposes of this study, four terms are essential to define: (1) In-school suspension was defined by the U.S. Department of Education (2014) as "instances in which a child is temporarily removed from his/her regular classroom(s) for disciplinary purposes but remains under the direct supervisor of school personnel" (p. 80). (2) Out-of-school suspension was defined by the Texas Education Agency (2010) as the removal of students from the regular classroom as a disciplinary consequence; a consequence that follows the use of in-school suspension. In an out-of-school suspension, students are removed from school for at least one day but not to exceed three consecutive days. (3) The third method of disciplinary consequence—one that follows an in-school suspension and an out-of-school suspension—is a disciplinary alternative education program placement. In a disciplinary alternative education program placement, students are removed from their regular classes because of disciplinary reasons and placed in a separate class. This class setting may be located either on or off of the regular school campus (Texas Education Agency, 2010). (4) The State of Texas uses the federal government's guidelines to determine whether students are economically disadvantaged or not. The income eligibility guidelines are:

The family-size income levels prescribed annually by the Secretary of Agriculture for determining eligi-

bility for free and reduced price meals and free milk. The free guidelines are at or below 130% of the federal poverty guidelines. The reduced price guidelines are between 130 and at or below 185% of the federal poverty guidelines (Child and Nutrition Programs, 2015, p. 10).

Method

Participants

Participants in this study included a total of 341,411 grade 6 students from Texas traditional public middle schools in the 2011-2012 school year. Of this total, 46,560 were Black, 179,638 were Hispanic, and 115,213 were White. Data regarding student racial and ethnic membership were obtained from the Texas Education Agency Public Education Information Management System, which is a reporting system that collects data from individual school districts regarding student and personnel demographics, academic performance, and financial and organizational information and reports it to the Texas Education Agency (2006). Through a public information request form, the Texas Education Agency provided the following information: student ethnicity and race; student economic status; and whether or not students had received an in-school suspension, an out-of-school suspension, or a disciplinary alternative education program placement.

Data Analysis

In this investigation, both the independent variables and the dependent variables were categorical in nature. Three independent variables were present: in-school suspension, out-of-school suspension, and disciplinary alternative education program placement. Each of these three independent variables was comprised of two groups: students that received a specific consequence or students that did not receive that specific consequence. The dependent variable used for each of these three independent variables was economic status of students: they either qualified for the free or reduced lunch program or did not qualify for the program. The sample of students differed for each of these analyses, with the analyses being conducted separately for Black, Hispanic, and White students.

The optimal inferential statistical procedure when both the independent variable and the dependent variable are categorical (i.e., in this study, they were all specifically dichotomous variables) is the Pearson chi-square (Field, 2013). The degree to which the percentages of students differentially received an in-school suspension, an out-of-school suspension, or a disciplinary alternative education program placement by

their economic status was ascertained in each of the Pearson chi-square procedures that were calculated. Given the large sample size and the independence of data, the underlying assumptions of this procedure were met (Field, 2013).

Results

Each of the previously delineated research questions will now be addressed, with in-school suspension for Black, Hispanic, and White students by their economic status being discussed first. Following the in-school suspension results will be the out-of-school suspension findings for Black, Hispanic, and White students by their economic status. Finally, the results for disciplinary alternative education program placements for Black, Hispanic, and White students by their economic status will be presented.

For the first research question for Black students, the result was a statistically significant difference, $\chi2$ (1) = 819.26, p < .001. The effect size for this finding was small, φ = .13 (Cohen, 1988). Revealed in Table 1 is that 33.5% of Black students who were economically disadvantaged received an in-school suspension compared to 19.93% of Black students who were not economically disadvantaged. Readers should note the numbers of grade 6 Black students who received an in-school suspension: 11,400 Black students who were economically disadvantaged and 2,499 Black students who were not economically disadvantaged. Readers are referred to Table 1 for the frequencies and percentages of in-school suspension by student economic status.

Regarding the first research question for Hispanic students, the result was a statistically significant difference, $\chi2(1)$ = 1309.84, p < .001. The effect size for this finding was trivial, φ = .085 (Cohen, 1988). Revealed in Table 1 is that 20.2% of Hispanic students who were economically disadvantaged received an in-school suspension compared to 12.0% of Hispanic students who were not economically disadvantaged. Readers should note the high numbers of grade 6 Hispanic students who received an in-school suspension: 28,818 Hispanic students who were economically disadvantaged and 4,415 Hispanic students who were not economically disadvantaged.

Similarly for White students, the result was also statistically significant, $\chi2(1)$ = 4225.28, p < .001. The effect size for this finding was small, φ = .19 (Cohen, 1988). As noted in Table 1, 23.1% of White students who were economically disadvantaged received an in-school suspension compared to 8.9% of White students who were not economically disadvantaged.

Table 1

Frequencies and Percentages of In-School Suspension for Grade 6 Black, Hispanic, and White Students by Economic Status

Ethnicity/Race and Economic Status	Received In-School Suspension	Did Not Receive an In-School Suspension
	n and % age of Total	*n* and % age of Total
Black Students		
Economically Disadvantaged	(*n* =11,400) 33.5%	(*n* = 22,585) 66.5%
Not Economically Disadvantaged	(*n* = 2,499) 19.93%	(*n* = 10,076) 80.1%
Hispanic Students		
Economically Disadvantaged	(*n* =28,818) 20.2%	(*n* = 113,952) 79.8%
Not Economically Disadvantaged	(*n* = 4,415) 12.0%	(*n* = 32,453) 88.0%
White Students		
Economically Disadvantaged	(*n* =7,623) 23.1%	(*n* = 25,423) 76.9%
Not Economically Disadvantaged	(*n* = 7,279) 8.9%	(*n* = 74,888) 91.1%

Though lower numbers than for Black and Hispanic students, high numbers of Grade 6 White students were assigned to an in-school suspension: 7,623 White students who were economically disadvantaged and 7,279 White students who were not economically disadvantaged.

With respect to the second research question for Black students, the result was a statistically significant difference, $\chi2(1)$ = 828.67, p < .001. The effect size for this finding was small, φ = .13 (Cohen, 1988). Revealed in Table 2 is that 21.3% of Black students who were economically disadvantaged received an out-of-school suspension compared to 9.7% of Black students who were not economically disadvantaged. Readers should note the strong disparity in these percentages and in the numbers of grade 6 Black students who received an out-of-school suspension: 7,237 Black students who were economically disadvantaged and 1,221 Black students who were not economically disadvantaged. Readers are referred to Table 2 for the frequencies and percentages of out-of-school suspension by student economic status.

