PROGRESS MONITORING WITH KINDERGARTEN AND FIRST-GRADE STUDENTS IN A RESPONSE TO INTERVENTION CONTEXT

A Capstone Project

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by

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DEDICATION

For my children, Jack and Malynn, who inspire me daily to continue working toward a better and brighter future for all learners.

To my husband, Mike, who has always understood my passion for this work, even when the cost benefit has been out of balance.

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The number of people I have to thank humbles me.

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Section I: Executive Summary

Advisor: Marcia Invernizzi

Progress monitoring is a critical component for a Response to Intervention (RtI) process (Duran, Hughes, & Bradley, 2011; Fuchs & Fuchs, 2006; Stecker, Fuchs, & Fuchs, 2008) because it is intended to make use of student performance data to evaluate and inform instruction in an ongoing manner (National Center on Learning Disabilities, 2006). Progress-monitoring data are also instrumental in determinations of specific learning disabilities (Individuals with Disabilities Education Act [IDEA], 2004). The need for teacher use of progress-monitoring practices, which are fundamentally formative in nature (Wiliam, 2006), is evident, yet little guidance exists in the literature to support teacher implementation of formative assessment practices (Wiliam, 2010).

Purpose

The purpose of this capstone project was to examine progress-monitoring practices used by kindergarten and first-grade teachers at Snowy Pond Elementary School for their students in an RtI context. The study addressed the need "to use progress monitoring to be more responsive to student instructional needs" (name withheld for confidentiality, personal communication, September 25, 2012).

Methods

A case study design was used to examine contextual influences that supported or hindered the effectiveness of progress-monitoring practices. Three kindergarten and first-grade teachers participated in the study. Classroom observational data were collected

from six visits over the course of two weeks. Pre- and post-interviews were conducted and document/artifact data were collected throughout the course of the study. All data were analyzed iteratively making use of ongoing coding, interpretive notes, analytic memos, and data displays. Member checking and peer debriefing were utilized to support the validity of the findings and reduce the influence of researcher bias.

Findings

Findings include four themes that emerged from the data:

1. Progress-monitoring practices can be identified by record keeping and instructional integration.
2. *Teacher-selected* progress-monitoring practices tend to rank highly on effectiveness ratings.
3. Strong knowledge of early reading development may support the integration of progress monitoring into instruction.
4. Integration of differentiation at the individual student level may support effective progress-monitoring practices.

Implications and Recommendations

Related recommendations that may support effective progress-monitoring practices are reported relative to the three contextual levels examined in this study: classroom, school system and field of education.

An overarching implication across all contextual levels is the need for common, clear criteria for the identification of progress-monitoring practices. One recommendation is to start conversations about progress-monitoring practices with common, clear criteria

that are grounded in the purpose of progress monitoring and that include the criteria of record keeping and instructional integration. These criteria will ensure that people who are engaged in conversations about progress monitoring are identifying the relevant assessment practices with a common lens.

Recommendations for teachers, as the primary audience at the classroom level, are to pursue:

- Early reading development knowledge needed to feel confident in setting early reading development goals for students.
- Specific progress-monitoring assessment knowledge needed to feel confident integrating progress monitoring into instruction.
- Knowledge about differentiation needed to feel confident making small-group and individual accommodations to meet student needs.

Recommendations for administrators, as the primary audience at the school-system level, are as follows:

- Set expectations for professional collaboration and provide opportunity in the school-wide schedule.
- Ask teachers about their progress-monitoring resource needs and work to fulfill those needs.
- Provide progress-monitoring guidelines with clear expectations about what progress monitoring should be, whom it is for, and how often it should be done.
- Make every effort to avoid inconsistencies to the instructional schedule.

- Prioritize smaller class and group sizes, particularly for struggling students, whenever possible.
- Provide professional development in the areas of early reading development, progress-monitoring practices, and differentiation.

The recommendation for researchers and policymakers, as the primary audience at the field-of-education level is to further investigate the implementation of progress monitoring and provide more specific guidance about what constitutes best practices thereof.

Section II: Study Description

In section II, the study description, I begin with a list of definitions of key terms for this study. Next, I provide the background information needed to frame the problem of practice. Then, I identify the conceptual framework used to guide the study and review relevant literature. The study description also includes an overview of the methods for the study.

Definition of Terms

The following is a list of key terms for this study.

- *Contextual levels of influence*:
    - The *classroom context* includes the environment, information, and participants in a particular classroom setting, as well as the dynamic interaction between environment and participants both immediately and over time.
    - The *school-system context* includes one or more school buildings as a whole, the information and participants within those buildings, district-level administrators, and the dynamic interactions among all of them immediately and over time.
    - The *field-of-education context* is the general culture of education in the United States, as informed by research and policy.

- *Differentiation* is the provision of tailored instruction and assessment for small groups or individuals to optimize learning by specifically meeting student needs and learning preferences.
- *Formative assessment*, or assessments *for* learning, consists of methods of evaluation of student performance that are brief, integrated within instruction, and informative with immediate feedback for students and teachers.
- The *Individuals with Disabilities Education Act (IDEA)*, a federal law, informs regulations for the provision of early intervention, special education, and related services to infants, toddlers, children, and youth with disabilities.
- *Progress monitoring*, or *progress-monitoring practices*, encompass the assessment tools and ways those tools are employed to collect and utilize student performance data as an indicator of instructional effectiveness, to inform ongoing modifications to instruction, and to determine student progress.
- *Response to Intervention (RtI)* is the structure and process of early literacy intervention and assessment designed to identify students with disabilities based on student response to high-quality instruction delivered at increased levels of intensity throughout a sequence of tiered levels.
- A *School-Based Intervention Team (SBIT)* is "a collegial group of administrators and school staff who are united in their commitment to student learning," and is charged with "the responsibility to review any problems (academic/developmental, behavioral, social/emotional, environmental or cultural) interfering with the student's performance in school, to brainstorm

solutions, to make recommendations to meet the student's needs, and to monitor/review the results of the recommendations" (website withheld for confidentiality).

- *Specific learning disability* is the designation of disability students may be found eligible for in a particular area of learning, such as literacy, which affords them protections under IDEA.
- *Tier 1* of the RtI process is provision of high-quality, differentiated instruction for all students in the regular classroom.
- *Tier 2* of the RtI process is typically small-group intervention provided above and beyond the differentiated classroom instruction of Tier 1 for students identified as at-risk for successful literacy development.
- *Tier 3* of the RtI process is typically intensified intervention, perhaps one-on-one, for students who make limited or no progress toward grade-level expectations within Tier 2 interventions.
- *Tier 4* of the RtI process is typically the provision of special education services for students found eligible per the regulations of IDEA.

The Problem: Optimizing Progress-Monitoring Practices

Educators are only truly teaching if students are learning. How do teachers know if their instructional messages are received? Student performance is the source of evidence, and performance occurs along a complex continuum of assessment opportunities that encompasses informal (e.g., classroom work samples) and formal (e.g., standardized tests) opportunities. The true indication of teaching and learning appears

when varied and complimentary performance evidence from across this continuum indicates a student has advanced in response to instruction.

When students struggle to advance in response to instruction, the instructional fit is called into question. Frequent use of student performance information can support the evaluation and modification of instruction. Frequent evaluation of student performance falls in a distinct category of assessment practices called progress monitoring.

Progress-monitoring practices encompass the assessment tools and ways those tools are used for conducting ongoing assessment of student achievement. Teachers may keep anecdotal records, which tend to be flexible and varied in structure. Highly informal assessments such as anecdotal records are often complemented with more structured assessments such as running records, where the teacher listens to a student read and records strengths and weaknesses of the oral reading performance using standard procedures for quantitative measure of word reading errors and rate, as well as qualitative measure of prosody (i.e., expression, tone, etc.). Measures are typically administered weekly, every two weeks, or monthly. How educators utilize progress-monitoring information to evaluate instruction, inform instructional planning, and track student progress can manifest in highly individualized ways. For example, one teacher may administer running records every Friday to students struggling with literacy or on an as-needed basis for students who are meeting or exceeding grade-level literacy expectations, while another teacher may administer running records to the entire class only at the beginning, middle, and end of the year.

The term progress monitoring is often used synonymously with *Classroom-Based Measures* (CBMs). CBMs are one of the most commonly used measurement tools for progress monitoring (Griffiths, VanDerHeyeden, Skokut, & Lilles, 2009). CBMs are short assessments of specific skills, constructed with alternate forms to allow repeated measure of the same skill, thus enabling teachers to collect a data series that reflects student progress. Stanley Deno's line of work in the 1980s developing CBMs (Deno, Marston, & Tindal, 1985) significantly contributed to the current concept of progress monitoring. Deno set out to design repeated measures allowing special education teachers to use "data to formatively evaluate their instruction and improve their effectiveness" (Deno, 2003, p. 184).

Effective progress-monitoring practices are intended to facilitate highly effective instruction and thereby promote optimal student achievement. However, implementation of progress-monitoring practices, let alone effective practices, is easier said than done. The kindergarten and first-grade teachers of Snowy Pond Elementary[1] sought to examine their progress-monitoring practices for struggling readers: "We want to look towards how to monitor the student progress so growth can be seen and if we need to make changes to the program do so quickly" (name withheld for confidentiality, personal communication, September 25, 2012). Progress monitoring is often instrumental in informing instruction and tracking progress with students who struggle, because monitoring their progress in smaller, ongoing increments is critical for keeping a tight match between instruction and student need when students are striving to catch up to their achieving peers.

[1] Snowy Pond Elementary is a disguised name of a local elementary school.

This study examined the nature of progress-monitoring practices and factors that influenced teachers as they operationalized progress monitoring in their classrooms. Themes that emerged informed recommendations likely to promote improved instructional quality and, subsequently, student achievement among their struggling students.

Contextual Layers of Influence on Progress-Monitoring Practices

The desire to improve progress-monitoring practices for the kindergarten and first-grade students at Snowy Pond Elementary was nestled within multiple contexts exerting influence on the problem. The first contextual layer was the classroom level. The classroom context consists of the individual teacher with diverse students in a unique setting and is a source of immediate influence on practice. The second contextual layer was at the level of the school-system. Local school systems each have their own unique cultures defining boundaries for educational practice. The third contextual layer was the general field of education. The field of education influences educational practices through research findings and education policy. Findings revealed that each contextual layer influenced progress-monitoring practices for the kindergarten and first-grade teachers who participated in this study.

The Need to Examine Progress Monitoring from the Classroom Perspective

The examination of progress-monitoring practices was a logical next step at Snowy Pond Elementary. In the fall of 2011, I consulted with the kindergarten and first-grade teachers to create intervention materials for their struggling students. The teachers

believed implementation of intervention instruction had met student needs, and they were ready to focus on refining associated assessment practices.

In an informal background conversation (February 20, 2013), the principal did not express any specific concerns with the present progress-monitoring practices for struggling students in kindergarten and first grade. She did support the study because she had "confidence in the instruction provided for all students and knows any concerns or requests coming from the kindergarten and first-grade teachers are legitimately in the best interest of student learning" (name withheld for confidentiality). When I asked the teachers at Snowy Pond why they believed their progress-monitoring practices were not serving to measure the effectiveness of instruction and to inform needed changes in a timely fashion, I began to get information to inform a focus for the study.

First, the teachers identified several aspects related to progress monitoring with their struggling students that were working. All agreed that their use of the Phonological Awareness Literacy Screening (PALS) assessment for kindergarten (Invernizzi, Juel, Swank, & Meier, 2004) and Grades 1-3 (Invernizzi, Meier, & Juel, 2004) for fall, mid-year, and end of year was effective and constituted the backbone of the identification and monitoring of at-risk students. The teachers said that the practice of teaching assistants delivering intervention instruction to small groups of struggling students adequately served the need for an initial dose of instruction above and beyond the core classroom instruction. Additionally, the teachers were satisfied with the available resources for intervention instructional materials: resources from the PALS website, intervention

materials I crafted for them in the fall of 2011, and other materials extending from classroom instruction.

Then, our discussion shifted to aspects of progress monitoring that needed improvement. Teacher knowledge of early reading development emerged as a factor when teachers said that progress monitoring may indicate need in a particular instructional area, but they were left wondering, "What do I need to teach him to make it better?" Teacher knowledge of both early reading development as well as of assessment practices emerged as a factor when teachers indicated that they struggled to identify progress-monitoring measures for certain literacy components, such as wanting progress monitoring for word features for decoding "similar to Word Study for spelling."

In addition to teacher-knowledge factors, contextual aspects emerged as progress-monitoring factors in need of improvement. The teachers said that support teachers used AimsWeb probes; however, few of the probes were appropriate for students in the earliest stages of reading. Furthermore, students were pulled out of instructional time for AimsWeb probes, and there was typically a significant delay between administration of AimsWeb probes and disclosure of the results to the classroom teacher. The lack of collaboration between classroom and support teachers indicated the need to examine school-system factors that may have influenced progress-monitoring practices. The teachers also expressed a desire to implement progress monitoring more frequently, which indicated the need to examine classroom factors that may be affecting the opportunity to conduct assessment.

In this study, progress-monitoring practices were examined at the classroom level. Educational practice at the classroom level largely comes down to the continuous decisions teachers make on a daily, sometimes minute-to-minute, basis (Jackson, 1968/1990; Peterson, Marx, & Clark, 1978) about instruction and assessment. As such, the teacher knowledge that contributes to decision making about progress monitoring and contextual factors that may hinder the potential for effective progress-monitoring practices were of interest for this study.

The Need to Examine Progress Monitoring from the School-System Perspective

The search for contextual factors from the school-system level that may influence progress-monitoring practices began with inquiry at the specific school. Information related to progress monitoring unique to the specific school was not found. Instead inquiry led to progress-monitoring information provided by the school system. For the purposes of this study, relevant information about progress-monitoring practices from the specific school context and the school-system context are one and the same. There was not a need to differentiate the two contexts in this study; however, the need to do so may emerge in other examinations of progress monitoring.

The search for information relevant to progress monitoring at the school-system level first led to the Office of Intervention and Prevention Services on the school-system website. However, the website made no specific reference to progress monitoring. Rather, mention of the need to "monitor/review" student performance was found as a responsibility of the School-Based Intervention Teams (SBITs), and information about SBITs led to more detailed information about progress monitoring.

An SBIT is one form of a professional learning community, being "a collegial group of administrators and school staff who are united in their commitment to student learning" (website withheld for confidentiality). The objective of an SBIT is "to attempt pre-intervention strategies in the general education environment prior to a referral for special education evaluation." More specifically an SBIT is charged with "the responsibility to review any problems (academic/developmental, behavioral, social/emotional, environmental or cultural) interfering with the student's performance in school, to brainstorm solutions, to make recommendations to meet the student's needs, and to monitor/review the results of the recommendations." After identifying that progress monitoring (i.e., "monitor/review the results") was integral to the responsibilities of the SBIT, I sought out further information in the school system's School-Based Intervention Team Manual (website withheld for confidentiality).

The manual provided some information on expectations for progress monitoring. Throughout the 15-page manual, there are 20 references to progress monitoring, with phrases such as "directed by child outcome data" (p. 5), "an essential activity in these efforts is close monitoring of the child's progress" (p. 6), and "implemented with progress monitoring collected and reviewed for an appropriate period of time" (p. 14). More specific and directive information about progress monitoring is absent from the SBIT manual, suggesting that the operational details are left up to individual schools.

The SBIT manual also provides information on how the functions of SBITs fit into the greater Response to Intervention (RtI) structure for the school system. Figure 1

approximates the graphic on the cover of the SBIT Manual, which indicates where the SBIT role overlaps with the RtI levels, or tiers.

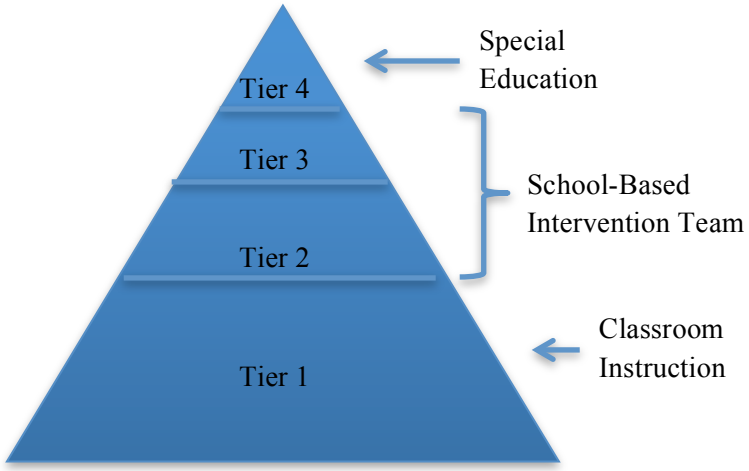

Figure 1. Overlap of the SBIT role and the RtI tiers.
Note. Adapted from the SBIT Manual (school website withheld for confidentiality). The basic graphic concept appears to have been adapted from Vaughn SR, Wanzek J, Woodruff AL, Linan-Thompson S. (2006). A three-tier model for preventing reading difficulties and early identification of students with reading disabilities. In: Haager DH, Vaughn S, Klingner JK, editors. *Validated reading practices for three tiers of intervention* (pp. 11–28). Baltimore, MD: Brookes.

As depicted in Figure 1, Tier 1, at the base of the pyramid, constitutes classroom-level differentiated instruction for all students. Tier 2 consists of small-group interventions. Tier 3 provides higher-intensity individualized intervention. Special Education services are considered Tier 4. The SBIT's role pertains to students within Tier 2 and Tier 3.

One of the most important takeaways about the influence from the school-system level on progress monitoring for students in an RtI context at Snowy Pond is the role of the SBIT for students at Tier 2 and Tier 3. Decision making about student progress and movement between tiers does not reside solely with the classroom teacher; instead, it rests in the hands of a collective group of administrators and school staff. Given the expectation of administering progress monitoring with students in the RtI process and

using the data to inform decision making, the concern about a lack of collaboration between classroom and support teachers is reinforced as a school-system factor that may exert significant influence on teachers' ability to accomplish effective progress-monitoring practices.

Stephens et al. (1995) found the decision-making relationships between teachers and school-level factors had a significant effect on progress-monitoring practices. Specific to Snowy Pond, the culture of progress monitoring with accountability to the SBIT proved relevant. Therefore, the potential influence of school-system expectations, structures, and supports (e.g., collaboration opportunities) for progress-monitoring practices were of interest for this study.

The Need to Examine Progress Monitoring from Field-of-Education Perspective

The field of education as a context is somewhat abstract. This context is conceptualized as the culture of education in our society. For example, our culture values and requires a free education for all children and strives to create equity in the education provided. Educational culture in our society is primarily influenced by educational policy and is also informed by educational research. Specific aspects of policy and research relevant to this study were (a) how interpretations of policy guided implementation of RtI and evaluation for specific learning disability, as well as (b) how knowledge of what the literature posits as effective progress-monitoring practices was understood and utilized.

The field of education has seen resurgence in emphasis on progress monitoring in the wake of research examining student response to intervention as a means of differentiating the contributions of experiential versus constitutional deficits to reading

difficulties (e.g., Vellutino et al., 1996, Scanlon, Vellutino, Small, Fanuele, & Sweeney, 2005). The work of Vellutino et al. bolstered established knowledge about the ability to prevent and remediate the majority of reading difficulties by providing early, intensive intervention to kindergarten and first-grade students struggling with literacy acquisition. Their methods of monitoring and adjusting according to student performance informed the reauthorization of the Individuals with Disabilities Education Act (IDEA, 2004) in which measuring student response to intervention may replace use of the IQ-achievement discrepancy as criteria for the identification of a disability (IDEA 34 CFR 300.8(c)(10), 2004). With the reauthorization of IDEA, the concept of RtI became the gold standard for reading disability identification and intervention processes; progress monitoring was considered a key element of any RtI process (Duran, Hughes, & Bradley, 2011; Margolis, 2012). An understanding of the RtI process is required to fully understanding the role of progress monitoring within that context.

Response to Intervention: A foundational understanding. RtI was conceptualized as a process of literacy intervention and assessment for students in the earliest stages of reading development (e.g., Vellutino et al., 1996, Scanlon, Vellutino, Small, Fanuele, & Sweeney, 2005). RtI has been generalized for use across content areas and grade levels. However, this study adheres to the RtI research base examining intervention for foundational literacy development among kindergarten and first-grade students.

The initial step of the RtI process, as operationalized by Vellutino et al., is to identify students with weak literacy skills compared to grade-level expectations. These

students are identified as at-risk for successful literacy development and therefore receive intervention aimed at preventing or remediating early reading difficulties. Students receiving intervention are monitored for progress, or a lack thereof. Progressing students continue with intervention until grade-level expectations are met. Students who make little or no progress receive intervention of increased intensity. Increasing the intensity of intervention may entail lower ratios of students to teachers (e.g., one-on-one instruction instead of small-group instruction), greater instructional time (e.g., sessions four days a week instead of two), or working with a more highly qualified teacher (e.g., a reading specialist instead of a teaching assistant). Little or no progress among students who receive intervention of increased quantity and quality suggests the learning difficulties are less likely a result of experiential deficits and may be a result of deficits of a constitutional origin. Specific learning disability and eligibility for protection under IDEA are commonly considered for students with continuing difficulties.