Concerning the second question for Hispanic students, the result was a statistically significant difference, $\chi2(1)$ = 946.08, p < .001. The effect size for this

finding was trivial, φ = .073 (Cohen, 1988). Presented in Table 2 is that 9.0% of Hispanic students who were economically disadvantaged received an out-of-school suspension compared to 4.1% of Hispanic students who were not economically disadvantaged. Readers should note the high numbers of grade 6 Hispanic students who received an out-of-school suspension: 12,855 Hispanic students who were economically disadvantaged and 1,522 Hispanic students who were not economically disadvantaged.

Similarly for White students, the result was also statistically significant, $\chi2(1)$ = 1526.92, p < .001. The effect size for this finding was small, φ = .12 (Cohen, 1988). As indicated in Table 2, 6.4% of White students who were economically disadvantaged received an out-of-school suspension compared to 1.9% of White students who were not economically disadvantaged. Comparatively lower numbers of White students received an out-of-school suspension than did Black and Hispanic students. The number of grade 6 White students who were assigned to an in-school suspension was 2,101 who were economically disadvantaged and 1,557 who were not economically disadvantaged.

With respect to the third research question for

Table 2

Frequencies and Percentages of Out-of-School Suspension for Grade 6 Black, Hispanic, and White Students by Economic Status

	Received an Out-of-School Suspension	Did Not Receive an Out-of-School Suspension
	n and %age of Total	*n* and %age of Total
Ethnicity/Race and Economic Status		
Black Students		
Economically Disadvantaged	(*n* =7,237) 21.3%	(*n* = 26,748) 78.7%
Not Economically Disadvantaged	(*n* = 1,221) 9.7%	(*n* = 11,354) 90.3%
Hispanic Students		
Economically Disadvantaged	(*n* =12,855) 9.0%	(*n* = 129,915) 91.0%
Not Economically Disadvantaged	(*n* = 1,522) 4.1%	(*n* = 35,346) 95.9%
White Students		
Economically Disadvantaged	(*n* =2,101) 6.4%	(*n* = 30,945) 93.6%
Not Economically Disadvantaged	(*n* = 1,557) 1.9%	(*n* = 80,610) 98.1%

Black students, the result was a statistically significant difference, $\chi2(1) = 162.79$, $p < .001$. The effect size for this finding was trivial, $\varphi = .06$ (Cohen, 1988). Revealed in Table 3 is that 4.0% of Black students who were economically disadvantaged received a disciplinary alternative education program placement compared to 1.6% of Black students who were not economically disadvantaged. Readers should note the number of Grade 6 Black students who were economically disadvantaged and received this consequence: 1,373 students. Readers are referred to Table 3 for the frequencies and percentages of disciplinary alternative education program placement by student economic status.

Concerning the third research question for Hispanic students, the result was a statistically significant difference, $\chi2(1) = 299.52$, $p < .001$. The effect size for this finding was trivial, $\varphi = .04$ (Cohen, 1988). Present in Table 3 is that 2.2% of Hispanic students who were economically disadvantaged received a disciplinary alternative education program placement compared to 0.8% of Hispanic students who were not economically disadvantaged. Readers should note the very high number of grade 6 Hispanic students who were economically disadvantaged and received this conse-

quence: 3,192 students.

Similarly for White students, the result was also statistically significant, $\chi2(1) = 758.46$, $p < .001$. The effect size for this finding was trivial, $\varphi = .08$ (Cohen, 1988). As indicated in Table 3, 2.1% of White students who were economically disadvantaged received a disciplinary alternative education program placement compared to 0.4% of White students who were not economically disadvantaged. Comparatively lower numbers of White students were assigned to this disciplinary consequence than were Black and Hispanic students. The number of grade 6 White students who were assigned to a disciplinary alternative education program placement was 691 who were economically disadvantaged and 334 who were not economically disadvantaged.

Discussion

In this empirical investigation, we used Texas statewide data to determine the extent to which inequities were present in the assignment of disciplinary consequences. Specifically examined were the assignment of in-school suspension, out-of-school suspension, and disciplinary alternative education program placement to grade 6 Black, Hispanic, and White stu-

Table 3

Frequencies and Percentages of Disciplinary Alternative Education Program Placement for Grade 6 Black, Hispanic, and White Students by Economic Status

Ethnicity/Race and Economic Status	Received a DAEP _n_ and % age of Total	Did Not Receive a DAEP _n_ and % age of Total
Black Students		
Economically Disadvantaged	(_n_ =1,373) 4.0%	(_n_ = 32,612) 96.0%
Not Economically Disadvantaged	(_n_ = 205) 1.6%	(_n_ = 12,370) 98.4%
Hispanic Students		
Economically Disadvantaged	(_n_ =3,192) 2.2%	(_n_ = 13,9578) 97.8%
Not Economically Disadvantaged	(_n_ = 309) 0.8%	(_n_ = 36,559) 99.2%
White Students		
Economically Disadvantaged	(_n_ =691) 2.1%	(_n_ = 32,355) 97.9%
Not Economically Disadvantaged	(_n_ = 334) 0.4%	(_n_ = 81,833) 99.6%

dents by their economic status in Texas public schools. Inferential analyses revealed the presence of statistically significant differences for each disciplinary consequence within each ethnic and racial group by student economic status. Students who were economically disadvantaged received statistically significantly more instances of each disciplinary consequence than their same ethnic and racial peers who were not economically disadvantaged. Of concern to us is the very high numbers of grade 6 students who were assigned these disciplinary consequences.

With respect to the receipt of in-school suspension, 13,899 Black students received this disciplinary consequence, compared to 33,233 Hispanic students and 14,902 White students. Hispanic students comprise the highest percent of student enrollment by ethnicity and race, followed by White students, and then Black students. Of these in-school suspension assignments, 47,841 of them were received by students in poverty, compared to 14,093 assignments who were received by students who were not economically disadvantaged. As such, the lack of equity in the assignment of in-school suspension as a disciplinary consequence is quite clear.