An RtI process has many systemic aspects, and progress-monitoring practices at the foundational level of RtI—Tier 1—were of primary interest for this study. Effective progress-monitoring practices are critical to an RtI process because student status within the tiers is determined by the progress or lack thereof as informed by progress-monitoring data. The process is paralyzed without teachers' ability to collect and utilize appropriate progress-monitoring information. Examination of progress-monitoring practices included consideration of teacher knowledge and contextual factors with the potential to support or hinder the efficacy of progress-monitoring practices.

Potential Benefits of Examining Progress-Monitoring Practices

The findings from this study's examination of progress-monitoring practices hold potential benefits for classroom teachers and school-system administrators as well as researchers and policymakers. Classroom teachers stand to benefit from recommendations that support their ability to reflect on their own knowledge and how it can be used to design and implement more effective progress-monitoring practices. School-system administrators stand to benefit from recommendations on how to support teachers' use of progress monitoring and how to promote effective practices. Optimizing progress monitoring at the initial tiers of RtI may promote more informed and responsive instruction and reduce the number of students who have persistent reading difficulties and therefore need support from higher tiers. Researchers and policymakers are aware that most schools across the nation, including Snowy Pond, are directed to implement an RtI process with minimal guidance. As a result, RtI processes vary greatly throughout the nation (Berkeley, Bender, Peaster, & Saunders, 2009). Findings from this study highlight areas for further research and policy that could inform and support implementation of effective progress-monitoring practices within an RtI process. The shared benefit of optimizing progress-monitoring practices for students struggling with literacy is to promote more responsive instruction. Strong, responsive instruction translates to student achievement, which is particularly important among struggling students who are striving to catch up with literacy development.

Socio-Cultural Theory as the Conceptual Framework for Examining Progress-Monitoring Practices

Socio-cultural theory (Au, 1997; Bronfenbrenner, 1979) provided structure and perspective through which the examination of progress-monitoring practices among kindergarten and first-grade teachers at Snowy Pond Elementary came into view. Socio-cultural theory acknowledges the multidimensional nature of educational phenomena such as progress-monitoring practices. As teachers assess student performance over time, they operate under influences from their immediate classroom-context, the school-system context, as well as the field-of-education context. In addition to multiple layers of context exerting influence at any single moment, these contextual levels may differentially influence teacher practice as it evolves over time. Purposeful consideration of these layers of contextual influence throughout the study promoted informed and inclusive findings representative of a highly authentic reality.

The Ecological Model: A Structure for the Contextual Levels of Influence

The abstract notion of multiple contexts of influence within socio-cultural theory became more concrete with an understanding of Bronfenbrenner's (1979) Ecological Model. The Ecological Model "posits that concentric levels of influence" (Tracy & Morrow, 2006, p. 105) affect human interactions and development. The *microsystem* is the innermost layer, the immediate environment where a person is present. Beyond the microsystem are increasingly broader contexts exerting influence: *meso-, exo-*, and *macro-* levels, which expand to contexts in which the person may never be present (e.g., historical or, relative to a young child's development, the parent's workplace). For this study, the microsystem is the immediate classroom-level context. The mesosystem is the

school-level context, and the exosystem is the greater context of the general field of education. It is these increasingly broader contexts surrounding the kindergarten and first-grade teachers of Snowy Pond that created a structure for the examination of their progress-monitoring practices (see Figure 2).

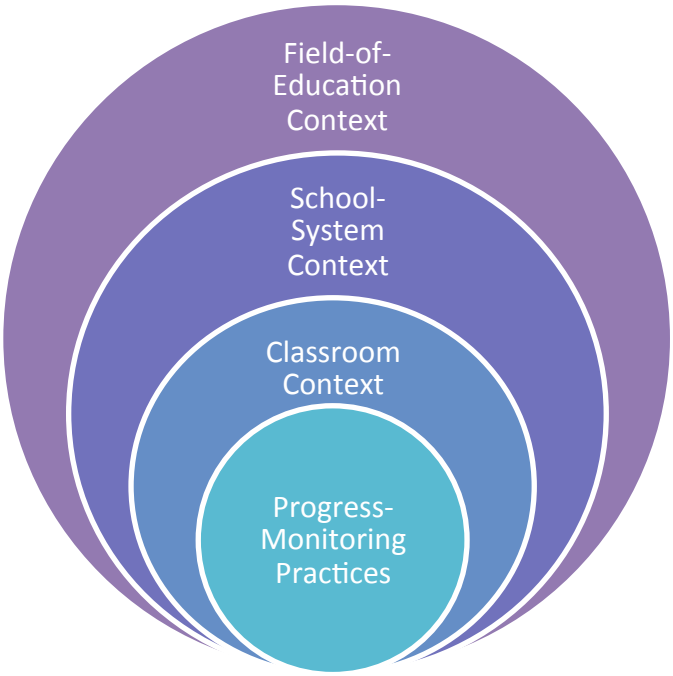

Figure 2. Contextual levels of influence on progress-monitoring practices.

Through my evaluation for this study, I searched for factors from each contextual level that served to support or hinder effective progress monitoring.

The Ecological Model also addresses the *interaction* of the levels with a person both presently and over time. Bronfenbrenner (1979) asserts that at the heart of the ecological perspective is "the concern with the progressive accommodation between a growing human organism and its immediate environment, *and* the way in which this relation is mediated by forces emanating from more remote regions in the larger physical

and social milieu" (p. 13). In this way, the Ecological Model served as a lens for viewing what progress-monitoring practices have been in the past, their current status during the course of this study, and their potential contributions to future student achievement.

This study examined progress-monitoring practices specific to literacy achievement. Au (1997) found the Ecological Model and related socio-cultural theory to be particularly relevant to literacy development (Tracy & Morrow, 2006). She makes the argument for literacy learning as a social process and aptly concludes:

> Learning to read cannot logically be separated from the particular milieu in which it takes place. When children learn to read, or fail to learn to read, they do so in a particular social, cultural, and historical environment. Their success or failure in reading cannot be understood apart from that environment (Au, 1997, p. 184).

As an extension of literacy learning, the associated instruction and assessment practices similarly, as Au explains, "cannot logically be separated from" the host of environmental (contextual) influences. My approach with the "wider, cultural lens" (Stephens et al., 1995, p. 495) of socio-cultural theory throughout the study led to a depth and breadth of understanding about factors that may help educators optimize progress-monitoring practices.

Progress Monitoring in the Tiered Structure of a RtI Context

The context for this capstone project was narrowed within the classroom level to the examination of literacy progress-monitoring practices for students who were part of the RtI context at Snowy Pond Elementary. According to information from state departments of education, implementation of RtI models varies greatly (Berkeley, Bender, Peaster, & Saunders, 2009) but does tend to follow a commonly accepted tiered structure. The tiers of RtI align to four distinct instructional levels delineated by the

response to intervention research conducted by Vellutino, Scanlon, et al. (e.g., Vellutino et al., 1996; Scanlon, Vellutino, Small, Fanuele, & Sweeney, 2005):

- Tier 1: High-quality, differentiated classroom-level instruction for all students
- Tier 2: Small-group intervention for students identified as at-risk for successful literacy development
- Tier 3: Higher-intensity (one-on-one if possible) intervention for students for whom difficulties persist
- Tier 4: Special Education Services for students identified with a specific learning disability

Any research-based RtI process will map, at least loosely, to this tiered structure of instructional support. At Snowy Pond, the classroom context most directly aligns with Tier 1 of the RtI structure. Thus, the findings from this study most directly relate to progress monitoring relevant for students considered part of Tier 1 of an RtI process.

The Consequential Role of Progress Monitoring

Progress monitoring is undisputed as a critical component to an RtI process (Duran, Hughes, & Bradley, 2011; Fuchs & Fuchs, 2006; Stecker, Fuchs, & Fuchs, 2008). For struggling students receiving intervention in an RtI context, effective progress monitoring is a linchpin. When high-quality classroom instruction at Tier 1 does not provide enough support for some students to achieve grade-level expectations, then assessments, including progress-monitoring measures, inform adjustments and supplements (i.e., intervention) to classroom instruction (Scanlon, Anderson, & Sweeney,

2010). Instructional adjustments and supplements are integral for preventing or remediating difficulties for students struggling with literacy.

Progress monitoring needs to occur with adequate frequency to evaluate the effectiveness of intervention and inform modifications in a timely manner (Stahl & McKenna, 2013). *Adequate frequency* suggests data collection should occur between the more comprehensive general classroom evaluations at the beginning, middle, and end of the year. As student data accumulate, they indicated either progress toward closing the gap between struggling students and those meeting grade-level expectations, or they suggest the characteristics of *treatment resisters* (Torgesen, 2000). Treatment resisters are students who do not make adequate progress despite high-quality classroom instruction and intervention efforts (treatment) at preventing or remediating difficulties with literacy. Informative and tight progress-monitoring practices have the potential to advance students through increasingly effective cycles of instruction, which increase their chances of responding to and graduating out of an RtI context instead of having persistent struggles. Progress monitoring informs the pivotal decisions regarding instructional practices and student response to instruction, and these decisions are the driving force behind the RtI process.

The interplay between the responsiveness of instruction and determinations of student progress is ultimately consequential to the evaluation of a specific learning disability (Stecker, Fuchs, & Fuchs, 2008). The 2004 revisions to the Individuals with Disabilities Education Act (IDEA) delineate that identification of a specific learning disability may be determined if "the child does not make sufficient progress to meet age

or State-approved grade-level standards…when using a process based on the child's response to scientific, research-based intervention" (300.309).

Research has revealed a lack of validity with the traditional IQ-achievement discrepancy criteria for identification of a specific learning disability (Stanovich, 1991; Vellutino, Scanlon, & Lyon, 2000), making way for this new RtI criterion. The change in criteria for determinations of specific learning disability is supported by research indicating that early, intense intervention is capable of preventing and remediating reading difficulties in estimates of up to 95% (perhaps more) of students (Vellutino et al., 1996). However, the potential for RtI processes to prevent and remediate reading difficulties among such significant percentages of students is contingent upon the provision of high-quality instruction. Educators cannot ensure high-quality instruction or make appropriate modifications without effective progress-monitoring practices providing formative feedback. It is logical to conclude that the efficacy of progress-monitoring practices contributes to the validity of identification of a specific learning disability.

Grounding Progress-Monitoring Practices in Their Purpose

With the specific RtI context delineated and the role of progress monitoring within that context explained, we now turn our attention to the identification of progress-monitoring practices and criteria for effective practice.

Guidance for progress monitoring, such as the IRA Position Statement on formative assessment (IRA, 2013) and the statement from the National Center on Response to Intervention (Retrieved May 30, 2013 from www.rti4success.org) are vague.

Particular assessment tools are not highlighted or given preference, and stipulations for use of progress-monitoring tools are not spelled out. The open-ended nature of guidance for progress monitoring is necessarily vague, because similar to instruction in general, progress-monitoring is not a one-size-fits-all phenomenon.

A grounding element for progress monitoring exists in the midst of the variability of assessment tools and use of selected tools: that grounding element is the consistent identification of the purpose of progress monitoring. Table 1 provides a sampling of statements of purpose for progress monitoring from various sources related to progress monitoring, including journal articles, books, and online sources. All statements touch on the purpose of evaluating instructional effectiveness[2] with the goal of making ongoing adjustments as indicated by progress-monitoring data. Deno (2003) asserts that teachers should select and utilize measures that allow them to "formatively evaluate their instruction and improve their effectiveness" (p. 184). In other words, once instructional effectiveness has been evaluated, improvements should be implemented if needed.

[2] Student performance data from progress-monitoring practices serve as an *indicator* of instructional effectiveness. The data do not provide a direct evaluation of instructional quality, because students may come to the classroom with strengths enabling them to meet grade-level expectations despite potential weaknesses within the instruction. If information sources, such as student performance data, indicate a need for evaluation of instructional quality, then measures of curriculum quality and teacher performance are also needed.

Table 1

Purposes for Progress Monitoring

Source	Explanation of Purpose
Deno, 2003	"…formatively evaluate their instruction and improve their effectiveness" (p. 184).
National Center on Student Progress Monitoring	"…assess students' academic performance and evaluate the effectiveness of instruction" (Retrieved April 11, 2013, from www.studentprogress.org).
National Center on Response to Intervention	"…(a) estimate rates of improvement, (b) identify students who are not demonstrating adequate progress and/or (c) compare the efficacy of different forms of instruction to design more effective, individualized instruction" (Retrieved May 30, 2013, from www.rti4success.org/progressMonitoringTool).
National Center on Learning Disabilities RtI Manual	"…1. To determine whether children are profiting appropriately from the instructional program, including the curriculum; 2. To build more effective programs for the children who do not benefit; and 3. To estimate rates of student improvement" (2006, Section 2).
Afflerbach, 2012	focus "on how well a student is developing in relation to his or her needs…and in relation to the curriculum chosen as a result of these assessments" (p. 121).
Stahl and McKenna, 2013	"…allows teachers to know when their instruction is working and when a course change is required" (p. 8).

In addition to progress-monitoring practices serving the purpose of evaluating and informing instruction, another consideration is reflected in the statement in Table 1 from the National Center on Learning Disabilities RtI Manual, which extends the purpose of progress monitoring to include the estimated "rates of student improvement" (2006, Section 2). The statement of purpose grounding the understanding of progress monitoring for this study encompassed the three aforementioned aspects: (a) using student performance data to indicate instructional effectiveness; (b) informing ongoing modifications to instruction; and (c) determining student progress.

Effective Progress Monitoring: Achieve the Purpose with Formative Assessment

On the whole, if the purpose of a particular educational practice is achieved, then it is likely the practice is functioning effectively. So what type of assessment is well suited to evaluate instructional effectiveness, inform instructional modifications, and determine student progress?

Assessments are often classified as either *summative* in nature, coined as assessments *of* learning, or *formative* in nature, coined as assessments *for* learning (Stiggins & Chappuis, 2006). Distinguishing whether an assessment is summative or formative is not as definitive as the term *classification* implies. The nature of being summative or formative is not an either/or distinction; rather, assessments fall somewhere along a continuum wherein the two classifications serve as bookends as opposed to categories. Let's consider whether assessments that tend toward being summative or formative are well suited for each of the three components of the purpose of progress monitoring.

1. Evaluate instructional efficacy. The first component of the purpose of progress monitoring is to use student performance data to indicate instructional effectiveness. Assessments *for* learning tend to be closely linked to instruction, often mirroring daily instructional tasks. These formative assessments tend to target evaluation of particular skills and knowledge. The student performance data collected then help inform the next steps of instruction. The measures tend to be informal (e.g., noting success on a word sort or administering an informal reading inventory). The evaluative perspective with formative assessment prioritizes

looking forward on learning. In other words, by first evaluating the aspects of instruction that appear to be working, educators can then look forward and decide to continue or modify instruction for the next steps. The tight link between instruction and formative assessment makes assessments *for* instruction well suited for the evaluation of instructional efficacy.

2. Inform ongoing modifications. Another component of the purpose of progress monitoring is that the student performance data inform ongoing modifications to instruction. The ability to make ongoing adjustments to instruction requires assessment data that are collected with adequate frequency and is in a format that is closely linked to instruction. Summative assessments tend to be used at end points of instruction (e.g., the conclusion of a unit of study), whereas, as Bloom points out (as cited in Wiliam, 2006):

   > Quite in contrast is the use of "formative evaluation" to provide feedback and correctives at each stage in the teaching-learning process. By formative evaluation we mean evaluation by brief tests used by teachers and students as aids in the learning process. While such tests may be graded and used as part of the judging and classificatory function of evaluation, we see much more effective use of formative evaluation if it is separated from the grading process and used primarily as an aid to teaching (p. 48).

   Formative assessment provides brief, integrated forms of evaluation well suited for informing ongoing instructional modifications.

3. Determine student progress. The third component of the purpose of progress monitoring is determining student progress based on student performance data. Student development progresses gradually. A student does not learn to recognize all the letters of the alphabet in one big leap; rather, it is the accumulation of

hundreds of small steps over months and months that leads to such an achievement. A summative assessment of letter recognition for the entire alphabet would not be appropriate for a student until he was near the end of developing letter recognition. Smaller, targeted assessments of a few letters at a time are needed to measure his progress with letter recognition along the way. The need for smaller, targeted assessments is again describing a need for formative measures to fulfill the purpose of progress monitoring.

Identifying Progress Monitoring by Characteristics of Formative Assessment

The aligned nature of formative assessment and progress monitoring means characteristics of formative assessment coincide with characteristics of progress-monitoring practices and can be helpful for identifying progress monitoring. McMillan (2010) provided descriptors of formative assessment characteristics. He categorized various formative assessment characteristics as low-level, moderate-level, and high-level. High-level formative characteristics identify formative assessment in its purest sense. Low-level formative characteristics start blending into summative assessment characteristics.

McMillan's characteristics and associated descriptors for each of the three formative assessment levels provide a rubric that can be used to facilitate evaluation of the formative nature of any given progress-monitoring practice. This study focused on progress monitoring with struggling students in an RtI context; therefore, one particular consideration, informed by McMillan's descriptors, was that low-achieving students benefit from high-level formative assessment that provides immediate and specific

feedback. Thus, the provision of feedback was one of the codes that contributed to the examination of progress-monitoring practices.

Effective Use of Formative Assessment for Literacy Progress Monitoring

As teachers use formative assessment to accomplish the purpose of progress monitoring, the particular assessment tool is less important than *how* the tool is used (Gallagher, 2009; Taras, 2005). The next logical question was, what does effective use of formative assessment tools for progress monitoring look like?

McLaughlin and Overturf (2013a; 2013b) address fundamental aspects of formative assessment in their principles for effective integration of assessment in the daily goings-on of instruction. Their principles are highlighted in the International Reading Association's (IRA) position statement on formative assessment (IRA, 2013). The principles for effective use of formative assessment are echoed in the definition of formative assessment proposed by Black and Wiliam (2009). The specific context of this study is to examine progress-monitoring practices for struggling early readers in an RtI process. Therefore, it was appropriate to consider whether or not principles of effective formative assessment aligned with principles of effective literacy assessment. Cooper's (1997) principles of effective literacy assessment are closely aligned with the McLaughlin and Overturf principles as well as with the Black and Wiliam definition. Integrating principles from the three sources led to the development of the following criteria for effective use of formative measures (i.e., progress monitoring) for literacy assessment:

1. Purposeful in evaluating instruction and student progress by being grounded in how students learn to read and write
2. Collaborative between teachers and students (Reflective)
3. Dynamic in how it is incorporated into instruction and in how it indicates learning (Multidimensional)
4. Informative, providing descriptive feedback for instructional planning (Identifies strengths and Zone of Proximal Development)
5. Ongoing, supporting continuous improvement
6. Authentic
7. Developmentally and culturally appropriate

Effective Progress Monitoring for the Struggling Student: Tell Their Story

In a research session at the International Reading Association Convention in April 2013, Robert Calfee made a poignant comment about collecting student performance data. He said the information should "tell their story." We think of a story as something meaningful and captivating; page-by-page, a story takes us on a journey such that by the end we arrive someplace different from where we started. Student performance data should function the same way.

The collection of formative data gathered from progress-monitoring assessments is a necessary story element complemented by other forms of assessment (Roskos & Neuman, 2012; Stahl and McKenna, 2013; Wiliam, 2010). Screening assessments provide an introduction—a starting point—for the story. Diagnostic assessments dig deeper into the story when needed. Evaluative assessments conclude chapters along the

way. But the ups and downs of the journey—the cumulative moments between the bookends of these more summative assessments—are told through the formative data elicited from progress-monitoring practices.

Formative assessment data are the consistent fodder for the pages of a student's academic story. Assessment practices must be streamlined to be practical, yet occur sufficiently to be informative. Stahl and McKenna (2013) advise teachers to be strategic with and avoid overuse of assessment when designing an evaluation plan in an RtI context; assessment should be "lean and mean" (p. viii). Finding the right balance varies from student to student because no two stories are alike.

Supporting Effective Use of Formative Assessment at the School-System Level

This study acknowledged the influence of contextual factors on educator efforts to make effective use of progress-monitoring practices and looked specifically at influences from the school-system context. Stephens et al. (1995) found factors from the school level to have significant influence on assessment practices. The researchers examined teacher use of the same assessment tools across four different schools. They "designed flow charts to trace decision making through organizational patterns of the districts" (p.486) and found markedly varied assessment practices, which were highly influenced by external forces (e.g., school structures and publisher influences). Their findings indicate the importance of attending to the influence of external forces, which may be functioning to support or hinder effective progress-monitoring practices.

The IRA position statement on formative assessment (2013) is a source of information on considerations for making effective use of formative assessment at the

school-system level. The IRA position statement was of interest since measures that are formative in nature are well suited for fulfilling the purpose of progress monitoring. The statement recognizes the school system's role as one primarily of support, recommending support for teacher use of formative assessment, development of a clear role for formative assessment, and provision of related professional development.

The IRA recommendations regarding support for formative assessment from the school-system level is reinforced by the findings from Graue and Johnson (2011) in their examination of how assessment intersected with forces of accountability. Their research was built on three years of qualitative data from nine elementary schools in Wisconsin. The authors concluded:

> In supportive assessment systems, teachers had tools that they understood and that they could use to improve their practice to meet the needs of their students. In contrast, assessment in lower quality classrooms took place in disjointed systems that focused primarily on summative rather than formative assessment. A focus on accountability without attention to the quality of instruction and the quality of assessment resources is inherently flawed (p. 1827).

Graue and Johnson's findings suggest that educational systems that support formative assessment with an emphasis on instructional quality have a significant effect on realizing higher-quality instruction for students. Therefore, progress-monitoring practices at Snowy Pond Elementary were examined for whether or not support from the school-system level may have been promoting or hindering effective use of formative assessment.

The Teacher's Role in Using Formative Assessment Effectively for Progress Monitoring with Struggling Students

The examination of progress-monitoring practices at the classroom level looked specifically at potential influences from relevant teacher knowledge. The context of a classroom is highly complex (Jackson, 1968/1990), and teachers are in the driver's seat, constantly making decisions about instruction and assessment. Teacher decision making is a dynamic process that relies on integrating numerous factors for any given decision (Borko, Roberts, & Shavelson, 2008). Educators face daily, even hourly, decisions about which student performance tasks will be sources of formative feedback and how to use the data to inform instruction.

Teachers and the decisions they make about assessment and instruction have a significant effect on student learning (Darling-Hammond, 2010; Foorman & Moats, 2004; Hanushek & Rivkin, 2006). Students struggling with literacy and receiving intervention within an RtI process need teachers who are making strong and informed decisions, because students working to catch up to their peers have no instructional time to waste. Wiliam points out the particular value of formative assessment for informing teacher decision making and concludes, "there can be little doubt that increased use of formative assessment is one of the most educationally effective and most cost effective ways of increasing student achievement" (Wiliam, 2010, p. 36). Teachers are empowered to successfully negotiate the use of formative assessment within the complexities of a classroom if they are supported by particular categories of teacher knowledge: specialized content knowledge about reading development (Moats, 1994; Moats & Foorman, 2003), assessment literacy (Plake & Impara, 1993), and pedagogical content

knowledge (Shulman, 1986) specifically related to the individual needs of struggling students (Connor et al., 2009; Hughes, 2010).

Teacher Knowledge of Early Reading Development

Teaching children the complex skills of reading requires specialized content knowledge of reading development; simply being a proficient reader yourself will not suffice (Phelps, 2009). Specialized knowledge of reading development has an influence on teacher effectiveness with struggling students (Lyon & Moats, 1988). Teachers are effective when they are making sound instructional decisions, and strong content knowledge supports decision making that can be highly complex when assessing and teaching struggling students (Lyon, 1987). Though the predictive value of early reading skills as students enter their classrooms in the fall is high, teacher effectiveness does have the ability to make additional differences in student achievement (Foorman, Schatschneider, Eakin, Fletcher, Moats, & Francis, 2006). Teachers with higher levels of specialized knowledge of reading instruction tend to make instructional decisions more closely aligned to research-based recommendations (Spear-Swerling & Zibulsky, 2013), and this benefit of teacher effectiveness extends to spelling achievement as well as reading (Moats, 2009). Specialized knowledge of reading development is critical for assessment related to instruction, because appropriate instruction is based on accurate assessment of a student's developmental level and related literacy skills (Invernizzi, Justice, Landrum, & Booker, 2004). For this study, content knowledge about the components of early reading development and formative assessment options that correspond to those components was of interest.

To grasp the nature of reading development requires a balance of seemingly contradictory understandings. On the one hand, learning to read is not a simple sequence of skills acquired in lockstep; rather, it is a highly complex process that develops gradually, in fits and starts, and uniquely (Adams, 1990; Paris, 2005). This characterization of reading development suggests it would be artificial to delineate stages, because compartmentalizing development into defined steps could not possibly stay true to the complex, continuous, and variable nature of reading development. On the other hand, there is a predictable coordination of skills, which develop with relative synchrony, wherein early acquisition is predictive of later success with literacy (Snow, Burns, & Griffin, 1998; National Institute of Child Health and Human Development, 2000). This general, predictable synchrony of reading skill development allows for conceptualization of stages that are qualitatively distinct and useful for guiding instruction and assessment (Gunning, 2003).

Stage theories for reading development have been developed by several notable researchers (e.g., Chall, 1983; Ehri, 1998; Bear, Invernizzi, Templeton, & Johnston, 2012), all of whom acknowledge they are building on conceptualizations about developmental progressions that began long ago (Chall, 1983). Educators identify a student's stage of development to situate the learner in the right ballpark for instruction. From there, educators apply knowledge of reading components relevant to the particular stage as well as knowledge of the individual learner to fine-tune instruction and assessment. For this study, the reading components relevant to the emergent and beginner stages of reading development were of interest, because kindergarten and first-grade

students struggling with literacy are situated in these two early reading stages. The relevant reading components to the early reading stages are each addressed and served as a priori codes during data analysis.

Phonological awareness. One prerequisite for working with the complex alphabetic system of English is phonological awareness (Adams, 1990). Phonological awareness is an awareness that language is composed of "the small units of speech that correspond to the letters of an alphabetic writing system" (Adams, Foorman, Lundberg, Terri, 1998, p. 1). Phonological awareness develops along a continuum that begins with initial awareness of elements such as words, rhyme, and alliteration in oral language and progresses to a refined awareness of phonemes, or individual speech sounds (Bear, Invernizzi, Templeton, & Johnston, 2012). The ability to parse and manipulate the speech stream according to boundaries (e.g., word, syllable, phoneme) represented by the phoneme-grapheme correspondences of a language is highly recommended for early reading instruction by the Report of the National Reading Panel (NICHD, 2000). National Reading Panel recommendations for phonological awareness instruction include (a) teach phonological awareness with letters; (b) address only one or two skills at a time; (c) conduct a total of 5 to 18 hours of training sessions; (d) keep sessions to 25 minutes or less; (e) provide instruction in small groups; and (f) include phonological awareness in instruction for most kindergarteners, especial those in remedial settings. Progress-monitoring measures may come from sources such as the Tests of Phonological Awareness (McKenna & Stahl, 2009) and Beginning Sound Production (PALS Quick Checks, 2009).

Concepts about print. Another skill necessary for understanding how an alphabetic system is used to capture language in print is knowledge of print concepts, or concepts about print (CAP), which predictably develops "as non-readers become readers" (Clay, 1993, p. 47). Clay (1985) established a checklist of basic knowledge about how language is represented in books, and her list, or variations of it, continues to be the go-to assessment for CAP. The list ranges from demonstrating basic book-handling skills (e.g., holding the book with correct orientation when it is handed to the student upside down) to more refined understandings about print (e.g., identifying punctuation and knowing what various symbols indicate). Progress monitoring for this early reading component is commonly accomplished with the protocol created by Mary Clay (1985), or a variation thereof, such as the Book-Handling Knowledge Guidelines provided by McKenna and Stahl (2009).

Letter names and letter sounds. Two other instructional components that are fundamental to instruction and assessment with students in the early reading stages comprise the nuts and bolts of an alphabetic system: the names and sounds associated with the graphemes (letters) of English. With time and quality instruction, students will develop knowledge of the hundreds of phoneme-grapheme correspondences in English. Phonics approaches vary in sequence and manner of instruction, but all prioritize teaching early readers the names and the most common phoneme-grapheme correspondences for the 26 letters of the alphabet (Adams, 1990). Progress-monitoring measures for letter name and letter sound knowledge are simplistic because they are

limited to the finite number of letters in the alphabet. Measures are available from PALS Quick Checks (2009) and can also be easily made by teachers.

Concept of word. As letter name and letter sound knowledge is acquired and phonological awareness develops to the level of phoneme awareness, students are then prepared to attend to individual letters and think about the associated sounds. Often, at about this point in development, students are also able to identify words as groups of letters separated by spaces in a string of print. This developing awareness and ability to identify words is referred to as concept of word (COW) and is considered a "watershed" (Henderson, 1980, p. 9) event, essential to reading development (Flannigan, 2007; Henderson, 1980; Morris, 1993). COW helps students move from a primary reliance on contextual cues and memorization to identify text (e.g., the shape and color of a stop sign to read *stop*) to the utilization of their phonemic awareness and alphabetic knowledge to decode text (e.g., the phoneme-grapheme knowledge for 'd'-/d/ to read *dog* from a short line of print). Instruction relies on memorized text (e.g., a nursery rhyme verse) that students can follow along with by pointing at the words with their finger, or tracking. COW develops in a predictable progression from tracking the directionality of print to tracking and identifying individual words accurately.

This progression is characterized by three phases: developing, rudimentary, and firm (Blackwell-Bullock, Invernizzi, Drake, & Howell, 2009). COW is highly likely to be incorporated into the instruction, and therefore progress monitoring, for readers in the RtI process at Snowy Pond. Assessment follows a basic format: measurement of accurate tracking of memorized text, identification of words in context, and identification of words

in isolation (Blackwell-Bullock, Invernizzi, Drake, & Howell, 2009; Flannigan, 2007; Invernizzi, Meier, & Juel, 2004; Morris, 1993). Once the basic format of the assessment is learned, the assessment can be teacher-made with any short, memorized text, such as a nursery rhyme.

Comprehension. The instructional components highlighted thus far relate to developing abilities for decoding text. However, the simple view (Gough & Tunmer, 1986) provides a two-pronged model of reading that distills reading abilities into either decoding or comprehension. Early readers tend to use texts with few lines per page, few words per line, pattered text, ample space between words, text connected to familiar topics, and high contextual (i.e., picture) support (Fountas & Pinnell, 1996). These features facilitate COW development but are not particularly rich for comprehension instruction. Rather, read-alouds are a common, highly valuable, evidence-based source of comprehension instruction for early readers (Wiseman, 2012). Read-alouds are typically conducted in whole-group classroom settings, not intervention instructional settings. Successful tutoring programs that have paved the way for intervention instruction often do not include read-aloud as a component (Clay, 1985; Johnston, Invernizzi, & Juel, 1998), or they make it optional (Morris, 1999). Prioritizing an instructional emphasis on decoding related skills in the limited number of minutes of an intervention session is appropriate given that struggling early readers can and should participate in classroom read-alouds (Wisemann, 2012).

Whole-group instruction in the classroom context is where the majority of comprehension instruction would likely occur. However, some accountability for

remembering and making sense of text is appropriate even with early reader texts. I anticipated finding this accountability in intervention instruction at Snowy Pond, because it establishes the importance of reading with purpose and understanding from the earliest interactions with text (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010). Comprehension is generally assessed with questions following a reading passage and can also be evaluated through story-retelling tasks evaluated with measures such as the Retelling Evaluation Guidelines (McKenna & Stahl, 2009).

Strategic reading. Readers in the beginner stage work with text that offers more complex content, less contextual support, and greater vocabulary and sentence variety (Fountas & Pinnell, 1996). Instruction with more complex text requires more complex strategies for reading. Strategies beginner readers develop and start to use in increasingly complex ways include automatic recognition of some words, metacognition (paying attention to thinking while reading) to monitor that reading makes sense, initiative to reread and self-correct when an error is detected, and more sophisticated phonics knowledge to decode unfamiliar words. Scanlon, Anderson, and Sweeny (2010) refer to these diverse strategies as strategic reading skills.

Running records. The What Works Clearinghouse evaluated 153 intervention programs, and only one received positive rankings on all the Clearinghouse effectiveness criteria (Allington, 2013): Reading Recovery (Clay, 1985). For decades now, Reading Recovery has been effectively helping struggling first-grade readers overcome their difficulties with literacy attainment (Clay, 1985; Iversen & Tunmer, 1993; Pinnell, 1989;

Pinnell, Lyons, DeFord, Bryk, & Seltzer, 1994; Torgesen et al., 1999; Wasik & Slavin, 1993). But how does Reading Recovery monitor student progress? The mother of Reading Recovery, Marie Clay, was also a champion for the primary form of assessment utilized in the program: the running record.

Running records are arguably the most practical form of reading assessment for primary teachers. Put simply, a running record is a close observation of a student reading text aloud. There is an impressive elegance to the task. On the surface, students are reading orally and teachers are listening; however, under the surface, students are demonstrating a wide range of knowledge about negotiating text and teachers are carefully observing, recording, and analyzing particular student behaviors. Thus, the running record is ideal for progress monitoring student development with strategic reading skills; it was another form of progress monitoring likely to occur at Snowy Pond. Not only is the running record clearly a powerful measure of student performance, but it has also been shown to serve as a formative literacy assessment that can be reliably used for instructional decisions (Burgin & Hughes, 2009).

High-frequency words. The texts beginner readers use are often reread to provide opportunities to practice their skills and promote automaticity with the words most frequently encountered. Working with high-frequency words, as provided by Dolch (1948) or Fry (1994), in isolation is common for beginning readers, because automatic word recognition for the words that compose a high percentage of the total words in texts supports fluent reading (Walpole & McKenna, 2007). Teachers commonly use the Dolch sight word list (Dolch, 1948) because the words are arranged by grade level. Teachers

can create progress-monitoring assessments for the Dolch list online through Intervention Central. The Snowy Pond school system used the *Six Minute Solution* program (Adams & Brown, 2003), which provides a list of high-frequency words they refer to as the Primary Automatic Words (PAWs).

Letter formation, writing for sounds/spelling, and sentence writing. Another category of early reading components I anticipated finding within instruction and assessment encompassed encoding skills. Encoding, use of the alphabetic system for writing, is the counterpart to decoding. The foundational writing skills I anticipated finding in early reading instruction for emergent readers center around writing for sounds (Johnston, Invernizzi, & Juel, 1998). Writing for sounds provides letter formation practice, which is appropriate to reinforce letter recognition and establish comfort and fluency with writing print. Letter formation is commonly assessed through informal observation of class work and writing samples, or it may be a simple teacher-made measure prompting student letter writing. Writing letters for sounds (e.g., labeling a picture) also reinforces phoneme-grapheme knowledge and begins early readers on the path of orthographic (spelling) development. Based on 20 cases of preschool children's spellings, Read (1971) presented findings supporting the conclusion that students' spelling attempts are not random; rather, their attempts are grounded in their knowledge of phoneme-grapheme correspondences. Read's findings laid the groundwork for our current understandings about the progression of spelling development, which occurs synchronously with reading development (Bear, Invernizzi, Templeton, & Johnston, 2012). The Snowy Pond school division requires word study instruction according to

Words Their Way (Bear, Invernizzi, Templeton, & Johnston, 2012); therefore, teacher-selected sorts are used for spelling assessment as well as spelling lists from PALS Quick Checks. As learners grow with their letter formation and spelling abilities, these skills facilitate the more sophisticated encoding work of sentence writing. Expressive writing is highly variable and progress is best assessed through informal observation of class performance and use of qualitative checklists.

Teacher Assessment Literacy

The focus on progress-monitoring practices for this study prompts particular consideration of teacher knowledge of assessment. Plake and Impara (1993) refer to teacher knowledge of assessment as *assessment literacy*. They used the *Standards for Teacher Competencies in the Educational Assessment of Students* (AFT, NCME, NEA, 1990) to identify areas of competency in assessment, or assessment literacy. Plake and Impara (1993) used these identified areas of competency to develop an instrument to measure teacher assessment literacy. In turn, Craig Mertler and Cynthia Campbell adapted their instrument to develop the Assessment Literacy Inventory (ALI; 2004), which was one of the instruments used in this study. The seven areas of competency articulated in the standards state that teachers should be skilled in:

1. Choosing assessment methods appropriate for instructional decisions.
2. Developing assessment methods appropriate for instructional decisions.
3. Administering, scoring, and interpreting the results of both externally produced and teacher-produced assessment methods.

4. Using assessment results when making decisions about individual students, planning teaching, developing curriculum, and designing school improvement plans.
5. Developing valid pupil grading procedures that use pupil assessments.
6. Communicating assessment results to students, parents, other lay audiences, and other educators.
7. Recognizing unethical, illegal, and otherwise inappropriate assessment methods and uses of assessment information.

Teacher Knowledge of Pedagogy

Duffy and Ball (1983) found that teacher decision making that promoted student understanding included utilization of content knowledge as well as pedagogical knowledge, such as capitalizing on teachable moments and restructuring student responses in feedback interactions. Teacher effectiveness with assessment is enhanced when teachers use research-based pedagogical knowledge, such as being aware of the nature of feedback interactions between teachers and students (Hoffman & Baker, 1981). This study focused on three primary pedagogical aspects specific to struggling early readers: differentiation, believing all students can learn, and building self-efficacy.

Differentiation. Differentiation is critical for achieving a best fit between instruction and assessment and the struggling reader (Hughes, 2010). Differentiation is a process of tailoring instruction and assessment to student developmental levels, interests, and preferred modes of learning (Tomlinson, 2000). Consideration of individual student characteristics informs teacher decision making about instruction and assessment

(Walpole, Justice, & Invernizzi, 2004), and the degree to which teacher decisions yield instruction and assessment that best serves student needs can either support or hinder student reading development (Connor et al., 2011).

Effective progress-monitoring practices, which are formative in nature, can help educators uphold the four intersecting principles between differentiation and literacy instruction shared by Tomlinson (2009): recognize students differ as learners, study those learners and teach them well, teach up by using rich, authentic curriculum that is appropriately scaffolded, and enhance student success by responding to student needs. Formative assessment is a valuable source of data that can serve to inform teacher decisions that are required to realize differentiation for students (Moon, 2005). Thus, I anticipated finding a potentially reciprocal relationship between effective progress monitoring and differentiation.

Believing all students can learn. One of Hughes' (2010) principles for using formative assessment effectively with struggling students states perhaps the most important pedagogical stance teachers should hold: Believe all students can learn. On the surface, this principle seems like a given; however, even exceptional educators can allow subjective judgments to slip in if weak performance begins to be attributed to personal characteristics over which we have little control (e.g., he's just not mature enough yet, home life is just too unstable, cognitive processing or memory is just too weak, she just can't sit still and pay attention, etc.).

Research studies that have shown how effective early intervention can be (Vellutino et al., 1996; Torgesen et al., 2001; Scanlon, Vellutino, Small, Fanuele, &

Sweeney, 2005) have not excluded students with, for example, unstable home lives. On the contrary, these studies have indicated what a positive force early intervention can be for students struggling to overcome such negative forces. Similarly, educators should approach assessment and instruction for all students without allowing subjective judgments to limit their expectations of success. Instead, educators need to use an awareness of factors, such as differences in discourse patterns between home and school, and facilitate academic success through use of the knowledge to address differences without devaluing the nature of interactions at home (Hoff, 2013).

Building self-efficacy. A third important aspect of pedagogical knowledge for teachers of struggling early readers is understanding the value of building self-efficacy. Struggling students are not only at-risk for academic failure, but also for low academic self-efficacy. Assessments that identify them as struggling and indicate performance that falls short of grade-level expectations send a "You *can't* do it" message. Achievement tests often highlight inadequacies of student performance with little to no opportunity to improve. However, this can be countered with formative assessment measures that meet students at their performance level, thus providing more opportunities for positive feedback and successful performance. Hicky and Kuiker (2005) discuss motivation as "the collective desire to participate meaningfully in the co-construction of understanding" (p. 291). This co-construction occurs when teachers and students interact through formative assessment, thus promoting motivation. Stiggins and Chappuis (2006) report findings from numerous studies that support the use of formative assessment in the classroom as a means of turning student thinking from feeling incapable of success to

feeling capable. Specific to struggling students, the authors distilled the evidence to conclude that findings from these studies "suggest that achievement gains and reductions in score gaps are within reach" (p. 14) when effective formative assessment practices are in place.

Research Questions

The literature sheds light on what progress monitoring is, what effective practices look like, and the factors that influence the teachers' implementation of progress monitoring with struggling early readers. This study was designed to evaluate teachers' current progress-monitoring practices in a specific context: the RtI process for kindergarten and first graders at Snowy Pond Elementary.

Three types of knowledge influence teachers' decision making about progress-monitoring practices: specialized content knowledge about reading development (Moats, 1994; Moats & Foorman, 2003), assessment literacy (Plake & Impara, 1993), and pedagogical content knowledge (Shulman, 1986). Teachers' decisions are also influenced by external factors, such as the school context and policies from the field of education (Stephens et al., 1995). Teacher decisions about progress monitoring can make a difference in student achievement (Foorman, Schatschneider, Eakin, Fletcher, Moats, & Francis, 2006) and contribute to ameliorating difficulties for struggling students receiving intervention in an RtI context. Therefore, the aim of the study was to identify how various factors in this specific context supported or hindered the implementation of progress-monitoring practices. The research questions for this study were as follows:

1. What progress-monitoring practices, if any, do kindergarten and first-grade teachers at Snowy Pond Elementary use for their struggling students in their RtI context?
2. In what ways, if any, do the kindergarten and first-grade teachers at Snowy Pond Elementary make use of progress-monitoring data for struggling students?
3. To what extent do occurrences, if found, of the Snowy Pond kindergarten and first-grade teachers' use of progress monitoring with struggling students in their RtI context relate to what we know about effective progress monitoring?
4. What role, if any, does knowledge of early reading development, assessment literacy, and pedagogical knowledge of struggling students play in the use of teachers' progress-monitoring practices with struggling kindergarten and first-grade students in the RtI context at Snowy Pond?
5. What role, if any, do contextual factors (e.g., school-system expectations, accountability to other professionals, classroom schedules, etc.) play in the teachers' use of progress monitoring for struggling kindergarten and first-grade students in the RtI context at Snowy Pond?