Concerning the assignment of out-of-school sus-

pension, a total of 25,493 instances occurred in this school year: 8,458 Black students received this disciplinary consequence, compared to 14,377 Hispanic students and 3,658 White students. Of note here is that White students constitute a much higher percentage of high school student enrollment than do Black students, yet Black students received more than twice the number of instances of out-of-school suspension. Of the total of 25,493 out-of-school suspensions that were assigned, 22,193 of them were received by students in poverty, compared to only 3,300 to students who were not economically disadvantaged. This statistic reflects that out-of-school suspension was assigned seven times more often to students in poverty than to students who were not economically disadvantaged.

Regarding the assignment of a disciplinary alternative education program placement, a total of 6,104 instances occurred in this school year: 1,578 Black students received this disciplinary consequence, compared to 3,501 Hispanic students and 1,025 White students. Of these disciplinary consequences, 5,256 of them were received by students in poverty, compared to less than a thousand (_n_ = 948) assignments who were received by students who were not economically disadvantaged. This statistic reflects that disciplinary

alternative education program placements were assigned almost six times more often to students in poverty than to students who were not economically disadvantaged.

Results of our statewide investigation are congruent with the suspension rates of Black students and of students of low economic status (Evans et al., 2010; Hilberth & Slate, 2012, 2014; Jones et al., 2014, 2015; Sullivan et al., 2013). Our findings were, unfortunately, even more robust than the findings of Dupper (2010) and Raffaele Mendez et al. (2002), who documented that Black and Hispanic students in middle school were three times more likely than were White students to be suspended or expelled from school. Results from this study are commensurate with Hilberth and Slate (2014) who established that Black students enrolled at the middle school level were two times more likely to be suspended and expelled than their White peers. This overrepresentation of Black students and potential academic ramifications are well documented in the literature (Fenning & Rose, 2007; Gregory et al., 2010; Hilberth & Slate, 2014; Jones et al., 2014, 2015; Skiba et al., 2011).

Conclusion

A clear lack of equity was demonstrated in the assignment of disciplinary consequences to Grade 6 Black, Hispanic, and White students by their economic status. For in-school suspension, out-of-school suspension, and disciplinary alternative education program placement, strong inequities were present not only in the assignment of these consequences by student race and ethnicity, but also by student economic status. Students in poverty were assigned disciplinary consequences many times more often than students who were not in poverty. Educational leaders, policymakers, and researchers are encouraged to examine the issue of discipline with respect to equity and disparate impact.

We are not aware of any empirical literature in which students in poverty were determined to misbehave more often than children who were not in poverty. As such, the underlying reasons for the inequities we documented need to be investigated. We believe that a lack of cultural or social capital may be present, meaning that students in poverty may lack the experience or knowledge they need to behave in accordance with school norms (Silva, 2001). Silva (2001), among other authors, contended that parent educational levels and socioeconomic status are primary influences on their children's success at school. If this lack of cultural capital is present, then educational leaders need to consider developing educational strategies and discipline methods that recognize this lack of cultural capital as well as generate ways to improve it. We also believe that a disconnect may exist between the culture of most teachers (i.e., White) and the culture of minority students (i.e., primarily Hispanic and Black students in Texas). Bone and Slate (2011) summarized the primary arguments in support of a more diverse teacher workforce, particularly given the increases in student diversity. We believe that our data provide even more support for a need for a more diverse teacher workforce.

Given the inequities in the assignment of the three major disciplinary techniques used in U.S. schools as a function of student economic status, we contend that changes need to be made in discipline methods. Instead of methods that exclude students from the classroom environment, educators must generate discipline techniques that do not interfere with student opportunity to learn. Until such time, it appears that children will continue to be removed from the classroom settings, not only on the basis of their behavior, but also based upon their ethnicity, race, and economic status.

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Goal Setting to Increase Student Academic Performance

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High-stakes accountability has teachers and administrators across the nation searching for proven strategies to ensure continual improvement. Additionally, establishing processes that promote shared leadership and responsibility for student achievement is of great interest to educators. Furthermore, motivating students to perform at high levels has become increasingly challenging. Jenkins (1994) advocates that many students' greatest problems in school are related to irresponsibility, not inability. Hwang (1995) reports that the apathetic attitude of American students is profound. The effects of this complacent outlook and lack of motivation is far reaching and necessitates a new direction in order for schools to reach their goals. For the schools in Carter County, Kentucky, a rural district of approximately 5,000 students, goal setting has proven to be the answer.

Over the past two years, the teachers and students in Carter County have been utilizing goal setting. As a result, the district has shown tremendous growth on not only state assessments, but also on local assessments. Additionally, the number of students meeting benchmarks for college and career readiness has increased significantly. The strategy has provided students and teachers a focus that has enhanced student performance.

Goal Setting Defined

Goal setting as defined in *Classroom Instruction that Works*, is the process of establishing a direction for learning (Marzano, Pickering, & Pollock, 2001). Schunk (2009) clarifies that while goal setting can lead to student motivation and higher academic achievement, simply stating a goal does not automatically benefit students. However, if implemented correctly, goal setting has the potential to positively impact learning.

Methodology

To measure the impact of goal setting on reading achievement, student performance on the reading section of the state assessment were analyzed when students were in fourth and fifth grades. Data from the 2014 state reading assessment, when the selected students were in fourth grade and did not participate in goal setting, were compared with data from the 2015 state reading assessment, when these same students were in fifth grade and participated in goal setting. McNemar's Change Test analysis was used to determine if a significant difference existed between the reading growth achieved in fourth grade compared to reading growth achieved in fifth grade.

Results

Of the 328 students participating in the study, 69% made adequate growth after goal setting utilization as compared to only 60% prior to the implementation of goal setting. Specifically, McNemar's Test results indicated that a significant difference existed in the reading growth performance when comparing the reading growth for the two year period (x^2=9.986, *df* = 1, *p* = .0016). In 2014, 60.4% of the students were classified as making adequate growth, whereas 68.6% received the designation in 2015 (Dotson, 2015).