Themes that emerged through the pursuit of answers to these research questions informed recommendations for promoting effective progress monitoring with struggling kindergarteners and first graders. Improvements with progress-monitoring practices hold the potential to translate to improvements with instruction, and improvements with instruction optimize the opportunity for struggling readers to overcome their difficulties and achieve lasting academic success.

Research Paradigm and Assumptions

The interpretivist paradigm guided the inquiry for this capstone project. Interpretivists take the stance that "reality as we can know it is construed intrasubjectively and intersubjectively through the meanings and understandings garnered from our social world" (Angen, 2000, p. 385). The assumption that reality is understood through the knowledge and beliefs of the participants and understood within the context of socio-cultural influences was suited for this case study examination of progress-monitoring practices among kindergarten and first-grade teachers at Snowy Pond Elementary.

Interpretivists' beliefs include relativist ontology, which is based in the assumption that there is not one truth to be discovered or understood about the world and our experiences in it, but rather that distinctive realities are developed through unique experiences (Guba & Lincoln, 1994). In tandem with relativist ontology, my epistemological assumptions included the belief that I cannot separate myself from what I know. My role as investigator exerts influence throughout the research process. My own knowledge and experiences shaped this investigation of progress-monitoring practices. As the investigator, I influenced interpretation of the problem of practice, articulation of the research questions, identification of relevant information from the literature base, collection and analysis of the data, and conclusions from the analysis. Given this epistemology, I made specific effort to be conscious of the influence of my own knowledge and experiences and acknowledged it in the analysis and interpretation of the data. My epistemological assumption also means it was only through a degree of personal

involvement that I would be capable of understanding the reality of the participants. I took the role of participant observer in select moments, which provide the opportunity to engage more directly with participants and their contexts. More direct interactions between myself, the participants, and the contexts fostered perspectives and insights that were more closely connected to those of the participants, helping *their* truth to be the one that emerged.

Research Approach

This capstone used a case study design to investigate teachers' progress-monitoring practices for struggling kindergarten and first graders at Snowy Pond Elementary. The research questions asked about the nature of current practices and the teacher knowledge and contextual factors that influenced practices. Qualitative methods lend themselves to providing the descriptive information needed to characterize practices and evaluate the effects of varied sources of influence (Marshall & Rossman, 2006). The naturalistic methods of observation and content analysis were employed, as well as semi-structured pre- and post-interviews. True to the interpretivist belief in the social construction of reality, I found that high levels of interaction and dialogue through the interviews yielded valuable data, which allowed for richer insights into the participants' perspectives.

Research Site and Participants

Research Site

Snowy Pond Elementary is a rural/suburban public school located outside of a city with a population of over 40,000 people in the mid-Atlantic region of the United

States. The school houses just over 300 students in kindergarten through fifth grade. In Table 2, student demographics for 2013-2014 indicate an equal distribution of boys and girls and relatively little socio-economic disadvantage (i.e., percentage of Free and Reduced Lunch students) as well as little ethnic/racial diversity (i.e., percentages of Black, Hispanic, and White students) (school website withheld for confidentiality). Demographic indicators of diversity suggest the school population is predominantly white and is made up of proficient English speakers who come from households with incomes above the poverty level.

Table 2

Snowy Pond Elementary Student Demographics (2013-2014)

Demographic	Percentage
Limited English Proficiency	1.9
Free and Reduced Lunch	17.0
Students with Disabilities	4.2
Gifted	5.8
Male	50.8
Female	49.2
Black	0.0
Hispanic	5.1
White	86.2

Note. Total enrollment for 2013-2014 at Snowy Pond Elementary was 311 students.

The demographic percentages for Male, Female, Black, Hispanic, White, and Free and Reduced Lunch had remained approximately the same since 2009. The school was fully accredited; however, the state testing pass rates for all students tested in third and fifth grades had been falling in reading (i.e., 84% in 2011 to 67% in 2013) and math (i.e.,

84% in 2011 to 61% in 2013) for the past couple years (state department of education website, source withheld for confidentiality).

Participants

The unit of analysis for this study was the teacher. Participant selection originated with opportunistic purposeful sampling (Creswell, 2008) of the two teachers who originally approached me with their problem of practice. Selection also included snowball sampling (Creswell, 2008), or recruitment of additional participants based on referrals by the initial teachers. One of the original teachers moved to a third-grade classroom and was not eligible for the focus of this study. The other original teacher was eligible to participate as a current kindergarten teacher. She held a bachelor's degree and had 25 years of teaching experience at the elementary level, several of which were in her current grade level. Her grade-level teammate agreed to participate in the study. This second kindergarten teacher held a master's degree and had 32 years of teaching experience, most of which were in her current grade level. The third teacher participant was a first-grade teacher who held a master's degree and was in her second year of teaching, both years in first grade. The other two first-grade teachers and the principal, who were approached, declined participation.

Data Sources

Data sources included the PALS Progress Monitoring Instructional Checklists (PALS, 2009), the Assessment Literacy Inventory (Mertler & Campbell, 2005), semi-structured interviews, classroom observations, artifacts including lesson plans, progress-monitoring assessments, and other examples of student performance such as classroom

work samples. Data collection informing analysis for the research questions was largely grounded in teacher perception.

PALS Progress Monitoring Instructional Checklists

The PALS Progress Monitoring Instructional Checklists are a collection of questions prompting reflection on factors that affect student progress in the areas of instruction, collaboration, and student engagement (see Appendix A). Versions are designed for the classroom teacher, supplemental instructor, and principal. Participant completion of the checklist provided self-assessment data related to teacher knowledge of early reading development and pedagogy.

Assessment Literacy Inventory

To ascertain levels of teacher knowledge related to assessment literacy, the Assessment Literacy Inventory (ALI; Mertler & Campbell, 2005) was administered (see Appendix B). The ALI parallels the National Council on Measurement in Education's seven *Standards for Teacher Competence in the Educational Assessment of Students*. The inventory comprises five scenarios with seven multiple-choice questions per scenario. Instrument reliability is reported as (KR20) of .74 (Mertler & Campbell, 2005).

Semi-Structured Interviews

Two semi-structured interviews were conducted, one prior to and one following the classroom observations. The pre-interviews conducted prior to classroom observations supplied initial data about the progress-monitoring practices in place for struggling readers. Post-interviews were used to focus follow-up discussion on issues related to the data collected from the classroom observations and relevant documents.

Pre- and post-interviews were conducted once with each participant, face-to-face in each participant's classroom, and lasted anywhere from 15-45 minutes, depending on engagement in the discussion. Responses were recorded on the protocol (see Appendix C) and audio-recorded with permission. Audio recordings were deleted immediately following review for each interview.

Classroom Observations

Classroom observations provided a window into the teachers' progress-monitoring practices that were actually occurring in the natural setting of the classroom for struggling readers. A series of six observations were scheduled with each teacher over a two-week period. Each observation was scheduled for approximately one hour. Observation protocols were developed based on findings in the literature and were used to record observational notes (see Appendix D).

Relevant Documents

In conjunction with classroom observations, I collected related artifacts for content analysis, which included progress-monitoring assessments, other student performance data, and lesson plans. All artifacts were immediately stripped of identifiers, coded to protect identities, and scanned; originals were returned to participants.

Data Collection

Data collection began with participants' completion of the PALS Progress Monitoring Instructional Checklists and the Assessment Literacy Inventory (ALI). Then pre-interviews were conducted with teacher participants. At the time of the pre-interviews, a schedule for classroom observations was set and artifact collection began. I

collected field notes in the classroom observations that followed the initial interviews. Insights from the PALS Progress Monitoring Instructional Checklists, ALI, classroom observations, and relevant documents were used to develop follow-up post-interviews conducted with the teacher participants. The University Institutional Review Board (IRB-SBS) approved all methods of the study for the Social and Behavioral Sciences on November 12, 2014 (see Appendix E).

Perspective of the Researcher

My role as researcher was primarily one of objective observer. This role did shift to participant observer at a few points during the classroom observations. I intentionally allowed for this for two reasons. First, I worked at Snowy Pond for four years as a literacy specialist and I anticipated that the previous levels of comfort and openness I had experienced in my prior employment would carry over to this study. Second, my perspective as an interpretivist guided me to welcome opportunities to immerse myself in the experiences that shaped the reality I was there to examine.

My prior knowledge and experiences as a reading doctoral candidate influenced all aspects of data collection and analysis: my interaction with participants, my focus throughout inquiry, my analysis of findings, and so on. This study was also influenced by the perspective I hold as a former elementary school classroom teacher and literacy specialist, as a student and clinician of reading education, and as a curriculum developer of materials designed to support literacy professional development as well as materials designed to support intervention with early readers.

Data Analysis

Data analysis is discussed separately from data collection; however, in the constant comparative paradigm upheld for this study, "it is certainly not a self-contained phase of research. On the contrary, analysis proceeds throughout the development of the qualitative research project" (Coffey & Atkinson, 1996, p. 192). Data analysis for this capstone is addressed relative to the seven phases identified by Marshall and Rossman (2006): (1) organizing the data; (2) immersion in the data; (3) generating categories and themes; (4) coding the data; (5) offering interpretations through analytic memos; (6) searching for alternative understandings; and (7) writing the report or other format for presenting the study. The phases do not truly align with the constant comparative paradigm and analysis for this study consisted of iterative and fluid movement within the phases.

Organizing the Data

I kept a log for all data collection activities (see Appendix F). I used templates for data collection to help keep track of dates, names (coded), titles, descriptions of the setting (specific to classroom observations), transcriptions, observations, and interpretations. The protocols were not entirely static; collection and organization of the data were responsive to data analysis. A priori coding categories grounded in relevant factors found in the literature were applied and data were continually revisited as new coding categories emerged. All data were kept electronically, which facilitated the reduction and reorganization of information into "manageable chunks" (Marshall &

Rossman, 2006, p. 156). The reduction and reorganization of data were guided by a focus on emerging patterns relevant to the research questions and related literature.

Immersion in the Data

For the immersion process, I focused on the occurrences of progress monitoring and searched for factors that appeared to influence them. I worked to maintain a balance between openness to any potentially relevant data and restraint to not allow data collection to preclude data analysis. I achieved this balance through consistent use of reflections and analytic memos (Marshall & Rossman, 2006) composed in an iterative and fluid way throughout data collection. This facilitated the emergence and triangulation of critical themes.

Coding the Data

Inductive and deductive analyses were of interest as the data were coded. At the onset of data collection, I found myself using inductive coding; that is, I kept my mind open to any data categories that seemed to emerge. Deductive coding immediately followed inductive coding, which entailed the application of a priori codes and any new code categories that emerged throughout the iterative analysis of the data.

A priori codes stemmed from the literature related to progress monitoring with early struggling readers. I applied the conceptual framework of socio-cultural theory and the ecological model (Au, 1997; Bronfenbrenner, 1979) to establish umbrella categories of the contextual levels of influence: (1) field of education, (2) school system, and (3) classroom. For each contextual level of influence a priori codes within each level are

enumerated. The letters under each enumerated code refer to subcategories used for coding.

I. Field of Education

1. Identify Progress Monitoring by Degree (Low to High) of Characteristic of Formative Assessment
2. Evaluate Efficacy of Literacy Progress Monitoring
    A. Purposeful in evaluating instruction and student progress by being grounded in how students learn to read and write
    B. Collaborative between teachers and students (Reflective)
    C. Dynamic in how it is incorporated into instruction and in how it indicates learning (Multidimensional)
    D. Informative, providing descriptive feedback for instructional planning (Identifies strengths and ZPD)
    E. Ongoing, supporting continuous improvement
    F. Authentic
    G. Developmentally and culturally appropriate

II. School System

1. Support teacher use of formative assessment
2. Develop a clear role for formative assessment
3. Provide relevant professional development

III. Classroom (Teacher Knowledge)

1. Early Literacy Development (ELD) Components

A. Phonological awareness (PA)

B. Concepts about print (CAP)

C. Letter names (LN)

D. Letter sounds (LS)

E. Concept of word (COW)

F. Comprehension (Comp)

G. Letter formation (LF)

H. Writing for sounds/Spelling (S)

I. Strategic reading (SR)

J. High frequency words (HFW)

K. Sentence writing (SW)

2. Assessment Literacy Specific to Progress Monitoring (Elements of Purpose)

   A. Data allow for teacher evaluation of instruction

   B. Data inform teacher modification of instruction when needed

   C. Data contribute to teacher determinations of student progress

3. Pedagogy with Struggling Early Readers

   A. Differentiate to serve individual student needs

   B. Believe all students can learn

   C. Build self-efficacy

Validating Truth

Certain measures were taken to ensure validity of the truths emerging from the data. All data recorded in the protocols for semi-structured interviews and classroom

observations were shared with the associated teacher participants for member checking. No changes were requested to the data as a result of member checking, but statements such as, "some of it was painful to read, but all accurate," were confirmation that the member checking was completed. In addition, a colleague who was also a graduate of the reading doctoral program at the University of Virginia served as a peer debriefer. Peer debriefing confirmed the reliability of coding with the PALS Progress Monitoring Instructional Checklists, the protocols for classroom observations, and the protocols for semi-structured interviews. Where corroboration was less than 90%, either discussion informed adjustments to coding procedures to achieve a minimum of 90% agreement, or the coding procedure was deemed invalid and excluded from analysis.

Offering Interpretations

"I found some way to *listen* to what was being said…, and that was by putting words on paper."

—Michael J. Rosen (in *Pegasus for a Summer*)

Rosen's reflection on the power of writing taps into a principle that has drawn me to qualitative work, a principle I consider critical to the work: writing is thinking. Some of my analytic thinking was captured with the coding system. Writing out my interpretations promoted higher-level analytic thinking during data collection and analysis. Writing demands clarity of thought as understandings are represented in print. I used a right-hand column on the protocols for interviews and classroom observations to record any interpretive thinking I did during data collection. I expanded and added interpretations in this space as data were revisited during analysis and composed separate

analytic memos (Marshall & Rossman, 2006) to record interpretations as they integrated across data. My interpretations were critical for moving the data from a record of daily occurrences to meaningful insights about the progress-monitoring practices utilized with struggling early readers at Snowy Pond.

Generating Themes

Themes were sought out relative to each of the five research questions. A theme was considered salient once it had *internal convergence* and *external divergence* (Guba, 1978); in other words, the data supporting the theme reflected consistent descriptive qualities and were also distinct from the data included for other themes. Themes were only reported if triangulated data supported the conclusion.

Particular data sources served as either primary or secondary sources to the analysis for particular research questions. Primary sources provided data most directly associated with the question (e.g., classroom observation of progress-monitoring occurrences as evidence of current practices). Secondary sources allowed for triangulation of data from the primary sources (e.g., follow-up discussion of progress-monitoring occurrences in post-interviews). Table 3 indicates which data sources were primary and secondary for each research question.

Table 3

The Data Collection Methods as They Inform the Research Questions

Research Questions		PALS Progress Monitoring Instructional Checklists	ALI	Semi-Structured Interviews	Classroom Observations	Artifacts
1. What progress-monitoring practices, if any, do kindergarten and first-grade teachers at Snowy Pond Elementary use for their struggling students in their RtI context?		Secondary		Secondary	Primary	Primary
2. In what ways, if any, do the kindergarten and first-grade teachers at Snowy Pond Elementary make use of progress-monitoring data for struggling students?		Secondary		Post-Primary Pre-Secondary		
3. To what extent do occurrences, if found, of the Snowy Pond kindergarten and first-grade teachers' use of progress monitoring with struggling students in their RtI context relate to what we know about effective progress monitoring?		Secondary		Secondary	Primary	
4. What role, if any, does knowledge of… play in the use of teachers' progress-monitoring practices with struggling kindergarten and first-grade students in the RtI context at Snowy Pond?	…early reading development…	Secondary		Primary	Primary	Secondary
	…assessment literacy…		Primary	Primary		
	…pedagogical knowledge of struggling students…	Secondary		Pre-Secondary	Primary	
5. What role, if any, do contextual factors (e.g., school-system expectations, accountability to other professionals, classroom schedules, etc.) play in the teachers' use of progress monitoring for struggling kindergarten and first-grade students in the RtI context at Snowy Pond?		Secondary		Primary	Secondary	Secondary

The position paper that follows describes teachers' progress-monitoring practices that were in place at Snowy Pond at the time of this study for their early struggling readers in the RtI process. The practices were evaluated for how they related to what we

know about effective progress monitoring and for how domains of teacher knowledge and school contextual aspects supported or hindered the effective use of progress-monitoring practices.

Section III: Position Paper

In section III, the position paper, I detail the findings of the study, implications, and recommendations. The codes from the Log of Data Collection Activities (see Appendix F) for specific data sources (e.g., TchrAO2) are provided in parenthesis following data presented as evidence supporting the findings reported throughout the position paper.

Results

The teacher participants from Snowy Pond Elementary School provided three unique case studies for the qualitative examination of teachers' progress-monitoring practices. The teachers were from two kindergarten classrooms and one first-grade classroom. Inquiry was focused on teachers' progress-monitoring practices within Tier 1 of the Response to Intervention (RtI) context (i.e., the regular classroom provision of differentiated instruction) for struggling readers. Four themes emerged and are presented within the results of the research questions. The themes uncovered include these:

1. Progress-monitoring practices can be identified by record keeping and instructional integration.
2. *Teacher-selected* progress-monitoring practices tend to rank highly on effectiveness ratings.
3. Strong knowledge of early reading development may support the integration of progress monitoring into instruction.

4. Integration of differentiation at the individual student level may support effective progress-monitoring practices.

Case Studies

Each of the following cases was generated from data collected at Snowy Pond Elementary School.

Case 1: Constant concern. Teacher A taught for 25 years (TchrAI1) and was in a kindergarten classroom at the time of this study. Lamp lighting and floor pillows welcomed you into her classroom. A huge, colorful, class rug anchored a central instructional space and learning stations (e.g., tables, rug areas, library corner, etc.) radiated around the rest of the room. The materials available evidenced the purpose of each space; the basket of writing journals and bin of supplies on a table indicated a learning station for writing (TchrAO1).

Teacher A made use of her classroom spaces with precision as a projected PowerPoint directed her 24 five- and six-year-olds through literacy rotations (TchrAO1). Seven of Teacher A's students were considered at-risk for difficulties with reading and were monitored within the RtI process (TchrAI1). These seven students made up two of the five leveled literacy groups in her class (TchrAO1). Nearly one-third of Teacher A's class was under her close watch. She was constantly concerned about their progress. Even when other groups were with Teacher A at the reading table, she was aware and often pulled away to intervene (e.g., TchrAO2) with the at-risk students as they rotated through opportunities to work independently (e.g., listen to books from RazKids on the

computer), work collaboratively (e.g., talk and work on writing at the writing table), and receive explicit handwriting instruction from the teaching assistant (TchrAO1).

All of her students benefited from balanced and developmentally appropriate literacy instruction. For example, one day, Teacher A reviewed a phonological awareness target: syllables. Her discussion of syllables from whole-group instruction was revisited and reinforced in differentiated ways with each of her reading groups (TchrAO1). Teacher A employed a consistent routine of whole-group instruction at the beginning of the literacy block. She always concluded the whole-group time with an introduction to the activity and expectations for working independently at the writing table during literacy rotations for the day. Then, literacy rotations would begin. Teacher A had five rotations that ran on 15-minute centers, with approximately 13 minutes for instruction and 2 minutes for transition. Teacher A broke up her rotations with a break for recess between the third and fourth rotations. Teacher A had one group composed of her three weakest students, one group of her four next weakest students, and one group of six students who were close but not yet meeting grade-level expectations.

In addition to offering classroom space, management routines, and instructional delivery conducive to early literacy learning, Teacher A embraced the opportunity to collaborate with colleagues. Every day, Teacher A and I found ourselves in reflective conversation about her instruction, especially for her struggling students. For example, she asked if I would pay specific attention to a particular struggling student one day and let her know if I had some of the same concerns she did (TchrAO6). When asked about professional collaboration in her post-interview (TchrAI2), Teacher A replied, “I learn

best when I have conversations with team members." This desire for collaboration is representative of Teacher A's open-mindedness and continuous reflection on her own practice.

Case 2: Once upon a time. Teacher B has taught for 32 years (TchrBI1) and was in a kindergarten classroom at the time of this study. Her classroom environment was similar to that of Teacher A's: large rug at the front of the room, several student tables in the center of the room, and small-group spaces off to both sides. The tables were in a signature diagonal configuration to facilitate student movement in a room with a lot of furniture. Though the room had a full feeling, an entire wall of low shelves full of student books was welcoming and the flip charts with pointers and funny glasses nearby for "read around the room" time exemplified the organization of the room (TchrBO1).

Every corner of the room was buzzing during literacy rotations as her 23 students made use of every table and small-group space (e.g., TchrBO1). Only two of Teacher B's students were considered at-risk for reading difficulties and were monitored for the RtI process (TchrBI1). Teacher B shared that she had also had few students she would consider above grade level (TchrBI1). The low percentage of students performing either above or below grade level may contribute to why she believed that the "most meaningful learning is when I have them together as a group" (TchrBI1). Several times she defended her preference for instructing language arts to her class as a whole group in contrast to conducting small-group literacy rotations. She remarked, "Is it really developmentally appropriate to do this small-group learning? It's hard for them to stay engaged" (TchrBI1).

When the nature of Teacher B's small-group instruction was discussed, she made comments such as "I'm still figuring out what to do with them," and "We haven't really done much of that this year yet" in regard to skill and strategy instruction (TchrBI1). Such comments reflected Teacher B's uncertainty about targeted early reading instruction. Her self-awareness of this was evident in her comment that she was "wanting to do different things with the low group, like phonemic awareness, and wants more training" (TchrBI1). In contrast to her uncertainty about instructional targets for small-group instruction, Teacher B was very confident in her instruction around themes and genres for the class as a whole. Over the two-week observation period, her students were engaged with *The Gingerbread Man* across the curriculum: students would read and listen to different versions from different authors, write about it in their journals, cook their own gingerbread man, perform the story with puppets, etc. Teacher B shared a specific passion for fairy tales and described her Fairy Tale Fridays, where she read a different fairy tale after lunch each Friday, which allows her to "go deeper" (TchrBI1).

Unlike Teacher A, Teacher B did not use small-group rotations consistently for daily literacy instruction. Teacher B let me know in advance when she was not going to do small-group reading instruction so that I could plan to not observe in her room that day. When small-group rotations were observed, they did follow a routine (TchrBO1-3). Teacher B would call her whole class over to a rug in the classroom library corner of the room. She would prepare them with information and instructions for what they would find at the various literacy centers that day (e.g., a new book on tape at the listening center or what to work on at the writing center). Teacher B had five literacy groups,

which rotated on her cue with a chime approximately every 15 minutes. Teacher B had one group of three, composed of her two students who were considered at-risk for reading difficulties, as well as a third student who she was watching closely.

Teacher B was always quick to respond to correspondence with me. She also completed items such as the PALS Progress Monitoring Instructional Checklist (PALS, 2009) in a timely fashion and welcomed me into her classroom with cheerful greetings; however, other behaviors often left me wondering about the degree of comfort she had participating in the study. Several times, Teacher B expressed concern about my seeing quality instruction, such as one day when she had repeatedly dealt with student interruptions during small-group reading instruction and she remarked to me, "Are you seeing enough good literacy instruction here today" (TchrBO3)? Social acceptability considerations were part of my reflections with data from Teacher B, which prompted me to inquire in our post-interview about the tension she seemed to feel between external (e.g., school system) expectations to conduct small-group instruction and her own preference for whole-group instruction. She felt small-group instruction was an expectation, but that it created "snippets instead of sustained attention on something more cohesive" (TchrBI2). At the same time, she expressed that she did not want to be locked into what was best once upon a time or "hold onto things just because they are in [her] comfort zone" (TchrBI2).

Case 3: No fuss, no muss. Teacher C was in her second year of teaching in a first-grade classroom at the time of this study (TchrCI1). My observations in Teacher C's room immediately followed observations in the two kindergarten rooms, and the space in

Teacher C's room felt excessive by comparison. Primary areas of the room included a large whole-group meeting rug, a small-group reading table, three student tables, two library corners with a bookshelf and comfortable seating, and a few other work stations such as a back table where the teaching assistant worked with groups and a table with a listening center (TchrCO1).

The ample space in Teacher C's classroom was accentuated by a total class size of 14 students (TchrCO1). Teacher C used the same projected PowerPoint as Teacher A to direct her students through literacy rotations. All of Teacher C's students met minimum expectations with the PALS screening assessment in the fall, but she closely monitored five of her students and considered them "on watch" for the RtI process (TchrCI1). These five students made up two of the five leveled literacy groups in her class (TchrCO1).

Teacher C employed the same consistent routine for literacy rotations as that of Teacher A (e.g., TchrCO1). Teacher C used the same timed and projected PowerPoint that directed students through their rotations each day. The literacy block began with whole-group instruction devoted to modeling the activity and expectations for working independently at the writing table for the day. Then, the literacy rotations around 15-minute centers would begin. One of the literacy groups was composed of two of the "on watch" students and another group was composed of the other three "on watch" students.

Teacher C used lesson templates to plan and track the targeted instruction she provided each of her literacy groups (TchrCDOC3). The targets for her instruction reflected a varied and balanced approach: comprehension targets based on the text structure (TchrCO1), fluency practice with song lyrics (TchrCO5), word attack strategies

in phonics readers (TchrCO2), high-frequency word recognition with word rings (TchrCO1), etc.

Teacher C created a synergy in her classroom. Her students came to the rug one day and she simply looked out at the room and said, "I see chairs left out, and that means our classroom is not safe. And I see papers left out on tables, and that means we're not done with clean up." A few students promptly scrambled to take care of the things she pointed out (TchrCO2). Interactions and expectations consistently had this no fuss, no muss feel. Teacher C and her students appeared to have an agreement that when they were ready for learning (e.g., had a prepared learning space) then they were ready to enjoy learning. Teacher C inspired this joy with interactions such as the following (TchrCO1):

> *Teacher C completed a quick introduction to the writing task for the day with the whole class. Looking at her group on the rug she asked, "Who knows who you're going to write about?"*
>
> *Several students responded, "Someone in our family."*
>
> *Teacher C, with a sly smile, said, "That doesn't sound very convincing." In a louder voice, she asked again, "Do you know who you're going to write about?"*
>
> *The whole group enthusiastically replied, "Someone in our family!"*
>
> *Teacher C, with the same sly smile, said, "I'm still not sure!"*
>
> *The whole group replied again, this time boisterously, "Someone in our family!" And everyone started literacy rotations with huge smiles.*

Research Question 1: What progress-monitoring practices, if any, do kindergarten and first-grade teachers at Snowy Pond Elementary use for their struggling students in their RtI context?

Classroom observations and documents collected for analysis were the data sources used to tabulate occurrences of progress-monitoring practices (Table 4). The total occurrences of progress monitoring for each teacher was used to rank each case study as a high, moderate, or low degree of implementation of progress-monitoring practices. Teacher C was ranked as implementing a high degree of progress-monitoring practices, Teacher A was ranked as moderate, and Teacher C was ranked as low. The progress-monitoring practice degree was not based on predetermined criteria, but rather was based a comparison of the three case studies relative to each other. Each progress-monitoring occurrence for the three case studies was then coded according to (a) its associated early reading development components; (b) whether documentation was used; (c) whether student feedback was provided; and (d) which rank (high, moderate, low) from McMillan's scale of formative characteristics (2010) best described implementation. An outside peer debriefer corroborated the coding.

The McMillan rank of high, moderate, or low was determined by evaluating each progress-monitoring occurrence as high, moderate, or low for nine of the eleven characteristics identified by McMillan. The characteristics of *motivation* and *attributions for success* were excluded, because the data sources did not adequately inform evaluation for these two characteristics. *Choice of task* was the characteristic consistently ranked as low (i.e., "mostly teacher-determined") across the progress-monitoring occurrences,

which is not unexpected with such young students who have not yet developed the higher levels of agency you may find in upper grades. *When done* was the characteristic consistently ranked as high (i.e., "mostly during instruction"). The rankings on the remaining characteristics largely aligned with the descriptors at the moderate level, such as "some delayed and some immediate and specific" for *feedback*, and "some interactions based on formal roles" for *teacher-student interaction*. The collection of rankings across the characteristics was then considered to arrive at an overall ranking of high, moderate, or low for each progress-monitoring occurrence.

Table 4

Progress-Monitoring Practices Observed at Snowy Pond Elementary

Occurrence Code	ERD	DOC	FEED[a]	McMillan Ranking[a]
	Teacher A			
DOC1	LN	Yes	-	-
DOC2	LN	Yes	-	-
DOC3	LN	Yes	-	-
	Teacher B			
O2	Running Record	Yes	Yes	Moderate
	Teacher C			
O1	HFW/S	Yes	Yes	Moderate
O2	HFW/S	Yes	Yes	Moderate
O2	Running Record	Yes	No	Moderate
O2	HFW/S	Yes	No	Moderate
O2	HFW/S	Yes	Yes	Moderate
O2	Running Record	Yes	Yes	Moderate
O3	HFW/S	Yes	Yes	Moderate
O3	Running Record	Yes	Yes	Moderate
O3	SW	Yes	No	Moderate
O4	S	Yes	-	-
O4	S	Yes	-	-
O4	S	Yes	-	-
O4	S	Yes	-	-

Note. DOC = document artifact provided by the teacher; FEED = feedback provided during progress monitoring; PMP = progress-monitoring practice; O# = classroom observation and number; LN = letter names; HFW = high-frequency words; S = spelling; SW = sentence writing.

[a] Document evidence from Teacher A as well as spelling (S) progress monitoring from Teacher C were not directly observed, which precludes recording whether feedback was provided and also precludes ranking for the degree of formative characteristics (McMillan, 2010).

In response to the first research question, Table 4 summarizes a variety of progress-monitoring practices utilized among the three cases. The progress-monitoring measures used with struggling kindergarten and first-grade students included evaluation of:

- Letter name recognition
- Spelling high-frequency words
- Spelling words by developmental spelling categories (Bear, Invernizzi, Templeton, & Johnston, 2012)
- Sentence writing
- Running records (a comprehensive measure of multiple reading skills)

Theme 1: Progress-monitoring practices can be identified by record keeping and instructional integration.

Early on in the classroom observations and data collection, it became clear that criteria for determining what counted as an occurrence of progress monitoring were needed. Two criteria emerged as I reflected on consistent characteristics across all occurrences of progress monitoring: (a) evidence that student performance was recorded, and (b) evidence that assessment was integrated into instruction.

Documentation, or records of student performance, was characteristic of all occurrences as seen in Table 4. The documentation characteristic was supported by evidence from the collection of relevant documents (see samples in Appendix G). Use of documentation was seen in the classroom observations, such as Teacher C's use of the high-frequency word checklists to record student performance (TchrCO2). The

documentation characteristic was further supported by responses to relevant interview questions, such as when Teacher C pointed out that she immediately transfers information from progress-monitoring documentation into her plan book, because if she doesn't "process it as it's happening" there is a better chance she will forget to use the information (TchrCI2).

Instructional integration was evidenced within data from the collection of relevant documents, observations of classroom literacy instruction, and responses to relevant interview questions and prompts from the PALS Progress Monitoring Instructional Checklist. Consistent characteristics of instructional integration included the following:

- The progress-monitoring practice occurred during small-group literacy instruction (100% of observable progress-monitoring occurrences). Sample classroom observation records are provided in Appendix H. One sample is the second observation with Teacher C (TchrCO2). On this day, Teacher C used progress-monitoring practices to assess spelling of high-frequency words with both small groups and an individual student. Teacher C also assessed comprehensive reading skills using a running record with two individual students. All of these progress-monitoring practices occurred across the small-group literacy rotations that day.
- Student feedback was provided (70% of observable progress-monitoring occurrences). Appendix H also includes the second classroom observation record for Teacher B (TchrBO2), which contains an example of the type of feedback provided with progress-monitoring practices. Teacher B followed up the running

record administered to an individual student with some decoding and comprehension coaching within the text the child read for the assessment.

- The progress-monitoring practice received a ranking of "moderate" in accord with McMillan's scale of formative characteristics. Progress-monitoring occurrences received the low-, moderate-, or high-level ranking based on which category offered the best fit throughout the descriptors for each formative assessment characteristic. For example, Teacher C completed a running record progress-monitoring assessment during her third classroom observation (TchrCO3). The record-keeping document (see Appendix G) offered opportunity for recording "some standardized and some anecdotal" *evidence of student learning*. The *structure* of the assessment was "informal." The running record was also somewhat "spontaneous" in that Teacher C explained that she prepared her progress-monitoring assessments as part of her routines; however she had to take advantage of unplanned opportunities to work with students one-on-one to complete some assessment such as running records (TchrCI2). Moderate-level *feedback* was demonstrated when Teacher C had "some delayed" feedback until her recording of reading errors and behaviors for the running record was complete and "some immediate and specific" feedback as the student continued to read. Feedback provided included pointing to the text to prompt the student to reread "Hip, hop, hip, hop," when the student misread it as "Hip, hip, hip, hip" (TchrCO3). Some descriptors were a better fit in the low- or high-level categories, such as the *choice of task* for the running record was "mostly teacher-determined"

(low-level formative), and some of the non-observable characteristics could not be ranked, such as *motivation* and *attributions for success*. Despite the lack of a perfect fit in any one category, the majority of formative assessment characteristic descriptors for the moderate level were aligned with the observed occurrences of progress monitoring in this study.

It is worth noting that when asked in the pre-interview about expectations for progress monitoring, all three teachers offered very different responses. Teacher C referred to a range of formative (e.g., "sight word testing") and summative (e.g., "PALS [benchmark testing] three times a year") assessment practices (TchrCI1). Teacher A referred to highly formative assessments, such as "journals" and "PALS Quick Checks" (TchrAI1). Teacher B's response may shed light on the differences between Teacher A's and Teacher C's responses. Teacher B said, "I think there is a lot of assessment we have to do, but I don't see what's required as 'progress monitoring'" (TchrBI1). Teacher C may have focused on the word *expectations* in the interview question and as a result listed assessments to include benchmark testing required by the school system. Teacher A may have focused on the term *progress monitoring*, therefore restricting her response to highly formative assessment measures. The discrepant responses across the case studies highlights the need for common criteria for identifying what constitutes progress-monitoring practices.

Research Question 2: In what ways, if any, do the kindergarten and first-grade teachers at Snowy Pond Elementary make use of progress-monitoring data for struggling students?

The post-interview data were the primary source of data for the second research question. The classroom observations did not extend for a period of time that allowed for observer interpretation of how progress-monitoring data were utilized. Teacher participants responded to questions about their own occurrences of observed progress-monitoring practices in the post-interview. Responses from the post-interviews across the three case studies revealed common characteristics of the use of progress-monitoring data with struggling students. Data were not strong enough to support the emergence of related themes.

Frequency. One commonality addressed by all three teachers pertained to the frequency of their use of progress-monitoring practices. Their comments about perceived expectations about how frequently they should engage in progress monitoring reflect their varied degrees of observed implementation noted in Table 4. Teacher B, the teacher with a low degree of observed progress-monitoring implementation, expressed no specific criterion for frequency when she stated that she used progress monitoring when she was "sensing growth or a plateau" and "to confirm [her] gut feeling based on informal observations" (TchrBI2). In contrast, Teacher A, the teacher with a moderate degree of observed implementation, expressed inconsistency with her criterion for frequency when she said that her "goal is every two weeks, but things come up" (TchrAI2). Teacher C's comments, the teacher with a high degree of implementation,

coincided with her demonstrated commitment to frequent progress monitoring. Teacher C described her progress monitoring as "continuous" and "built into the routines at least once a week, sometimes two to three times per week" (TchrCI2).

Immediacy. The term "immediate" was used across the cases when the teachers were asked how quickly progress-monitoring data inform instruction. Immediacy represents a second commonality among the cases regarding the use of progress-monitoring data. However, two caveats were shared: (a) "sometimes it can take a while to score them" (TchrAI2), and (b) there may be a delay in instructional modifications "when it translates to a whole group" (TchrAI2). An example of the latter was seen in the letter-name recognition progress-monitoring artifacts provided by Teacher A (TchrADOC1-3). She had two individual students who demonstrated mastery of the letter name for "q," but until the other four students in the group also demonstrate master of the letter name for "q" she planned to continue to include it in the letter-name instruction for the group.

Research Question 3: To what extent do occurrences, if found, of the Snowy Pond kindergarten and first-grade teachers' use of progress monitoring with struggling students in their RtI context relate to what we know about effective progress monitoring?

Each observed occurrence of progress monitoring across the case studies was evaluated for whether or not it met specific efficacy criteria. The efficacy criteria that follow were complied from Cooper's (1997) principles of effective literacy assessment and McLaughlin and Overturf's (2013a, 2013b) principles for the effective use of

formative assessment. Occurrences of progress monitoring were determined to be effective if they met at least four of the seven following criteria:

1. Purposeful in evaluating instruction and student progress by being grounded in how students learn to read and write
2. Collaborative between teachers and students (Reflective)
3. Dynamic in how it is incorporated into instruction and in how it indicates learning (Multidimensional)
4. Informative, providing descriptive feedback for instructional planning (Identifies strengths and Zone of Proximal Development)
5. Ongoing, supporting continuous improvement
6. Authentic
7. Developmentally and culturally appropriate

Determination of whether or not each occurrence of progress monitoring met each of the seven efficacy criteria were collectively informed by classroom observation records, relevant documents, and interview responses. However, all three data sources did not inform every single criterion. For example, the criterion of *ongoing* was informed by relevant documents and interview responses; ongoing use of progress-monitoring practices was not observed. It was the collective use of data from all three sources that allowed for evaluation of each occurrence of progress monitoring across all seven of the criteria for effective use.

Alignment to early reading development components was the primary factor contributing to all occurrences meeting the first criterion (purposeful), the fourth criterion

(informative), and the seventh criterion (appropriate). All occurrences of progress monitoring were aligned with one or more early reading development components (see Table 4). The documentation provided by Teacher A evidenced progress monitoring for letter name (LN) knowledge (TchrADOC1-3). Teacher B and Teacher C administered running-record assessments (TchrBDOC1 & TchrCDOC1) to progress monitor student's comprehensive use of early reading development skills while reading in context. Teacher C also used progress-monitoring measures to assess sentence writing (TchrCO3) and spelling of both high-frequency words (TchrCO1-3) and developmental spelling categories of words (TchrCO4).

The provision of feedback to the student determined whether the progress-monitoring practice met the second criterion (collaborative). The provision of feedback from Teacher C was not observed during or after the sentence writing progress-monitoring assessment during the third classroom observation (TchrCO3); therefore it did not meet the criterion as being collaborative. The collaborative criterion was not evaluated for progress-monitoring assessments that were not observed, such as the letter-naming assessments evidenced in documentation from Teacher A (TchrADOC1-3). Observed progress-monitoring occurrences wherein feedback was provided during or immediately after the assessment, such as Teacher B's coaching with decoding and comprehension as a student continued reading after a running record (TchrBO2), met the criterion as being collaborative.

Running records and sentence writing were the only progress-monitoring practices that met the third criterion (dynamic) and the sixth criterion (authentic). The

more complex nature of reading and writing in context requires the application of collective as opposed to singular literacy skills, thus qualifying assessment of reading and writing in context as dynamic and authentic.

The only indication for the fifth criterion (ongoing) was if the teacher provided documentation of an ongoing record for student performance for a particular progress-monitoring assessment. Most of the progress-monitoring occurrences did have associated record-keeping documentation and therefore were considered ongoing (see samples in Appendix G).

An outside peer debriefer corroborated the determinations of whether or not the observed progress-monitoring occurrences met each of the criteria for effective progress-monitoring practices through collaborative discussion of each type of progress-monitoring occurrence. The discussion refined the yes/no evaluations for each of the seven efficacy criteria reflected in Table 5.

Table 5

Efficacy Criteria for Observed Progress-Monitoring Practices

Occurrence	ERD	1	2[a]	3[a]	4	5	6	7
			Teacher A					
DOC1	LN	Yes	-	-	Yes	Yes	No	Yes
DOC2	LN	Yes	-	-	Yes	Yes	No	Yes
DOC3	LN	Yes	-	-	Yes	Yes	No	Yes
			Teacher B					
O2	Running Record	Yes	Yes	Yes	Yes	-	Yes	Yes
			Teacher C					
O1	HFW/S	Yes	Yes	No	Yes	Yes	No	Yes
O2	HFW/S	Yes	Yes	No	Yes	Yes	No	Yes
O2	Running Record	Yes	No	Yes	Yes	-	Yes	Yes
O2	HFW/S	Yes	No	No	Yes	Yes	No	Yes
O2	HFW/S	Yes	Yes	No	Yes	Yes	No	Yes
O2	Running Record	Yes	Yes	Yes	Yes	-	Yes	Yes
O3	HFW/S	Yes	Yes	No	Yes	Yes	No	Yes
O3	Running Record	Yes	Yes	Yes	Yes	-	Yes	Yes
O3	SW	Yes	No	Yes	Yes	Yes	Yes	Yes
O4	S	Yes	-	-	Yes	Yes	No	Yes
O4	S	Yes	-	-	Yes	Yes	No	Yes
O4	S	Yes	-	-	Yes	Yes	No	Yes
O4	S	Yes	-	-	Yes	Yes	No	Yes

Note. DOC = document artifact provided by the teacher; FEED = feedback provided during progress monitoring; PMP = progress-monitoring practice; O# = classroom observation and number; LN = letter names; HFW = high-frequency words; S = spelling; SW = sentence writing.