Discussion

Goal Setting in Carter County

Before leading students in the process of writing effective goals, it is imperative that teachers are knowledgeable of the process. Like students, teachers must experience the different goal types, components, and steps required to successfully mentor others toward reaching individual goals. Start by asking teachers to choose a trusted colleague to serve as a learning partner. Letting adults decide on their partner will make teachers more comfortable during the learning process. Partners will work together during the orien-

tation phase to coach each other through the different steps of goal setting. Then, in the same manner that we explicitly teach children by connecting new learning with prior knowledge, begin teachers' practice of goal setting by choosing a topic that they are familiar with such as weight loss. Allow teachers to record their current weight and their desired weight on paper. Next, discuss the different types of activities that they can do to assist them in reaching their established ideal weight. Then, ask participants to determine a timeline for achieving their goal. It is important to realize that some teachers will have a much larger range between their current weight and their desired weight, pushing the goal date ahead for some people. Finally, establish dates for progress monitoring so that the teacher partners can discuss progress toward reaching the goal and revisions of activities if necessary. This practice will enable teachers to better relate to the concerns and possible misconceptions that students will have when they begin the process.

Providing teachers opportunities to become proficient in each step of goal setting before introducing the strategy to students provides a common language and a uniform process throughout the school. Students should be taught to record their goals on paper so that they can refer back to it throughout the learning process. The documentation should include a place for the specific goal, anticipated date for accomplishment, activities that will be implemented in an effort to achieve the goal, progress monitoring notes, and a place for both student and teacher signatures. Having students sign the goal form increases the level of accountability and further confirms the expectation that the teacher has for the student.

Four Steps to Successful Academic Goal Implementation

1. Set goals that are specific, measureable, attainable, realistic, and time sensitive. In order for students to view goals as meaningful, they must have a clear understanding of what specific target(s) they are aspiring to accomplish (Doran, 1981). There are a couple of options for developing effective student growth goals. First, goals may be set for individual learning targets as in the following example: "By May 15, 2015, I will identify the three branches of government and explain the function of each with 100% accuracy." This goal contains the five critical elements of being specific, measurable, attainable, relevant, and time sensitive. A second option for setting student academic growth goals is to focus on an entire exam. Unit tests, benchmark assessments, and state assessments are some possibilities for which goals may be set as in the following example: "By May 30, 2015, I will increase my ACT composite score from 22 to 24". This goal also contains the critical elements of being specific, measureable, attainable, relevant, and time sensitive.

2. Develop a plan of action. As stated earlier, simply writing down a goal does not impact student learning. It is the activities that the student will participate in during the learning process that have the potential to positively influence student achievement. In collaboration with the teacher, the student will need to brainstorm different possibilities beyond core instruction that could increase achievement. I do not recommend writing generic actions such as paying better attention in class, trying harder, or turning in all assignments; these are things that should be part of the standard expectations for all students. Activities should be meaningful and provide learning opportunities that will enhance the student's knowledge and understanding in the specified area. One example to consider is encouraging the student to spend a minimum of one hour for two evenings per week on a research-based computer program designed to provide enrichment in the specific area of concentration. Another idea is to have the student commit to afterschool tutoring or enrichment for a specified number of times per week. It's important to consider when developing activities to ensure that they are specific to the child's goal and that there is a means of accountability. If the accountability piece is missing from the activity, the likelihood of the student actually completing the activity decreases. Adding accountability to some traditional activities takes a little creativity, but it is worth the effort. Take the following example: A child sets a goal of scoring 95% on the upcoming social studies exam and decides on a plan of action that consists of studying for 30 minutes each day. I think we can all agree that studying for 30 minutes each day for the test would be a great activity for any student. However, there is the possibility that the child will not follow through with the commitment because of the lack of accountability. Having a parent or guardian sign a student-generated form each evening verifying the amount of time spent studying adds accountability, increasing the probability that the activity will take place.

3. Monitor progress frequently. The third step in student goal implementation is arguably the most important. Monitoring the impact that the planned activities have on student success is imperative. This step requires the teacher to monitor the progress that the student is making toward reaching established goals. This process further allows the teacher to eval-

uate their instructional practices to determine effectiveness. Additionally, as student ownership is a critical piece in goal setting, progress monitoring provides a system to ensure that students value and own their learning. Progress monitoring allows for this structure by immersing students in the implementation of a self-developed needs-based action plan that is evaluated systematically. A simple approach to monitor a student goal is to create a trajectory with small interim goals along the way. For example, if a student is currently reading 60 words per minute and has set a goal to read 100 words per minute, establishing target points along the way will help to monitor progress and provide motivational support. If after one month of goal implementation the student increases fluency to 80 words per minute, the student and teacher will know that the specific strategies are working. In addition, realizing that their efforts are producing results will motivate students and teachers to attain even higher levels of achievement.

4. Celebrate successes—even the small ones. We have all heard the age-old adage that "success breeds success," and as it turns out, there is validity in the proverb (Rijt, Kang, Restivo, & Patil, 2014). As students realize success in reaching their goals, it is important that accomplishments are celebrated. Recognizing the efforts of students will motivate them to strive for greater success as well as encourage teachers in their quest to help all students succeed. I recently visited a local high school where students were taking a placement assessment that measured their abilities in math. If students reached an established benchmark on the assessment, they would not be required to take a remedial math course in college. The students shared with me some of the rigorous work they had completed in an effort to prepare for the assessment. Goal documentation indicated intensive work that had been completed for several weeks including attending tutoring sessions after school. It was obvious that these students were committed to their goal of a successful outcome on the assessment. The assessment was computer based and results were immediately revealed to students. Most of the students were successful and met the required benchmark. The celebration for these students began immediately with everything from tears to high fives. Three students, however, were not celebrating; the students felt defeated as they had not reached the required benchmark. Realizing the importance of celebrating even the small things, the teacher serving as the mentor for the three students approached the students with a smile telling them of the great progress that had made. She pointed out the different activities they had been successful at completing and how much

growth they had shown. When she finished with her talk, the frowns turned into smiles and the students' defeated attitudes turned into determination. While these students did not recognize complete success of their goal, they had improved, and that was reason to celebrate. To further emphasize the spirt of celebration, all students were individually recognized for their determination. While these students did not recognize complete success of their goal, they had improved, and that was reason to celebrate. To further emphasize the spirt of celebration, all students were individually recognized for completing the activities outlined in their goal documentation during a school-wide assembly. This recognition ceremony, which recognized effort, reinforced the importance of trying your best even if the desired outcome is not fully realized.