[a] Document evidence from Teacher A as well as spelling (S) progress monitoring from Teacher C were not directly observed, which precludes evaluation for collaboration between teacher and student (second criteria) and for dynamic incorporation into instruction (third criteria).

Across all three case studies, the vast majority of progress-monitoring practices met four or more of the seven criteria for effectiveness. The use of the progress-monitoring practices across the case studies was, therefore, generally determined to be effective. This finding is encapsulated in the second theme.

Theme 2: *Teacher-selected* progress-monitoring practices tend to meet the majority of efficacy criteria for literacy progress monitoring.

This theme is specific to teacher-selected progress-monitoring practices, because the study did not extend to observations or document progress-monitoring data collection beyond Tier 1. However, in the post-interviews, Teacher A and Teacher B mentioned

progress monitoring related to Tier 2 (i.e., supplemental intervention provided above and beyond the classroom literacy instruction). Both teachers shared that when students received intervention with the intervention specialist, the intervention specialist may ask them to do particular progress-monitoring assessments. The teachers expressed that when they are asked to administer progress-monitoring measures selected by someone else, it often feels "disconnected" and frustrating when it causes a "loss of instructional time" for the struggling student (TchrBI2). The disconnect teachers feel when progress monitoring is selected for their students by someone other than themselves suggests that non-teacher-selected progress-monitoring measures may not be found to meet the high degree of effectiveness criteria that teacher-selected progress-monitoring practices do. Therefore, Theme 2 is written specific to *teacher-selected* progress-monitoring practices. There is a need for further inquiry into the effectiveness of progress-monitoring practices beyond Tier 1.

Research Question 4: What role, if any, does knowledge of early reading development, assessment literacy, and pedagogical knowledge of struggling students play in the use of teachers' progress-monitoring practices with struggling kindergarten and first-grade students in the RtI context at Snowy Pond?

The complexity of the fourth research question is broken down into three categories: early reading development, assessment literacy, and pedagogical knowledge. Multiple data sources informed and triangulated themes that emerged in response to this question.

Early reading development. Evidence of early reading development knowledge came from three sources: (a) the Instruction section of the PALS Progress Monitoring Instructional Checklist (PALS, 2009); (b) related questions from the pre-interview, which were developed based on Henk, Moore, Marinak, and Tomasetti's (2000) Reading Lesson Observation Framework; and (c) the coding and ranking of early literacy instructional components from the classroom observations.

An outside peer debriefer corroborated the results by independently coding and ranking progress-monitoring occurrences for one classroom observation protocol for each of the three case studies. The early reading development components in the list of a priori codes was used and each occurrence was ranked for quality (3 – high quality, 2 – satisfactory, 1 – missing or unsatisfactory). Agreement of 90% or better was found for the early reading development component codes. Strong agreement was not found within the quality rankings. Through follow-up discussion, the peer debriefer and I determined that there was not sufficient information in the written record of the classroom observations to facilitate an evaluation for quality. However, a general difference in overall quality among the teachers was agreed upon. The classroom observation records for Teacher A and Teacher C provided more evidence of higher-quality early reading development instruction than the records for Teacher B. For example, we agreed that Teacher A's practice of having her students complete their beginning sound sort for /r/ and /m/ both independently and collaboratively was a high-quality practice (TchrAO2). On the other hand, we deemed that Teacher B's practice was weak when she wanted students to accurately track memorized text and had them count the words in each line instead of

providing prompts to use the beginning letter-name and/or sound to help accurately track the text (TchrBO1). The difference in apparent knowledge of early reading development between the case studies informed another theme that emerged from the findings.

Theme 3: Strong knowledge of early reading development may support the integration of progress monitoring into instruction.

The influence of early reading development knowledge was analyzed relative to the degree (high, moderate, or low) of observed occurrences of progress monitoring. All three participants ranked themselves relatively similarly on items related to early reading development knowledge on the PALS Progress Monitoring Instructional Checklist (TchrACh, TchrBCh, TchrCCh). Similarly, in the pre-interview, all three participants mentioned a wide variety of early reading development components integrated in their literacy instruction and spoke to those components with competency. Teacher A promoted Concept of Word by "posting poems and other things we've reviewed in the classroom so [students] can go back to them for practice," and prepared students for reading by "introducing words [before reading] that might give some [students] trouble" once they get into the text (TchrAI1). Teacher B promoted Concepts about Print when she had students spend time with the cover of a little book before reading to talk about literacy terms (e.g., title, author, illustrator) and "what those words mean" (TchrBI1). She also supported the complex task of writing when she provided appropriate models, regular writing opportunities, helpful resources such as posting high-frequency words, and time to share writing (TchrBI1). Teacher C reached her students by providing a classroom library that was both "leveled and interest-based" for independent reading, and

she fostered metacognition by "encouraging students to read actively: check for their own understanding" during reading (TchrCI1).

Meaningful differences emerged between the cases when the general difference in overall early reading development instructional quality among the teachers was considered. Table 6 shows the general evaluation of strong or weak early reading development practices for each case study alongside the degree of progress-monitoring occurrences.

Table 6 does not reflect a linear correspondence of early reading development practice average rankings with degrees of progress-monitoring occurrences. However, the case with the lowest average early reading development ranking is also the case with the lowest degree of progress-monitoring occurrences. Thus, a minimum level of early reading development knowledge may support the integration of progress-monitoring practices into instruction.

Table 6

Early Reading Development Knowledge Relative to the Degree of Progress-Monitoring Practices by Case Study

Case Study	PMP Degree	Average Rank of ERD Practices
Teacher A	Moderate	Strong
Teacher B	Low	Weak
Teacher C	High	Strong

Note. PMP = Progress-monitoring practice; ERD = Early Reading Development.

Assessment literacy. Evidence of *general* assessment literacy was found in relevant questions from the pre-interview and in participant scores on the Assessment Literacy Inventory (ALI; Campbell & Mertler, 2005). Data were not strong enough to support the emergence of related themes.

The influence of assessment knowledge is analyzed relative to the degree (high, moderate, or low) of observed occurrences of progress monitoring. Across the case studies, the three teacher participants scored near or above the typical average score of classroom teachers: 63% (Perry, 2013). ALI scores are summarized in Table 7, and they do not reflect particular correspondence to degrees of progress-monitoring occurrences.

Table 7

Assessment Knowledge Relative to the Degree of Progress-Monitoring Practices by Case Study

Case Study	PMP Degree	ALI Score (%)
Teacher A	Moderate	60
Teacher B	Low	77
Teacher C	High	63

Note. PMP = Progress-monitoring practice; ALI = Assessment Literacy Inventory.

Pedagogical knowledge. Evidence of pedagogical knowledge was based on the coding and ranking of three target pedagogies: differentiate for individual needs, believe all students can learn, and build self-efficacy. The pedagogical targets were coded and ranked across the PALS Progress Monitoring Instructional Checklist (PALS, 2009), related pre-interview questions, and the classroom observations. An outside peer debriefer corroborated the findings by independently coding and ranking the three target pedagogies for one teacher's PALS Progress Monitoring Instructional Checklist, for one classroom observation protocol for each of the three teachers, as well as the pre-interview protocol for each of the three teachers.

Theme 4: Integration of differentiation at the individual level may support effective progress-monitoring practices.

The influence of target pedagogical knowledge was analyzed relative to the degree (high, moderate, or low) of observed occurrences of progress monitoring. All three participants ranked themselves relatively similarly on items related to pedagogical knowledge on the PALS Progress Monitoring Instructional Checklist (TchrACh, TchrBCh, TchrCCh). Meaningful differences emerged between the cases when responses from related items on the pre-interview and occurrences of target pedagogies from classroom observation field notes were analyzed.

When targeted pedagogies were coded and ranked for quality (3 – high quality, 2 – satisfactory, 1 – missing or unsatisfactory) within the classroom observation field notes, the results lacked objectivity and there was a weak agreement rate with the outside peer debriefer. For example, there were very few instances of the code for *believe all students can learn* throughout the interview and classroom observations, and the code tended to apply to researcher reflections more so than to raw data. Therefore, quantitative data related to pedagogical knowledge were not included in the analysis. However, qualitative data from the pre-interview and field notes did reveal a potential relationship between implementation of progress-monitoring practices and the integration of differentiation.

Teacher A's case study provided rich evidence of the integration of differentiation. Students had individual book boxes for daily independent reading in text matched to their reading level (TchrAO1). Teacher A shared that her reading "groups are based on PALS [data] and class observations" (TchrAI1). Classroom observations

provided evidence of skillful planning with her reading group rotations. For example, a stronger reading group was scheduled at the reading table with her when several of her at-risk students were at the "Work on Writing" station because it was easier to have her stronger reading group read independently for a few minutes if she needed to step over to the writing station to support her at-risk students (TchrAO2). Skillful integration of differentiated instruction was also observed on an individual level, such as when I observed one of Teacher A's reading groups matching word cards back to sentence strips of the Gingerbread Man poem they had been working with:

> Teacher A is sorting through the cards of words in isolation to purposefully match different words to different students. Some students are given only high-frequency [e.g., *the*] and CVC [consonant-vowel-consonant pattern, such as *man*] words, while other students get more of the non-high-frequency [e.g., *Gingerbread*] and non-CVC words [e.g., *fast*] words. (TchrAO2)

Teacher C similarly spoke to and demonstrated rich evidence of differentiated instruction. In her pre-interview, Teacher C emphasized the importance of creating opportunities for student choice whenever possible because she believed in allowing students to "follow their interests" (TchrCI1). Her classroom library had a wide variety of interest-based books, which provided daily opportunity for student choice (TchrCI1). She also differentiated instructional materials, which were tailored to individual needs, such as word rings with high-frequency words for students to practice with independently or with a partner. For example, when Teacher A needed a few more minutes to support a student one-on-one as two new students came to her reading table, she was able to simply ask, "Would you get a sight word ring and practice those until I come over?" (TchrCO1). This kept everyone engaged and met individual student needs.

In contrast, Teacher B's case study did not yield examples of instructional differentiation beyond the grouping of students into four reading groups. Her reading groups met inconsistently, which contributed to the reduced number of total observations with Teacher B. She believed I would not "see what I was looking for" (TchrBO3) when she was not meeting with reading groups. Differentiation can be skillfully integrated during whole-group instruction, such as with shared reading instruction (Stahl, 2012). Teacher B may have alluded to instruction such as shared reading when she said, the "most meaningful learning is when I have them together as a group" (TchrBI1). As such, there may have been more differentiation implemented than I had the opportunity to observe. However, the lack of differentiation evidence was supported by statements shared in the pre-interview in which Teacher B conveyed a discomfort with planning and implementing instruction tailored to individual student needs. When asked about small-group instruction, Teacher B responded with, "Is it really developmentally appropriate to do this small-group learning? It's hard for them to stay engaged" (TchrBI1).

These findings were again similar to those related to the influence of early reading development knowledge; the case with the weakest evidence of differentiation was also the case with the lowest degree of progress-monitoring occurrences. Thus, a minimum level of differentiation pedagogy knowledge may support the integration of progress-monitoring practices into instruction.

Research Question 5: What role, if any, do contextual factors (e.g., school-system expectations, accountability to other professionals, classroom schedules, etc.) play in the teachers' use of progress monitoring for struggling kindergarten and first-grade students in the RtI context at Snowy Pond?

Contextual factors with the potential to influence progress-monitoring practices surfaced as data were considered across the three case studies. Contextual factors commonly identified by all three teachers are reported. However, data were not strong enough to support the emergence of related themes.

Access to resources. Across the case studies, the teachers addressed the importance of quick and easy access to progress-monitoring tools as a factor that influences implementation. These data came primarily from the pre- and post-interview responses. When asked in the post-interview to name the greatest supporting factor for implementing progress monitoring, all three teachers identified access to resources (TchrAI2, TchrBI2, TchrCI2).

Across the case studies, the progress-monitoring resources provided on the PALS website, PALS Quick Checks, were mentioned as a support for progress-monitoring practices. Teacher A and Teacher C stated that between the support of knowledgeable colleagues and their own efforts they were adept at accessing and utilizing PALS Quick Checks. Teacher A said she "relies on the PALS website for [progress-monitoring] measures" (TchrAI1) and Teacher C said, "PALS has great resources that fit what I need" (TchrCI1). Teacher B shared that she knew resources were available on the PALS

website, but she had not used PALS in her previous district and had not received training on it (TchrBI1).

Some evidence supports the importance of the link between assessment resources and instruction (Cooper, 1997). Teacher A mentioned that students who received intervention instruction from the school's intervention specialist are often required to complete AimsWEB progress-monitoring assessments, which tend to feel "disconnected" (TchrAI2). Teacher A and Teacher B both mentioned frustration over not having progress-monitoring measures for all the skills they want to evaluate and monitor, such as phonological awareness (TchrBI2). This study did not specifically investigate the assessment-instruction link but acknowledges this as a probable influence on the access-to-resources factor.

Clarity of expectations. Across the case studies, the three teachers referred to a literacy assessment binder provided by the school system and district guidelines for quarterly assessment. These data came primarily from the pre- and post-interview responses. Evidence indicated that assessment practices were grounded in the expectations set forth by the school system. However, a lack of clarity of expectations specifically related to progress monitoring may be an inhibiting factor. Teacher B expressed uncertainty about *what progress monitoring should be*: "I think there is a lot of assessment we have to do, but I don't see what's required as progress monitoring" (TchrBI1). Teacher A shared uncertainty about *who progress monitoring is for*: "I think it's the case that it's only done on children in SBIT, or if the teacher has a child she's concerned about" (TchrAI1). Teacher C mentioned uncertainty about *how often progress*

monitoring should be done: "It would be helpful to know more about how frequent to do progress monitoring" (TchrCI1).

Instructional schedule consistency. When asked in the post-interview to name the greatest inhibiting factor for implementing progress monitoring, all three teachers identified inconsistencies in instructional schedules. Teacher C said her biggest obstacle to implementing progress monitoring the way she wants to is the "inconsistency of the school schedule; holidays, breaks, assemblies all create interruptions" to routines (TchrCI2). Teacher A mentioned that even when progress-monitoring plans are made and the school schedule is more regular, there always seems to be something "such as the teaching assistant is out or a student is sick" (TchrAI2). She expanded to say that inconsistencies not only make implementing progress-monitoring routines difficult, but also "makes it more confusing" to use data to inform instruction (TchrAI2).

Group size. As I collected field notes, I often reflected on why I was seeing so few occurrences of progress monitoring during the classrooms observations for Teacher A and Teacher B. My conclusions consistently related to group size. Teacher A and Teacher B have 24 and 23 total students, respectively. Even with at-risk students in reading groups of three or four total students, this leaves a large number of students working independently at literacy rotation stations while the teacher works with reading groups. Computers that won't load, chocolate milk that is spilled, glue sticks that are stuck closed, papers that rip, and so on, creates a constant barrage of interruptions for the teachers trying to deliver reading instruction. Interruptions obviously hinder a teacher's ability to effectively implement instruction and assessment practices.

Group size not only influences the degree of instructional interruptions, but also influences the likelihood of being afforded one-on-one opportunities for assessment. The one instance of progress monitoring I observed from Teacher B occurred on a day when the student she assessed was the only student who was not absent from his reading group. Teacher B capitalized on this one-on-one opportunity to administer a running record (TchrBO2). When I asked if the running record she completed with that student was planned she replied, "no." Rather it was "opportune because the rest of the Lion group was out sick" (TchrBI2).

In sum, a number of factors may dynamically interact to either create or interfere with opportunities to conduct progress-monitoring assessments. However, across the case studies, access to resources, clarity of expectations, and instructional schedule consistency were all similar. Class size was the only contextual factor that was markedly distinct, with a smaller class size for Teacher C and larger class sizes for Teacher A and Teacher B.

In the discussion of the results reported here, implications at each contextual level are addressed, future directions are explored, limitations are acknowledged, and recommendations for action intended to support the use of effective progress-monitoring practices are provided.

Discussion

The kindergarten and first-grade teachers of Snowy Pond Elementary sought to examine: "… how to monitor the student progress so growth can be seen and if we need to make changes to the program do so quickly" (name withheld for confidentiality,

personal communication, September 25, 2012). The examination of progress monitoring was specific to practices in place for the students who were in Tier 1 of the RtI process at the school.

Socio-cultural theory (Au, 1997), specifically Bronfenbrenner's ecological model (1979), was used to develop the conceptual framework because the problem of practice was situated in multiple layers of contextual influence. The problem of implementing effective progress monitoring for kindergarten and first-grade students is influenced by the first context, the field of education, because related research (e.g., Vellutino et al., 1996, Scanlon, Vellutino, Small, Fanuele, & Sweeney, 2005) and policy (IDEA, 2004) have identified RtI as the gold standard for reading disability identification and intervention processes; progress monitoring is considered to be a key element (Duran, Hughes, & Bradley, 2011; Margolis, 2012). Implementing effective progress monitoring is also influenced by a second context, the school system, because the classroom teachers have accountability to the SBIT and it is known that decision-making relationships between teachers and school-level factors (i.e., SBIT) have a significant effect on progress-monitoring practices (Stephens et al., 1995). A third context, the classroom, exerts a two-pronged influence on progress monitoring. The teacher is situated as the primary decision maker in the classroom and, therefore, individual teacher knowledge (e.g., knowledge of early reading development) has immediate and direct influence on the decisions made about implementing progress monitoring. Teacher decisions are also influenced by a wide range of classroom contextual factors (e.g., resources, instructional time, etc.). The ecological model was well suited as the conceptual framework for this

study because it allowed for consideration of dynamic interactions within and between the contextual levels of influence.

The concept of progress monitoring was grounded in a statement of purpose that encompassed three aspects: (a) using student performance data to indicate instructional effectiveness; (b) informing ongoing modifications to instruction; and (c) determining student progress. Progress monitoring was identified as assessment practice that is formative in nature (Wiliam, 2006). Therefore, criteria for effective use of formative assessment (Black & Wiliam, 2009; Cooper, 1997; McLaughlin & Overturf, 2013a, 2013b) applied to the evaluation of effective progress monitoring.

Factors with the potential to either support or hinder the implementation of effective progress monitoring were identified as relevant teacher knowledge and contextual factors at the classroom and school-system levels. Three types of knowledge might influence teachers' decision making about progress-monitoring practices: specialized content knowledge about reading development (Moats, 1994; Moats & Foorman, 2003), assessment literacy (Plake & Impara, 1993), and pedagogical content knowledge (Shulman, 1986). Decision making may also be influenced by external factors such as support from the school system. Teacher decisions about progress monitoring can make a difference in student achievement (Foorman, Schatschneider, Eakin, Fletcher, Moats, & Francis, 2006) and contribute to ameliorating difficulties for struggling students receiving intervention in an RtI context. Therefore, the aim of the study was to identify how various factors in this specific context may support or hinder the effective implementation of progress-monitoring practices.

A case analysis of three case studies was used to identify current progress-monitoring practices, to evaluate the efficacy of current practices, and to examine contextual influences that may support or hinder implementation of effective practice. Themes emerged throughout the data collection and analysis, which consisted of classroom observational data collected from six visits over the course of two weeks, pre- and post-interviews, and document/artifact data collected throughout the course of the study.

The themes that emerged from this case study have implications for addressing the implementation of effective progress monitoring. Discussions about the implementation of progress monitoring need to be grounded in common knowledge about what progress monitoring is and what effective practice looks like. Implementation decisions also need to be addressed with an awareness of the contextual factors that hold the potential to either support or impede effective practice. The first theme was related to identifying progress monitoring: Progress-monitoring practices can be identified by record keeping and instructional integration. The second theme was related to recognizing effective progress-monitoring practices: *Teacher-selected* progress-monitoring practices tend to meet the majority of efficacy criteria for literacy progress monitoring. Two additional themes related to an awareness of factors that influence the implementation of effective progress monitoring: Strong knowledge of early reading development may support the integration of progress monitoring into instruction; and Integration of differentiation at the individual student level may support effective progress-monitoring practices.

Implications of the findings from this study are discussed relative to three contextual levels: the classroom level, the school-system level, and the greater field-of-education level. Implications at the classroom level relate to factors that influence progress-monitoring practices that are largely under the control of the teacher as a decision maker (Borko, Roberts, & Shavelson, 2008). Implications at the school-system level relate to factors governed by school or district guidelines and expectations. Implications at the field-of-education level relate to factors informed by literacy research and policy. Following the discussion of implications, related recommendations that may support effective progress-monitoring practices are provided.

Implications

One overarching implication across all contextual levels is the need for common, clear criteria for the identification of progress-monitoring practices. In a review of related literature, progress monitoring was consistently defined by its purpose: to use student performance data to evaluate and inform instruction as well as to inform determinations of student progress. As progress-monitoring practices were observed for this study immediately observable and objective criteria were required for coding progress-monitoring occurrences. Analysis of identified occurrences of progress monitoring for this study suggests that progress monitoring can be identified by record keeping and instructional integration (Theme 1). These criteria were confirmed by the teachers in the post-interview when, across case studies, they all agreed the occurrences identified by these criteria did indeed qualify as progress-monitoring practices.

Common, clear criteria for the identification of progress-monitoring practices will ensure that people who are engaged in conversations about progress monitoring are identifying the relevant assessment practices with a common lens. This did not occur when the teachers in this study were initially asked to identify progress-monitoring practices and they named a range of formative and summative assessment measures. When educators have in mind different assessment practices—which are perhaps even conflicting in nature—within a discussion about a particular form of assessment such as progress monitoring, then undoubtedly misunderstandings and miscommunications will ensue.

Classroom-Level Factors

Early reading development. It is only logical that strong teacher knowledge of early reading development would support all assessment and instruction practices in kindergarten and first-grade classrooms, and this appears to hold true with respect to progress-monitoring practices (Theme 3). Of particular interest is the answer to the question, why. Findings from this study implicate teacher ability to set appropriate instructional goals as a link between early reading development knowledge and effective progress-monitoring practices. The case studies with moderate and high progress-monitoring occurrences involved teachers who repeatedly referred to having a "specific goal in mind" (TchrCI1) and who spoke of assessing "on a regular basis to measure progress toward that goal" (TchrAI1). In contrast, the case study with low progress-monitoring occurrences involved a teacher who expressed uncertainty about specific

early reading development goals with statements such as, “I’m still trying to figure out what to do with them” (TchrBI1).

Assessment literacy. Data did not support an association between general assessment knowledge and progress-monitoring practices. However, data did suggest that specific assessment knowledge might hold potential to influence progress-monitoring practices. Evidence of assessment literacy specific to progress monitoring was found in relevant questions from the pre- and post-interviews. Similar to the influence early reading development knowledge may have on supporting the use progress monitoring, findings related to specific progress-monitoring assessment knowledge may best explicate the case study with a low degree of practice.

When asked what progress monitoring means, Teacher B replied, “I don’t really know what the term means. It’s not a term we used in my previous district” (TchrBI1). In contrast, when Teacher A and Teacher C were asked what progress monitoring means, both confidently responded. Teacher C stated that progress monitoring is “consistent assessment, weekly or bi-weekly. It is done specifically with a goal in mind” (TchrCI1). Teacher A explained, “I make a goal for my students, design lessons to support that goal, I assess them on a regular basis to measure progress toward that goal. We have weekly PLCs [Professional Learning Community meetings] and we put in a goal and that goal is reviewed” (TchrAI1). Additionally, when asked about how progress-monitoring information is used, both Teacher A and Teacher C commented on the data informing instruction and serving as a record of student progress. Teacher A said, “It helps me plan—like with PALS Quick Checks, I take a close look to see if there are certain letters

that need revisiting" (TchrAI1). She also mentioned sharing the data as evidence of student progress at SBIT meetings and "with parents at conferences" (TchrAI1). Teacher C said she used the data "to inform instruction: to check for what's learned and see where I need to go next" (TchrCI1). She similarly mentioned sharing the data at SBIT meetings (TchrCI1). The clear focus on goal setting with progress monitoring and use of the data to inform instruction and build a record of student progress stand out as strengths in the specific progress-monitoring assessment knowledge of Teacher A and Teacher C. The case studies of teachers demonstrating strengths in their knowledge of progress monitoring were found to have moderate and high use of progress-monitoring practices, whereas the case study of the teacher who demonstrated weaknesses in her knowledge of progress monitoring was the case study with a low use of progress-monitoring practices.

What might it mean to have specific knowledge related to progress monitoring? Teacher A and Teacher C, who had moderate and high occurrences of progress-monitoring practices, respectively, demonstrated specific assessment knowledge related to progress monitoring. Teacher A and Teacher C were able to describe the purpose of progress monitoring, identify specific materials used for progress monitoring, relay how progress monitoring was integrated with instruction, and report the ways they used data to inform instruction and evaluate student progress.

Pedagogical knowledge. Differentiation is important pedagogy to employ to meet the needs of struggling students (Hughes, 2010). Out of the relevant pedagogies examined in this study, differentiation appears to support the integration of progress-monitoring practices (Theme 4). The teachers across all three case studies demonstrated

some differentiation by grouping their students for reading instruction based on beginning-of-the-year assessment data. The case studies with moderate and high occurrences of progress-monitoring practices demonstrated a more systemic integration of differentiation with individual student needs driving decisions about management of small-group rotations, scaffolds for instructional tasks, and one-on-one feedback opportunities. Teacher A and Teacher C, who demonstrated moderate and high occurrences of progress-monitoring practices, respectively, stood in contrast to Teacher B, who demonstrated low occurrences of progress monitoring and had little to no evidence of differentiation beyond grouping her students for reading instruction based on beginning-of-the-year assessment data.

Evidence across the case studies suggests that teacher knowledge of early reading development, assessment specific to progress monitoring, and differentiation all appear to influence progress-monitoring practices. The influence of these three types of knowledge consistently appeared to explain differences between the case study with low occurrences of progress-monitoring practices as compared to the case studies with moderate and high occurrences of progress-monitoring practices.

Of the three types of teacher knowledge that appear to influence the integration of progress-monitoring practices, knowledge of early reading development may be a priority. Consider the aspects of assessment knowledge specific to progress monitoring that the teachers from the case studies with moderate and high occurrences of progress monitoring were able to demonstrate: they were able to identify specific materials used for progress monitoring, relay how progress monitoring was integrated with instruction,

and report the ways they used data to inform instruction and evaluate student progress. Each of these aspects of progress-monitoring knowledge was supported by the ability to use early reading development knowledge to set appropriate instructional goals. Similarly, differentiation was supported by the ability to use early reading development knowledge to recognize students' individual developmental needs. Future examination of the interplay between teacher knowledge of early reading development, progress-monitoring assessment, and differentiation may reveal that knowledge of progress monitoring and knowledge of differentiation improve by virtue of increases in knowledge of early reading development.

Data further suggest the value of teacher knowledge as potentially contributing to individual teacher ability to mitigate any negative influence contextual factors may have on the use of progress-monitoring practices. The value of teacher knowledge is suggested by recognition of the differences in use of progress monitoring among the case studies, despite similarities in contextual factors that may influence practice.

Consider the contextual factor of access to resources identified by all three teachers. When asked about resources for progress monitoring, Teacher B, whose case study reflected a low degree of progress-monitoring occurrences said, "I don't feel like we have things that give us that information" (TchrBI1). In contrast, Teacher A expressed that she could "rely on the PALS website for measures" (TchrAI1). Consistent with the highest degree of progress-monitoring occurrences, Teacher C not only made use of PALS resources, but also mentioned various progress-monitoring tools from Jan Richardson's guided reading book (Richardson, 2009), weekly word-study spell checks

guided by developmental spelling assessments (Ganske, 2000), high-frequency word lists provided in a literacy assessment binder by the school system, and running records completed using leveled books from the book room just down the hall (TchrCI1). Teacher C was able to pull out the first three resources as she mentioned them by simply reaching over to a shelf beside her reading table, which highlighted the accessibility of the resources as she spoke. Each teacher's individual pursuit of access to resources is aligned with the degree of occurrences of observed progress-monitoring practices.

A second contextual factor all three teachers identified related to clarity of expectations. When asked about school-system expectations for progress monitoring, Teacher B concluded that there are "no [district] expectations" (TchrBI1). Teacher A concluded that progress monitoring is expected for "children in SBIT" (TchrAI1). Despite similar uncertainties, Teacher C had decided to implement progress monitoring "continuously" by having it "built into the routines" (TchrCI2). Thus, despite the common influence of a lack of clarity of progress-monitoring expectations, each teacher set her own level of expectations, which aligned with the degree of occurrences of observed progress-monitoring practices.

A third contextual factor was group size, which differentially influenced Teacher A and Teacher B who had much larger class sizes than Teacher C. Individual teacher management of the influence of instructional group size may explain some meaningful differences between the case studies. The case with the highest degree of progress-monitoring occurrences, Teacher C, also had the smallest group sizes with a total class size of 14. Teacher C was able to more frequently administer assessments because, with

smaller group sizes, opportunities were created more often for one-on-one and there were very few interruptions from the rest of the class during small-group reading time. In contrast, Teacher A and Teacher B had larger total class sizes of 24 and 23, respectively, which yielded larger instructional group sizes. Teacher A had more progress-monitoring occurrences and fewer average instructional interruptions (1.6) than Teacher B, who had the lowest degree of progress-monitoring occurrences and the highest average instructional interruptions (7). Teacher A's effective management system for her literacy rotations may help explain this difference.

In sum, when there are hindrances to the access of resources for progress monitoring, uncertainties about progress-monitoring expectations, or challenges to implementing progress monitoring created by large class size, each teacher's unique response may enable them to overcome these obstacles to the implementation of progress-monitoring practices.

School System–Level Factors

Teacher knowledge. Teachers with higher levels of early reading development knowledge, assessment knowledge specific to progress monitoring, and pedagogical knowledge related to differentiation may use their knowledge to mitigate any negative influence that contextual factors have on their ability to integrate progress-monitoring practices. For example, when Teacher C realized that interruptions to her instructional routines (e.g., school assemblies) often impeded her ability to complete progress-monitoring assessments, she adjusted to integrate progress monitoring more regularly in her instructional time (TchrCI2). A related implication for the school-system level is that

support for professional development in the areas of early reading development, progress-monitoring practices, and differentiation may promote effective progress-monitoring practices.

Contextual factors. The contextual factors suggested as having potential influence on teachers' use of progress-monitoring practices include access to resources, clarity of expectations, instructional schedule consistency, and group size. The implication for practice is that collective recognition, by educators and administrators, of the factors that have the potential to support or impede effective implementation of progress-monitoring practices should lay a foundation for collaborative discussions. Collaborative discussions should identify factors that support effective practice within specific contexts, as well as factors that impede effective practice, to encourage supports to continue and to work toward eliminating impediments.

Collaboration is considered a school system–level factor, because collaboration among educators within a school tends to be governed by school-system expectations and school-wide scheduling opportunities. At Snowy Pond, Teacher A mentioned the school-system expectation of weekly Professional Learning Community (PLC) meetings (TchrAI1). School-wide scheduling at Snowy Pond provided common planning time at each grade level. Teacher responses to interview questions suggested that progress-monitoring data might be minimally, if at all, used to inform intervention services provided by professionals outside of the grade-level team (i.e., the school intervention specialist).

Further examination may reveal that the *immediacy* that is characteristic of the use of progress-monitoring data by the classroom teachers does not extend beyond the Tier 1 context examined in this study. There was unanimous uncertainty about the use of progress-monitoring data to inform intervention instruction delivered by other professionals in the building (TchrAI2, TchrBI2, TchrCI2). Across the cases, the teachers explained that progress-monitoring data informed Tier 1 instruction, which included primary literacy instruction provided by the classroom teacher and any supplemental instruction provided by teaching assistants, because the classroom teacher created the plans for all Tier 1 instruction. Progress-monitoring data also contributed to the body of student performance information shared at School Based Intervention Team (SBIT) meetings. SBITs may initiate Tier 2 instructional services, intervention provided by the school's intervention specialist, for a struggling student. However, once a struggling student received intervention above and beyond the Tier 1 instruction of the classroom, there was little to no collaboration between the classroom teacher and the intervention specialist.

Infrequent professional collaboration was echoed in teacher comments from the pre-interview and weak ratings under the Collaboration section of the PALS Progress Monitoring Instructional Checklist (PALS, 2009). Teachers believed there were missed opportunities for supporting each other while using progress-monitoring data to inform instruction. Teacher A evidenced this in her comment: "And what do we do with the results? I feel like it's all put on the classroom teacher. Perhaps it's the small school—we're low on support staff" (TchrAI2). Teacher B expressed a similar sentiment when

she said, “Discussions about interpretation [of data] would be good targets” for [our] meetings (TchrBI2). Teacher C expressed that when it came to informing intervention beyond Tier 1 there was “minimal teacher input” (TchrCI2), and when asked whether progress-monitoring data shaped Tier 2 and Tier 3 intervention services, Teacher A simply said, “That’s a fear I have” (TchrAI2). The implications of the degree of influence that collaboration opportunities have on the use of effective progress-monitoring practices may warrant future study.

Field of Education–Level Factors

The field of education provides information regarding best practices, through research findings and through creating policy. Findings from this study reveal that teachers do not feel confidently informed about what progress monitoring should be, whom it is for, and how often it should be done. Results from this study indicate that teachers tend to use progress-monitoring practices primarily with struggling students, with some degree of frequency, and to inform instruction in a relatively immediate way (Theme 2). However, they are grappling with uncertainty about whom to prioritize progress monitoring for, what the point of diminishing returns is with regard to the frequency of assessment, and how to balance the frequency of assessment with instructional priorities. The implication is that information about the implementation of progress monitoring is lacking. The field may be well served by researchers and policymakers who keep implementation in mind as they pursue knowledge and create policy about best practices related to progress monitoring.

Limitations

The data collected and analyzed within the RtI context of this study were grounded in progress-monitoring occurrences at the Tier 1, classroom level. Further, examination occurred in kindergarten and first-grade classrooms only. Investigation of how the themes that emerged from this study hold up or vary across the other RtI tiers and across other grade levels are avenues for further research.

Because I was the sole researcher, it was not possible to compare data from multiple researchers; it was therefore not possible to control for researcher bias effects. Of particular note is my previous employment with the school and professional relationship with Teacher A. I acknowledge that researcher bias is embedded in the findings. In addition, I did not have prolonged time in the field to complete classroom observations, conduct interviews, and collect artifacts, which limits the trustworthiness of the themes.

Recommendations

Recommendations for promoting effective progress monitoring with struggling kindergarteners and first graders are articulated as direct action items in response to the implications of the findings from this study.

An overarching recommendation for optimizing the efficacy of progress-monitoring practices is to start conversations about progress-monitoring practices with common, clear criteria that are grounded in the purpose of progress monitoring and that include the criteria of record keeping and instructional integration. Professional development designed, first, to address knowledge of the formative–summative

continuum of assessment practices and, second, to address record keeping and instructional integration as criteria specific to progress monitoring may support efforts to clarify the nature of progress-monitoring practices. Record keeping for progress-monitoring assessment is systematic, yet flexible and informal, and the integration of progress-monitoring assessment within instruction promotes immediate feedback and evaluation of student performance that is intertwined with instructional goals. Record keeping of this nature and instructional integration reinforce understanding progress monitoring as formative assessment.

Classroom-Level Recommendations

Teacher knowledge of early reading development, progress-monitoring assessment, and differentiation appear to support effective implementation of progress monitoring. Therefore, it is recommended that teachers regularly reflect on their own knowledge of early reading development, progress-monitoring assessment, and differentiation, and consider whether each is supporting or hindering their decision making about progress monitoring. Teacher B, who had low occurrences of progress monitoring, exemplified this when she said that she wanted "to do different things with the low group, like more phonemic awareness, and want[ed] more training." Teachers may ask themselves:

- Do I use early reading development knowledge to set short-term instructional goals for my students?
- Do I use knowledge of progress monitoring to effectively integrate practices within instructional time?

- Do I use knowledge of differentiation to create small-group and individual accommodations to meet my students' needs?

It is recommended that teachers observe colleagues for their use of knowledge related to early reading development, progress monitoring, and differentiation; it is further recommended that they conduct collaborative discussions to promote the extension of their own knowledge in these areas. The pursuit of professional development opportunities related to early reading development, progress monitoring, and differentiation are also recommended if such a need exists and opportunities are available. Implementation of these recommendations for teachers might be impeded if teachers do not welcome and pursue related opportunities for reflection, collaboration, and professional development.

School System–Level Recommendations

Teachers benefit from school-system support that promotes the effective use of progress monitoring. Recommendations for administrators to support effective progress monitoring from the school-system level include the following:

- Making professional collaboration an expectation from the school system and making time for such collaboration a provision in the school-wide schedule. This promotes the common use of effective progress-monitoring data collected at the classroom level (Tier 1) among all educators who deliver instruction to individual students.
- Asking teachers about their progress-monitoring resource needs and working to fulfill those needs. This was exemplified by Teacher B who said that she was

aware her colleagues were effectively using PALS Quick Checks for progress monitoring and she wanted training on how to access the Quick Check materials and utilize the associated supports on the PALS website.

- Providing progress-monitoring guidelines with clear expectations about what progress monitoring should be, whom it is for, and how often it should be done.
- Making every effort to avoid inconsistencies to the instructional schedule, such as scheduling school assemblies during literacy instructional blocks.
- Prioritizing smaller class and group sizes, particularly for struggling students, whenever possible.
- Providing professional development in the areas of early reading development, progress-monitoring practices, and differentiation.

Implementation of these recommendations for administrators might be impeded if there is not district-level discussion to support defining and communicating progress-monitoring expectations, if channels for professional collaboration are not established and utilized, and if principals are not mindful of the conditions that support effective progress-monitoring practices as decisions are made (e.g., class sizes for groups with high numbers of students who are struggling with literacy).

Field of Education–Level Recommendations

Findings from this study suggest that teachers grapple with varied factors from multiple contexts that may support or impede the implementation of effective progress monitoring. Thus, a recommendation for researchers and policymakers is to further investigate the implementation of progress monitoring for kindergarten and first-grade

students in RtI contexts and provide more specific guidance about what constitutes best practices for the students within those contexts.

The aforementioned recommendations are intended to address implications of the findings from this study. When classroom teachers, administrators, researchers, and policymakers all do their part in promoting effective progress-monitoring practices, actions translate to improvements in instruction. Instructional improvements optimize the opportunity for struggling readers to overcome their difficulties and achieve lasting academic success.

Summary

This study presented three case studies of kindergarten and first-grade classroom progress-monitoring practices. From a socio-cultural perspective, effective implementation was of interest for these teachers in light of influences from three contextual levels: the field of education, the school system, and the classroom. The field of education provided related research (e.g., Vellutino et al., 1996, Scanlon, Vellutino, Small, Fanuele, & Sweeney, 2005) and policy (IDEA, 2004) that encouraged the use of response to intervention—a process that is critically informed by progress-monitoring data. The school system implemented an RtI process with accountability for progress-monitoring data to the SBIT. At the classroom level, the teachers negotiated influences from their individual content, assessment, and pedagogical knowledge, as well as influences from their unique classroom contexts, as they faced daily decisions regarding implementation of progress monitoring. But the interest in examining progress-monitoring practices for the kindergarten and first-grade students in the RtI process at

Snowy Pond went deeper than pressure from the field of education, accountability to the school system, and desire to relieve the challenges of daily decision making about assessment. These teachers recognized the urgency of creating a best fit between student needs and the instruction they provided to meet those needs, especially for the students who were not meeting grade-level expectations and who had no instructional time to waste. These teachers recognized that effectively "…monitor[ing] the student progress so growth can be seen and if we need to make changes to the program do so quickly" (name withheld for confidentiality, personal communication, September 25, 2012) was critical for creating that best fit between instruction and student need.

Examination of each case study revealed themes about the nature of progress-monitoring practices at Tier 1 of the RtI process for students in kindergarten and first grade. The themes that emerged extend what we already knew about progress monitoring.

We knew that progress monitoring was intended to serve the purpose of evaluating instructional effectiveness, informing ongoing modifications to instruction, and determining student progress (Afflerbach, 2012; Deno, 2003). Theme 1 sheds light on more specific and concrete aspects of progress monitoring that may support the identification and use of progress monitoring as distinct from other forms of assessment.

Theme 1: Progress-monitoring practices can be identified by record keeping and instructional integration.

With recognition of progress monitoring as an assessment practice that is formative in nature (Wiliam, 2006), the application of criteria for the effective use of

formative assessment to the evaluation of progress-monitoring practices revealed Theme 2.

Theme 2: *Teacher-selected* progress-monitoring practices tend to meet the majority of efficacy criteria for literacy progress monitoring.

We knew that specialized content knowledge about reading development (Moats, 1994; Moats & Foorman, 2003), assessment literacy (Plake & Impara, 1993), and pedagogical content knowledge (Shulman, 1986) all influence teacher decision making, and that decision making is also influenced by contextual factors, such as decision-making structures within a school system (Stephens et al., 1995). The following themes provide insights into more specific aspects of teacher knowledge that hold the potential to support or impede effective implementation of progress monitoring, and may even mitigate any negative influence of contextual factors (e.g., limited access to resources, instructional schedule inconsistencies).

Theme 3: Strong knowledge of early reading development may support the integration of progress monitoring into instruction.

Theme 4: Integration of differentiation at the individual student level may support effective progress-monitoring practices.

Implications of the themes that emerged informed recommendations for supporting effective progress-monitoring practices. The recommendations include the following.

- Start conversations about progress-monitoring practices with common, clear criteria that are grounded in the purpose of progress monitoring and that include the criteria of record keeping and instructional integration.
- Specific to classroom teachers:
    - Regularly reflect on one's own knowledge of early reading development, progress-monitoring assessment, and differentiation, and consider whether each is supporting or hindering their decision making about progress monitoring.
    - Observe colleagues for their use of knowledge related to early reading development, progress monitoring, and differentiation, and conduct collaborative discussions to promote the extension of their own knowledge in these areas.
    - Pursue professional development related to early reading development, progress monitoring, and differentiation if such a need exists and opportunities are available.
- Specific to administrators:
    - Make professional collaboration an expectation from the school system and make time for the collaboration a provision in the school-wide schedule.
    - Ask teachers about their progress-monitoring resource needs and work to fulfill those needs.