The power of goal setting has been studied for many years. Setting goals keeps students focused on desired outcomes and provides a clear direction for success. The key to establishing goals that produce results is making them specific, measureable, attainable, relevant, and time sensitive. Furthermore, goals must be supported by a specific plan of action that outlines the steps to be taken to maximize success. Monitoring the progress of the plan ensures that activities being utilized are producing the desired outcomes. Lastly, celebrating the progress made by students reinforces the importance of effort and recognizes improvements.

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The "Othering" of Men in Early Childhood Education: Applying Covey's Seven Habits

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How do early childhood educators, parents, and administrators really feel about men working with young children? Should men work as teachers of young children from birth through 8 years of age? Is this women's work? Does explicitly and implicitly excluding men from the early childhood education workforce benefit the early childhood community's commitment to diversity? Young children should have a diverse range of experiences including learning from men in their early childhood education settings (Bullough, 2015). In order to effectively recruit and retain more men into the early childhood education profession, early childhood education staff, parents, and administrators have to address their overt and covert "othering" biases toward men working in early childhood education environments.

Edward Said (1978) coined the term "othering," or the societal marginalization of people based on some physical or mental characteristic. Said was specifically referring to Asian and Arab people and their "othering" experiences. In the years since 1978, social scientists and researchers have used the term "othering" to describe a plethora of marginalization experiences including gender. Most of the "othering" research on gender is concerned with the marginalization of women in a male dominated society; however, when it comes to early childhood education, men are often marginalized in a female dominated environment. Some of the "othering" can be overt such as accusing all men in early childhood education settings of being pedophiles, violent, or gay (Nelson, 2010; Pruit, 2014). In some instances, the "othering" experiences can be covert such as assuming that all men are good at putting together the housekeeping furniture for the dramatic play center, disciplining children who are not following the classroom rules, or participating in and organizing sporting events (Eisenhauer & Pratt, 2010).

The following sections will discuss overt "othering" biases, covert "othering" biases, and the application of Stephen Covey's *Seven Habits of Highly Effective People* in addressing overt and covert "othering" biases. The seven habits are: (1) be proactive, (2) begin with the end in mind, (3) put first things first, (4) think win-win, (5) seek first to understand, then to be understood, (6) synergize, and (7) sharpen the saw (Covey, 2013).

Overt "Othering" Biases

Men Who Work with Young Children may be Perceived as Being Pedophiles

We must do everything that we can to protect children from men and women who want to harm them. Some of the ways that we ensure children's safety is to require that everyone in the child care center, regardless of gender, goes through the same rigorous background checks. All employees must receive up-to-date professional development regarding the signs of sexual and physical abuse, and all early childhood education staff must be vigilant in their monitoring and observation of all adults who come into contact with children (Nelson, 2010).

Men may be Perceived as Inherently Violent

Some members of the early childhood education community think men are inherently violent and overly aggressive, thus negating any nurturing attributes they may have. To the contrary, men care for children as fathers, grandfathers, and uncles. Men can be very nurturing caregivers for infants, toddlers, and preschoolers. The nurturing skills that men possess in order to take care of their children can easily be transferred to the early childhood education environment (Eisenhauer & Pratt, 2010; Johnson, Middleton, Nicholson, & Sandrick, 2010).

Men Who Work with Young Children may be Perceived as Being Homosexual

It is true that some male early childhood teachers are gay; however, it is also true that some male police officers, firefighters, and professional athletes are gay. A man's sexual orientation should not preclude him from a career in early childhood education (Nelson, 2010).

Covert "Othering" Biases

Men may be Stereotyped as Being Naturally Better at Managing Children's Behavior

Are men inherently better at managing children's behavior or is it a role assigned to them from the larger society? If society had assigned the role of primary disciplinarian to women, then they would be considered better at managing the behavior of children. Exposure to evidenced-based professional development on best-practice classroom management strategies will enhance classroom management for all early childhood teachers regardless of gender.

Men are Often Thought to be Good Mechanical Technicians and Good Athletes

All men should be good at repairing broken items, putting together furniture, and playing a variety of sports. Some men are very good repairmen and very athletic and some are not; some women are very good repairwomen and very athletic, and some are not. Think about sending out a general message requesting assistance with your broken furniture or repair requests. You may be surprised at who answers your call regarding repairing broken furniture or putting together bookshelves. Early childhood educators, parents, and administrators should not assume that the men in our early childhood centers and schools will take on all physical education activities. Early childhood education centers and schools will have to examine this from an individual perspective.

Applying Stephen Covey's Seven Habits

Be Proactive

Teachers and administrators in early childhood settings can talk to students and parents about early childhood teaching as an option for boys. Post pictures of men in early childhood settings who are engaged in the total classroom environment (e.g., cooking activities, changing diapers, feeding infants, reading stories, rocking children in rocking chairs), not just the activities that are traditionally assigned to men (e.g., disciplinarians, repairing broken furniture). Encourage boys to play in the dramatic play center. En-

courage fathers to come in and volunteer. Encourage our allies and colleagues in the K-12 sectors to also promote the idea of men working as teachers in early childhood settings.

Begin with the End in Mind

It is December 31, 2026. What do you want your colleagues to say about your advocacy efforts related to men working in all aspects of early childhood education environments? Will they say you were an ally and advocate for men teaching in early childhood settings? The advocacy that we employ today will determine whether the early childhood community is having this same conversation about covert and overt "othering" biases in the near and distant future.

Put First Things First

The early childhood community will continue to work within its own ranks in terms of welcoming men to the early childhood profession. Make sure that the center policies are very explicit in terms of inclusion. During staff and parent meetings, remind everyone that discrimination will not be tolerated including discriminating against men because of their gender.

Think Win-Win

Let teachers and parents know that the center actively recruits the best teachers. Also inform them that some of the top candidates could be men and that some of these men will be working with the infants and toddlers including changing diapers. This is not men versus women. Everyone wins when the most-qualified candidates get the early childhood teaching jobs regardless of gender.

Seek First to Understand, then to be Understood

Be mindful of your thoughts and actions regarding men in early childhood education in general and to any men in your schools or centers in particular. Are your thoughts and actions "othering" men? Are we thinking about overt "othering" biases such as pedophilia, homosexuality, and violence? Are we thinking about covert "othering" biases such as repairmen, athletes, and disciplinarians? Seek first to understand the men as individuals via active listening and thoughtful responses.

Synergize

Lend your voice to others in the struggle for equality regarding men working in early childhood education via joining groups that advocate for men teaching and caring for young children (e.g., National Association for the Education of Young Children, Men-

Teach).

Sharpen the Saw

Covey (2013) stated that a dull saw will not be very effective in cutting wood. Just as a dull saw will not cut wood, a fatigued mind and tired body will not function at its optimal level. In order for us to actively monitor and screen our own covert and overt "othering" biases and the biases of others, we have to take time to energize our minds and bodies. With re-laxed minds and energized bodies, the early child-hood education community can do the heavy lifting related to addressing the covert and overt "othering" biases regarding men in early childhood education.

Conclusion

Young children, from birth through age 8, need to be exposed to a wide range of experiences. One of these experiences is interacting with highly-qualified and caring male teachers in early childhood environ-ments (Bullough, 2015). In order to ensure that more male teachers are hired for early childhood education classrooms, early childhood staff and parents have to be aware of gender-based biases. In addition, since administrators play a pivotal role in who gets hired, it is important for them to be aware of biases toward male early childhood teachers. As teachers, parents, and administrators become aware of their biases, they can address them via applying Stephen Covey's *7 Habits of Highly Effective People*.

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Book Review:
Improving Reading Comprehension of Middle and High School Students
Editors: Kristi Santi Ph.D. and Deborah Reed Ph.D.

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This highly readable volume should be required reading for all middle and high school teachers across all content areas. Education administrators and those who provide education and professional development for teachers should also find it quite useful. Parents will also find the information valuable and clearly presented. The overviews of relevant research in each chapter are succinct and helpful information for classroom implementation. The volume, with its impressive cadre of contributors, represents a crucial contribution to moving the information learned over recent decades into practice. Reed and Santi have done an admirable job of achieving their goal of providing research-based evidence on adolescent literacy learning that moves toward a blending of general and special education and better learning gains for all students, including those with learning disabilities.

Chapter 1: What Do Models of Reading Comprehension and Its Development Have to Contribute to a Science of Comprehension Instruction and Assessment for Adolescents?

Barnes sets the stage for the entire volume, discussing the contribution of cognitive models of reading comprehension to instruction and assessment for this age group and examining component skills and process models and their importance for adolescent readers. Her clear, coherent explanation of the differences and value of both makes this information accessible to interested teachers. She also provides solid background for those seeking to understand how research evidence can aid us in understanding the development and improvement of adolescent reading comprehension. It is heartening that she not only clearly lays out the importance of intervening with adolescent readers who have decoding difficulties, but that she also clearly points out that these students benefit more from an intervention that integrates decoding and comprehension work—a point made by others (e.g., Lovett, Lacerenza, De Palma, & Frijters, 2013). Barnes also addresses discourse and text characteristics. After

reviewing what is known about the development of inferencing and integration and their relation to reading comprehension, she points to research that develops and tests inference and integration interventions for adolescent readers. As for text characteristics, Barnes asserts that while research has focused on the structure of narrative texts, text strategy instruction for informational texts can be helpful for those with learning disabilities and that as students increase their reading in discipline-specific informational texts, the structures of these texts may be less familiar than those found in narrative texts. Having more educators aware of these facts could go a long way to reducing the complaints often heard about the push under the Common Core State Standards (CCSS, National Governors Association Center for Best Practices [NGA], Council of Chief State School Officers [CCSSO], 2010) to increase use of informational texts for students in the elementary grades. Her overview of the variations in text difficulty for different disciplines is enlightening (and is picked up in greater detail in subsequent content-specific chapters).

Anyone reading this chapter should come away with the clear understanding that reading by 9 years old is not enough; good, solid reading instruction in grades K-3 is critically important. However, ongoing work on reading comprehension is needed and should include instructing students on word and world knowledge as well as inference and integration. In addition, having teachers scaffold student learning so their students can better understand the nature of the texts from which they expect students to learn in those disciplines is extremely important. This chapter competently sets the stage for the chapters that follow.

Chapter 2: Reading History: Moving from Memorizing Facts to Critical Thinking

Massey provides information on the characteristics of history texts that differentiate them from informational texts in other disciplines and suggests what it

might take to help students gain expertise in reading and to learn from history texts. Within a brief history of content area reading instruction, which moves from general strategies to a more discipline-specific focus, she also provides a background for reading history, telling us that "it is the texts themselves, as well as the thinking about those texts that distinguish history from other disciplines" (p. 22).

Massey tells us that students often see history texts as authoritative, which limits inquiry and discussion, reinforced by the narrative structure of most of these texts. However, the use of primary sources presents its own challenges for teachers and students, (e.g., variety and multiplicity of genres, text structures, points of view, and varying quality) which Massey describes clearly in the sections of the chapter. More general challenges for both primary sources and history texts include the heavy reliance on background knowledge, the specialized vocabulary and language patterns used, and the traditional reliance on memorization. She views reading and thinking as inseparable if one is to comprehend a text "like a historian."

Massey's descriptions and explanations of expert and novice historians should be valuable information for teachers in general but especially helpful to history teachers. All of the information in this chapter should help teachers move students away from taking history texts as a final authority toward thinking critically and synthesizing multiple sources. The overall purpose of reading history should indeed disseminate to other disciplines.

This chapter also clearly indicates the importance of teaching students about different genres and what is characteristically unique and must be taken into account about them—something important for history and also across other disciplines. It also clearly illustrates the need for teachers themselves to understand and be able to teach aspects of literacy both in reading and writing within the discipline. In fact, discipline-based literacy interventions for middle school readers have shown good results in content learning and reading comprehension in the content area, although they have not been strongly generalized to reading comprehension as measured by standardized tests. Massey cites Shanahan (2009) regarding the developmental nature of literacy skills, culminating in discipline-specific literacy by suggesting that perhaps it's time to look both within and across disciplinary literacy skills and instructional approaches to continue to track the developmental trajectory of literacy at a deeper level. Massey points out that instruction allowing students to compare processes in different disciplines could

help in developing metacognition. This seems ripe for study, since it is not clear that we have prepared teachers to do this, and it would be quite interesting to see how students might respond to such instructional approaches; this might also be enlightening and helpful to teachers. Massey calls for research on the value of modified texts versus original sources and how best to use these to ensure students' learning of complex concepts.

Finally, issues of motivation, engagement, and student resistance, as well as teacher expertise in both content knowledge and "brokering" student understanding, are considered—again, not disciplinarily unique issues with adolescents, but crucially important and unfortunately with no easy answers. Massey concludes by emphasizing the need to not separate literacy from critical thinking and sees this integration happening optimally through cross-disciplinary collaboration on translating theory to practice, where teachers "stand as mediators."

Chapter 3: Reading Mathematics: Moving from More than Words and Clauses; More than Numbers and Symbols on a Page

Avalos, Bengochea, and Secada inform us that math texts seem to lead the disciplines in concepts per sentence and use of discipline-specific terminology and symbols. In this chapter the authors seek integration between teaching generic comprehension strategies to be used in reading math texts and teaching students to understand and translate symbols to solve problems. They cite research indicating the need for disciplinary-specific reading instruction and scaffolding, especially for socially and culturally diverse groups of learners. They compare learning the "language of math" to foreign language learning. They refer to the importance of "ways of knowing" in a content area, which they describe as "knowledge and reasoning processes found in the particular subject" (p. 52, citing Heller and Greenleaf, 2007).

The chapter begins with an overview of recent research on how students and teachers use math texts in secondary classrooms. Students do not often read the text, as teachers see themselves as facilitators and the main source of information. Avalos and colleagues cite Shepherd's (2005) account of her scaffolding effort to get students more actively engaged with the text using some creative means of forcing interaction with the text; however, her measure of success was not student learning, but attitude, because "she believed that students' feelings about mathematics were a better indication of their success with the subject than passing the course" (p. 54). The report of Rezat's (2009,

2013) work seems more informative and useful; his work on self-regulated learning and utilization scheme types delved into how the structure of the text and the teacher's mediation of student use of the text affected student learning strategies. The work of Weinberg, Weisner, Benesh, and Boester (2012) also reported that the textbook chosen along with the students' attitudes about math are important in attempting to maximize student learning based on a survey of undergraduates. The limited research available indicates that texts heavily influence instruction and are used by teachers as a planning guide. However, students often rely on teachers rather than reading the math texts, and they tend to emphasize problem solving over understanding of the problems and the solutions to them.

Avalos and colleagues then present their own research focused on explicit instruction of math academic language to low-achieving English learners (ELs), low-achieving fluent English speakers, and high-achieving fluent English students in middle school. Based on in-person interviews with each student, they found that worked examples were felt to be most helpful to students, although low-achieving students indicated the need for teacher assistance. The authors offered several conclusions: EL students read both active and passively, while fluent English students read more actively; word problems were difficult for all low-achieving students who also did not see value in writing for math understanding; and teacher text mediation and scaffolding of active reading were important for math learning, especially for lower achieving students.

Avalos, Bengochea, and Secada suggested that teachers should spend time assessing and building prior knowledge and conceptual understanding attending closely to language structures, especially with ELs and low-achieving students. Furthermore they suggested teachers should not focus exclusively on solving the problems, but using problems to develop conceptual understanding and reasoning.

Chapter 4: Understanding Causality in Science Discourse for Middle and High School Students. Summary Task as a Strategy for Improving Comprehension

León and Escudero attribute students' difficulty in science and reluctance to pursue careers in science disciplines at least in part to the difficulty of most science texts (i.e., jargon, symbol use, math language, and abstract concepts that do not relate to everyday experiences). They convincingly argue with data and explanatory examples that summarizing can be used

as a teaching and learning activity with great value to high school and college students and that it can be used to evaluate reading comprehension. This will require changes in education practice, but it seems clear that such changes are needed based on PISA reports indicating that US and Spanish 15-year-olds are not efficient readers.

Likewise, León, Olmos, Escudero, Canas, & Salmeron, (2013) studied students at age intervals of 12, 14, and 16 regarding their ability to produce a summary of a 500-word text. They assessed students' summaries for content and coherence and surprisingly found little difference based on age, which they attributed to students' failure to elaborate and synthesize. They lament the education system's failure to focus on reading comprehension, metacognitive awareness, and skills needed to write good summaries in favor of merely reproducing what is said or written (i.e., paraphrasing rather than summarizing).

Their excellent brief literature summary on causal relations as criterial in guiding inferential processing and the development of coherence sets the stage for a discussion of how causality is organized in expository science texts as compared to narrative. León and Escudero assert that because the nature of science is to explain the *why, what, how,* and *when*, it is less likely to be presented chronologically. Therefore, it requires a reorganization of information derived from text in order to comprehend and summarize information. Having established this, they then believe that the ability to produce a good summary containing synthesis and coherence demonstrates comprehension.

León and Escudero studied high school and college students, comparing the causal network in a narrative text to that in the student summaries. Their results supported the hypothesis that the ability to identify causal relationships in a text is a factor in distinguishing the competency of readers. Based on this and experimental studies that have shown the value of writing summaries to recall content, these authors view summary writing as a good measure of science text comprehension and as a valuable means of improving comprehension.

Chapter 5: Reading Comprehension Instruction for Middle and High School Students in English Language Arts: Research and Evidence-Based Practices

Hock, Brasseur-Hock, & Deshler address the English language arts classroom for adolescents and provide information on "high impact" reading strategies. They call for changes not only in instruction, but also in curricular materials, teaching strategies, assess-

ments, support systems, and professional development, all of which are needed if schools are to meet college and career-readiness standards. The chapter builds on the León and Escudero discussion of comprehension, causality, and inference and the other chapters in the book addressing the complexity of reading comprehension, and takes the discussion into the practices of ELA teachers.

To highlight the importance of supporting ELA teachers, Hock and colleagues cite their own work (Hock et al., 2009), demonstrating that 61% of adolescent struggling readers scored a standard deviation below proficient readers in all five domains of reading tested (e.g., alphabetics, word-level reading, fluency, vocabulary, and comprehension) and 73% had comprehension difficulties. They also summarize the common features of the six reading programs determined by the What Works Clearinghouse (WWC) to have evidence of significantly improving reading comprehension for middle and high school students: explicit skills and reading comprehension strategy instruction, cooperative learning activities, and imbedded reading comprehension instruction within the core curriculum. Furthermore, they draw upon Hattie's (2009) synthesis of studies regarding general instructional practices, indicating that these too can be incorporated into ELA teachers' repertoires: having students record and track their own performance, creating an optimal environment, knowing how and when to provide optimal feedback, and creating import teacher-student relationships. Critical here is also utilizing explicit instruction, providing structure to support engagement, learning complex ideas, and using strategies for learning vocabulary and metacognitive concepts. Hock and colleagues also cite data on the critical role teachers play in student success (including attributes of teachers), the importance of assessment-informed instruction, and the broader knowledge of learning and cognition that will make teachers better able to cope with students' learning differences.   In their discussion of close reading, Hock and colleagues emphasize the importance of teaching both skills and strategies that will support the student in a close-read of text, enabling students to integrate background knowledge, drawing conclusions, and objectively assessing what is said in the text. Vocabulary instruction and other supports students need to accomplish this are clearly reviewed as well.

Hock, Brasseur-Hock, & Deshler conclude this chapter with their call for improved, evidence-based programs and practices, support for students based on ongoing monitoring and assessment, a whole-school response to teaching reading to today's diverse population of students, a strong program of professional development, and support for ELA teachers. They call for dramatic changes, but are optimistic that these can be accomplished, and they have clearly outlined practical ways all this can be accomplished.

Chapter 6: Improving Comprehension Assessment for Middle and High School Students: Challenges and Opportunities

Sabatini, Petscher, O'Reilly, & Truckenmiller review what has characterized standards in reading assessment prior to recent advances in measurement, learning sciences, and technology. They join the popular protest in pointing out that US schools spend too much time on testing and on test preparation, but unlike many critics, they are not anti-testing; instead they critically analyze what can be done to lessen the time consumed and heighten the value of testing not only for accountability or achievement reporting, but also for student learning. The authors also provide basic information and references that the reader can use to follow up on assessments that can guide instruction and intervention.

Citing the recent international assessments and development of new standards for educational achievement (CCSS), which have resulted in a call for a new generation of reading assessments, Sabatini and colleagues voice guarded optimism about new and better assessments based on advances in technology coinciding with changes in attitudes about assessment and scholarly reform. In the final section of this chapter, they present information on the work of their team at Educational Testing Services in partnership with three universities under the funding and auspices of the Institute of Education Sciences. This work was to develop reading comprehension assessments, specifically the Global, Integrated Scenario-based Assessment (GISA) and the Florida Center for Reading Research Reading Assessment (FRA), which are complementary assessments that together offer a broader picture of reading achievement. Each has practical utilities that can not only provide student achievement information but can also potentially be used to guide more tailored instruction. Although not as readable as the other chapters in this volume, this chapter provides important information documenting progress in changing instruction and improving student performance.

Chapter 7: Reading Comprehension Skill Development and Instruction for Adolescent Literacy Instruction for Adolescent English Language Learners: A Focus on Academic Vocabulary

Galloway and Lesaux address reading comprehension; their goals are to increase awareness of the population of English-learners (EL) students, to improve the understanding of the process of reading comprehension generally, but also very specifically to give the reader foundational information about this process and its challenges for adolescent EL students. They then present research on academic vocabulary instruction for this group, as well as a literacy research agenda.

Their overview of who ELs are and the influences of poverty on the literacy learning of both monolingual and EL students should be required reading for all teachers at any grade level. This chapter puts in perspective the importance of recognizing the challenges faced by these students and addressing them in all classrooms in all states. Galloway and Lesaux offer a clear, brief explanation of bilingualism and then "unpack" reading comprehension in their discussion of why it is especially challenging for middle school ELs and their peers. The emphasis on the importance of both skills and knowledge-based competencies and clear discussion of these provide useful background for all teachers, not just those particularly interested in ELs. In their own research, the authors have demonstrated that while many EL middle schoolers were actively using reading comprehension strategies, often these were limited in value due to students not having the necessary content knowledge and vocabulary.

Galloway and Lesaux emphasize teaching vocabulary using definitional and contextual information, providing multiple encounters with the target words, using depth over breadth, targeting high-utility words, as well as offering suggestions on how to teach targeted words. They point out that the recommended interventions also provide for some broader learning, such as teaching morphology skills, which support independent learning, an approach that will benefit all learners, not just ELs.

Chapter 8: Special Education in Middle and High School

Volume editors Santi and Reed provide a clear and objective historical overview of education legislation that can serve as a primer for parents and new teachers and a solid review for other educational stakeholders. The following statement regarding their rationale holds not only for the details presented about IDEA and response to intervention but also for the volume as a whole; it should have been the marching theme for all of us when IDEA was reauthorized in 2004: "We present the legislation and its component provisions with the intent of helping those in general education and special education move from considering their systems as separate to a blended approach for working with all students" (p. 185). I join them in calling for research-informed policies aimed at integrating general and special education at both the state and local levels.

The section on current issues for students with disabilities follows a natural transition from legislation in the previous section to highlighting the Common Core State Standards (NGA, CCSSO, 2010), a national movement not levied by the federal government but by State Governors and Chief State School Officers. Santi and Reed then offer a succinct summary of key points in the chapters of this volume and how they can serve to help educators move forward to provide improved literacy instruction and intervention across content areas for students with disabilities. They also include research-supported instructional recommendations such as providing explicit content vocabulary instruction, teaching inference making, improving student metacognitive strategies, and supplementing background knowledge in new areas. Interestingly, in their section on computer-based texts, these authors cite research showing that reading-disabled students did not perform at a higher level when online resources were made available to them, concluding that this has more to do with being strategic readers than to their needing "non-traditional" texts and resources. This indicates that structured experiences provided by skilled teachers are still needed as well as research on the use of electronically delivered texts.

Santi and Reed close by calling for middle and high school teachers to move from traditional approaches to more interactive engagement, whereby they may break through the passivity of many students with learning disabilities and assist these students in making academic gains. Overall, this volume makes it clear in significant and understandable detail that reading comprehension is highly complex, requires explicit instruction, and requires deep knowledge of reading and the structure of language on the part of the teacher. This is true for teachers of middle and high school students across disciplines. In all disciplines and for instructing diverse groups of learners, teacher professional development and improved teacher education are needed, along with ongoing support, which should be inherently part of any good professional development program. Unfortunately

this is not always the case. The clear delineation of differences in texts faced by adolescent readers across disciplines is at once basic, striking, and important. The chapters within this volume make that clear and should help educators take a leap forward in the translation of research to practice. I congratulate Santi and Reed in putting together this coherent, interesting, highly readable, and immensely helpful volume.

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