  - Provide progress-monitoring guidelines with clear expectations about what progress monitoring should be, whom it is for, and how often it should be done.
  - Make every effort to avoid inconsistencies to the instructional schedule, such as scheduling school assemblies during literacy instructional blocks.
  - Prioritize smaller class and group sizes, particularly for struggling students, whenever possible.
  - Provide professional development in the areas of early reading development, progress-monitoring practices, and differentiation.
- Specific to researchers and policymakers:
  - Further investigate the implementation of progress monitoring for kindergarten and first-grade students in RtI contexts and provide more specific guidance about what constitutes best practices for the students within those contexts.

Classroom teachers, school-system administrators, and researchers and policymakers in the field each have a role in promoting effective progress-monitoring practices. Action communications designed to translate the findings and recommendations from this study to classroom teachers and school administrators are provided as the final component of this capstone project. The recommendations from this study may help some educators recognize best practices that are already in place and may foster reflection and modification toward improved progress-monitoring practices for others. Working together, across all contextual levels, to ensure that teachers can

implement effective progress-monitoring practices will benefit students who struggle to catch up to grade-level expectations. Effective progress monitoring promotes the all-important condition of effective instruction. Effective assessment and instruction means teachers are able to provide educational experiences that propel students forward as learners and turn potentially tragic tales into success stories.

Section IV: Action Communications

The recommendations provided in light of the findings from this study are encapsulated in two forms of action communications.

One action communication is a workshop-style presentation for educators. The presentation addresses recommendations for the classroom level and is intended for teachers who have an interest in making the most of progress monitoring with their students. The PowerPoint for the presentation (see Appendix I) covers specific knowledge of progress monitoring as a type of formative assessment. Teachers then utilize knowledge of early reading development to set assessment goals and knowledge of differentiation to reflect on how to effectively integrate progress-monitoring practices with instruction. This presentation was delivered at the Virginia State Reading Association in Richmond, Virginia, on March 14, 2015.

The other action communication is a newsletter-style memo for administrators. The memo addresses recommendations for the school-system level and is intended for administrators or other school leaders who have an interest in supporting classroom teachers' use of progress monitoring. The memo (see Appendix J) covers findings about the need for professional collaboration to facilitate sharing progress-monitoring results, the influence of contextual factors on teachers' ability to implement progress monitoring effectively, and the value of professional development in the areas of early reading development, progress-monitoring practices, and differentiation to empower teachers to maximize their use of progress monitoring. A letter introducing the memo with the memo

enclosed was shared with the principal of the school where the study took place as well as with the district-level lead administrator for elementary language arts. An explanation of the presentation on progress-monitoring professional development for teachers is included in the letter, as well as my offer to deliver it to teacher groups upon request. The communication was as follows:

To: *Select school-system administrator*
Address

From: Angelica D. Blanchette, M.T.
Doctoral Candidate
University of Virginia
1390 Dunlora Drive
Charlottesville, Va 22901

Dear *administrator*:

I recently conducted a case study examining progress-monitoring practices for kindergarten and first-grade students in the Response to Intervention (RtI) process in your school. During the case study, I observed small-group instruction in three kindergarten and first-grade classrooms over the course of two weeks. I also interviewed the teachers before and after the series of classroom observations and collected documents for review. To share my findings and recommendations with you about how to maximize the use of progress-monitoring practices, I have created the attached memo.

A workshop-style presentation for educators has also been designed to deliver professional development on best practices for progress monitoring. The workshop covers specific knowledge of progress monitoring as a type of formative assessment. Teachers can then utilize knowledge of early reading development to set assessment goals and knowledge of differentiation to reflect on how to effectively integrate progress-monitoring practices with instruction. This presentation was delivered at the Virginia State Reading Association in Richmond, Virginia, on March 14, 2015, and I would be happy to provide it to teachers in your school(s) upon request.

Sincerely,

Angelica D. Blanchette

Enclosure

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Appendix A: Progress Monitoring Instructional Checklist—Classroom Teacher

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Progress Monitoring Instructional Checklist—Classroom Teacher

Date *Student* *Grade*

Classroom Teacher *Supplemental Teacher(s)*

	Never	Rarely	Sometimes	Regularly
	1	**2**	**3**	**4**
Instruction				
My Language Arts block is at least 90 minutes long.	1	2	3	4
PALS data is used to differentiate small group instruction.	1	2	3	4
I dedicate at least 60 minutes of the 90 minute Language Arts block to small-group differentiated instruction.	1	2	3	4
I provide small group reading instruction at students' instructional levels.	1	2	3	4
I provide small group differentiated word study instruction at students' spelling/phonics levels.	1	2	3	4
I work with low-performing students in small literacy groups every day of *no more than five students*.	1	2	3	4
I fully complete my Language Arts plans every day.	1	2	3	4
I provide comprehensive and balanced Language Arts lesson plans (i.e., instruction and practice in phonemic awareness, fluency, oral reading, vocabulary, spelling/phonics, comprehension, and writing).	1	2	3	4
I provide explicit literacy instruction.	1	2	3	4
I use a variety of strategies in Language Arts lessons.	1	2	3	4
I address the instructional needs of individual students every day.	1	2	3	4
I seize opportunities to teach academic and content vocabulary across the curriculum.	1	2	3	4
I provide students with opportunities to talk and write about what they are reading.	1	2	3	4
I use content-related texts, such as nonfiction books, at students' instructional levels.	1	2	3	4
I give students time to practice reading at their independent levels each day.	1	2	3	4
I provide the support necessary for students to complete work independently.	1	2	3	4
I regularly review student work samples and provide timely feedback.	1	2	3	4
I establish realistic short-term, ongoing instructional goals related to progress monitoring.	1	2	3	4
I use the PALS Quick Checks (for other similar assessments) to monitor progress towards instructional goals.	1	2	3	4
I seize opportunities to read and write across curricular areas throughout the day.	1	2	3	4

UPDATED ON: 04/02/2013

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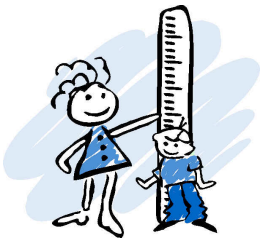
	Never	Rarely	Sometimes	Regularly
	1	2	3	4
Collaboration				
I am involved in the planning of all supplemental literacy instructional for struggling readers (i.e., instruction delivered by reading specialists, SLPs, paraprofessionals, etc.).	1	2	3	4
I communicate with the professional(s) responsible for delivering all supplemental instruction to my struggling readers.	1	2	3	4
Student PALS assessment data is reviewed as a collaborative team (i.e., myself, the reading specialist, and principal).	1	2	3	4
PALS Quick-Checks or other progress monitoring information is reviewed and shared as a collaborative team (i.e., myself, the reading specialist, and principal).	1	2	3	4
My planning period overlaps with the reading specialist or the other supplemental instructors working on my students.	1	2	3	4
I am diligent in gathering feedback from all relevant instructional support staff prior to sharing student literacy progress with parents.	1	2	3	4
I participate in ongoing, systematic professional development dedicated to the dynamic needs of the school-based community.	1	2	3	4
I facilitate access to home literacy experiences through ongoing efforts to get to know individual student families.	1	2	3	4
Student Health and Engagement				
I make reading approachable and engaging for students, using appropriately leveled books in areas of student interest.	1	2	3	4
I note my students' general health, especially when interfering with learning (i.e., ear infections, chronic illness, unusual bruising, etc.).	1	2	3	4
I note when student unrest interferes with class participation and engagement.	1	2	3	4
I note when the Language Arts instructional time of struggling readers is interrupted by tardiness and/or external logistics (i.e., overslept, car broke down, snow delays, assemblies, etc.).	1	2	3	4
I take note of students' basic needs (i.e., adequate seasonal clothing, hunger, cleanliness, etc.).	1	2	3	4
I note when absenteeism is excessive and report it to the appropriate administrator.	1	2	3	4
I problem solve issues pertaining to children's health access basic needs and engagement with appropriate school and community members.	1	2	3	4
I discuss concerns about children's health, basic needs, access, and engagement, with other members of the collaboration team (i.e., myself, the reading specialist, and the principal).	1	2	3	4

UPDATED ON: 04/02/2013

Appendix B: Assessment Literacy Inventory

Assessment Literacy Inventory



Cynthia Campbell, Ph.D.
Northern Illinois University

and

Craig A. Mertler, Ph.D.
Bowling Green State University

Description of the *ALI*:

The ***Assessment Literacy Inventory*** (***ALI***) consists of five scenarios, each followed by seven questions. The items are related to the seven "Standards for Teacher Competence in the Educational Assessment of Students." Some of the items are intended to measure general concepts related to testing and assessment, including the use of assessment activities for assigning student grades and communicating the results of assessments to students and parents; other items are related to knowledge of standardized testing, and the remaining items are related to classroom assessment.

Directions:

Read each scenario followed by each item carefully; select the response you think is the best one and *mark your response on the answer sheet*. Even if you are not sure of your choice, *mark the response you believe to be the best*.

Scenario #1

Ms. O'Connor, a math teacher, questions how well her 10th grade students are able to apply what they have learned in class to situations encountered in their everyday lives. Although the teacher's manual contains numerous items to test understanding of mathematical concepts, she is not convinced that giving a paper-and-pencil test is the best method for determining what she wants to know.

1. Based on the above scenario, the type of assessment that would *best* answer Ms. O'Connor's question is called a/an
   A. performance assessment.
   B. authentic assessment.
   C. extended response assessment.
   D. standardized test.

2. In order to grade her students' knowledge accurately and consistently, Ms. O'Connor would be well advised to
   A. identify criteria from the unit objectives and create a scoring rubric.
   B. develop a scoring rubric after getting a feel for what students can do.
   C. consider student performance on similar types of assignments.
   D. consult with experienced colleagues about criteria that has been used in the past.

3. To get a general impression of how well her students perform in mathematics in comparison to other 10th graders, Ms. O'Connor administers a standardized math test. This practice is acceptable *only* if
   A. the reliability of the standardized test does not exceed .60.
   B. the standardized test is administered individually to students.
   C. the content of the standardized test is well known to students.
   D. the comparison group is comprised of grade level peers.

4. Which of the following is an *in*appropriate use of the results from this standardized math test?
   A. planning instruction
   B. assigning student grades
   C. determining students' strengths and weaknesses
   D. developing curriculum

5. Throughout instruction, Ms. O'Connor assesses how well her students are grasping the material. These assessments range from giving short quizzes following introduction to a new topic, to administering an end-of-the-unit final exam. In order to improve the validity of this grading procedure, Ms. O'Connor should
   A. make the grading scale the same for all assessments.
   B. consider students' prior performance before assigning a final grade.
   C. weight assessments according to their relative importance.
   D. take into consideration each student's effort when calculating grades.

6. During a parent teacher conference, one of the parents of a student in Ms. O'Connor's class wants to know what it means that his daughter scored in the 80th percentile in mathematics. Which of the following provides the *best* explanation of this student's score?
   A. She got 80% of the items on the math test correct.
   B. She is likely to earn a grade of 'B' in her math class.
   C. She is demonstrating above grade level performance in math.
   D. She scored the same or better than 80% of the norm group.

7. Which of the following is an appropriate use of assessment information?
   A. Utilize information from a variety of assessments when making decisions about student learning.
   B. Use scores from standardized tests to determine teacher instructional effectiveness.
   C. Use scores from a standardized test as the primary indicator of student retention.
   D. Post final grades in order to provide normative information to students in the class.

Scenario #2

Mr. Okawa, a fifth-grade teacher, is planning his instruction for the next grading period, aware of the fact that his students will be taking the statewide achievement test near the end of the grading period.

8. Mr. Okawa's mathematics unit for this grading period will focus on multi-step problem-solving. He wants to assess his students' problem-solving abilities at the end of the unit to determine if any reinstruction will be necessary prior to the statewide test. Which of the following assessment strategies would be the most appropriate choice?
   A. He should choose the assessment included in the teacher's manual from the textbook he uses.
   B. He should choose an assessment which is consistent with the content and skills he taught.
   C. He should choose a different standardized assessment that provides a score on similar skills.
   D. He should choose an assessment which covers single-step problem-solving skills.

9. Mr. Okawa decides to develop his own assessment in order to determine if any reinstruction will be necessary. He also wants to use his assessment as a means of anticipating how his students will perform on the statewide assessment. In order for him to accurately approximate his students' performance, which of the following would be the most appropriate type of assessment for him to develop?
   A. a performance assessment
   B. a multiple-choice test
   C. a portfolio assessment
   D. an essay test

10. Julie, one of Mr. Okawa's students, receives a percentile rank of 60 on the problem-solving skills subtest of the statewide assessment. This score is most appropriately interpreted as which of the following?
   A. Julie scored above average.
   B. Julie scored below average.
   C. Julie scored at the national average.
   D. Not enough information to determine.

11. Juan, another student in Mr. Okawa's class, receives a scaled score of 196 on the reading comprehension portion of the statewide assessment. The cut score is 200; therefore, Juan does not pass this subtest. However, the subtest has a standard error of measurement equal to 6. Which of the following is the best decision for Mr. Okawa to make regarding instruction appropriate to meet Juan's needs?
   A. Juan has clearly not achieved the minimum level of reading comprehension and should receive remedial reading instruction.
   B. Mr. Okawa knows that Juan could have scored higher, so the results of the test should be ignored.
   C. Juan may likely have achieved the minimum level of reading comprehension and nothing different or additional should be done.
   D. Mr. Okawa knows that Juan should have scored much lower, so the results of the test should be ignored.

12. Which grading practice being considered by Mr. Okawa would result in grades that would least reflect achievement?
   A. grades based on daily homework and chapter tests
   B. grades based on daily homework and chapter tests, with points deducted for poor effort
   C. grades based on daily homework and chapter tests, where students are permitted to redo assignments in order to meet higher standards
   D. grades based on chapter tests, where daily homework is not formally graded

13. Barbara scores at the 60th percentile on mathematics problem-solving and at the 56th percentile on reading comprehension. The percentile bands for each test are five percentile ranks wide. What advice should Mr. Okawa give to Barbara's parents?
   A. They should ignore the difference; her performance was essentially the same on the two tests.
   B. They should seek additional tutoring help for Barbara in reading.
   C. They should force Barbara to read more at home.
   D. They should provide enrichment experiences for Barbara in math, which is her better performance area.

14. Mr. Okawa was worried that his students would not perform well on the statewide assessment. He did all of the following to help increase students' scores. Which was unethical?
   A. He instructed students in strategies for taking multiple-choice tests, such as how to use answer sheets.
   B. He planned his instruction so that it focused on concepts and skills to be covered on the test.
   C. He encouraged the students to do their best, and provided them with a reward after testing was complete.
   D. He allowed students to practice with items from an alternate form of the test.

Scenario #3

Ms. Green is an eighth-grade American History teacher. She has just finished teaching a unit on the Industrial Revolution and wishes to make decisions about her students regarding their higher-order thinking skills. Ms. Green has decided to give her students a single assessment in the form of an end-of-unit multiple-choice test. She anticipates that most of her students will perform well on the test.

15. Based on her goal, what can you conclude about her decision to administer a multiple-choice test?
    A. This is an appropriate choice for a unit assessment.
    B. The test scores may not be valid for this purpose.
    C. The test scores may not be reliable for this purpose.
    D. A true-false test would be more appropriate.

16. To determine the quality of her multiple-choice test, Ms. Green should conduct an item analysis and examine all of the following except
    A. item difficulty values.
    B. item discrimination values.
    C. reliability coefficients.
    D. validity coefficients.

17. Ms. Green decides to score the tests using a 100-percent correct scale. Generally speaking, what is the proper interpretation of a student score of 85 on this scale?
    A. The student answered 85% of the items on the test correctly.
    B. The student knows 85% of the content covered by this instructional unit.
    C. The student scored higher than 85% of other students who took this test.
    D. The student scored lower than 85% of other students who took this test.

18. Some of Ms. Green's students do not score well on the multiple-choice test. She decides that the next time she teaches this unit, she will begin by administering a pretest to check for students' prerequisite knowledge. She will then adjust her instruction based on the pretest results. What type of information is Ms. Green using?
    A. norm-referenced information
    B. criterion-referenced information
    C. both norm- and criterion-referenced information
    D. neither norm- nor criterion-referenced information

19. The Industrial Revolution test is the only student work that Ms. Green grades for the current grading period. Therefore, grades are assigned only on the basis of the test. What is the major criticism of this practice?
    A. The test, and therefore the grades, reflect too narrow a curricular focus.
    B. These grades, since based on tests alone, is probably biased against some minority students.
    C. She should add extra points to the scores of students who scored low on the test.
    D. Decisions like grades should be based on more than one piece of information.

20. Mr. Simpson, another American History teacher, bases his grades primarily on his observations of students during class. The primary distinction between his system of assigning grades and that used by Ms. Green is *best* characterized as which of the following?
    A. Ms. Green uses formal assessment; Mr. Simpson uses informal assessment.
    B. Ms. Green uses formative assessment; Mr. Simpson uses summative assessment.
    C. Ms. Green uses standardized assessment; Mr. Simpson uses nonstandardized assessment.
    D. Ms. Green uses traditional assessment; Mr. Simpson uses alternative assessment.

21. Based on their grades from last year, Ms. Green believes that some of her low-scoring students are brighter than their test scores indicate. Based on this knowledge, she decides to add some points to their test scores, thus raising their grades. Which of Ms. Green's actions was unethical?
    A. examining her student's previous academic performance
    B. adjusting grades in her course
    C. using previous grades to adjust current grades
    D. adjusting some students' grades and not others'

Scenario #4

Mr. Valdez is an English teacher in the newly built middle school. Experienced in issues of classroom assessment, Mr. Valdez is often asked to respond to the district's questions concerning best practices for evaluating student learning.

22. Ms. Franklin, also an English teacher, asks what type of assessment is best for evaluating her 6th graders' writing skills. Which of the following methods is likely to provide the *best* response to her question?
    A. selected response methods
    B. true/false statements
    C. completion items
    D. essay prompts

23. One of the middle school math teachers is redesigning her tests to make greater use of "story problems" as a way to check students' math understanding. She consults with Mr. Valdez to see what, if any, concerns she should be aware of when constructing assessments of this type. Which statement is *not* an appropriate recommendation when designing story-based math tests?
    A. make sure that the reading level is grade appropriate
    B. avoid scenarios more familiar to certain groups over others
    C. check for clarity of sentence construction
    D. incorporate scenarios used during instruction

24. Isabel, a student in Mr. Valdez's class, scored 78 points on a standardized English test which had a mean of 80 and a standard deviation of 4. She scored 60 points on the science portion of this test which had a mean of 50 and a standard deviation of 3. Based on the above information, in comparison to her peers, which statement provides the most accurate interpretation?
    A. Isabel is better in English than in science.
    B. Isabel is better in science than in English.
    C. Isabel is below average in both subjects.
    D. Isabel is close to average in both subjects.

25. At the end of each class period, Mr. Valdez does a quick "check in" with his students to get an impression of their understanding. In this example, the primary purpose for conducting formative assessment is to
    A. identify cumulative knowledge.
    B. determine content for the final exam.
    C. plan classroom instruction.
    D. evaluate curriculum appropriateness.

26. To prepare students for state testing and identify areas of school improvement, all 6th grade English teachers give a common final exam which contains a series of essay items. Recently, however, several teachers have expressed concern that the time and effort necessary to complete grading on a timely basis may result in inconsistent scoring. They consult with Mr. Valdez. Which of the following provides the *best* response to the teachers' concern for consistency?
    A. grade all responses to essay #1 before grading responses to essay #2
    B. during grading, adjust rubric criteria to reflect exemplary student work
    C. utilize a holistic scoring method to minimize teacher subjectivity in scoring
    D. all things being equal, it is best to limit the use of multiple essay exams

27. Jeremy, a 6th grade student in Mr. Valdez's class, received a grade equivalent score of 7.2 on a standardized reading test. Jeremy's parents wonder what this means. Based on the above information, which of the following statements provides the most appropriate interpretation of this student's score?
    A. Jeremy is reading at the 7th grade level.
    B. Jeremy is reading better than the majority of students in his class.
    C. Jeremy is reading 6th grade material as expected.
    D. Jeremy should be placed in a 7th grade reading class.

28. "To ensure that standardized test results provide an accurate picture of what students *really* know, it is recommended that teachers clarify items that are confusing to students."

    Based on best practices of assessment, which of the following is an appropriate response to the above statement?
    A. The above statement is an acceptable way to reduce error in testing.
    B. The above statement is an acceptable way to increase test validity.
    C. The above statement is unacceptable because it labels students as poor readers.
    D. The above statement is unacceptable because it breaks standardization.

Scenario #5

Ms. Hawkins is responsible for teaching science at the 4th grade level. Over the past couple of years, her students have really seemed to struggle with investigations of how water changes from one state to another (i.e., freezing, melting, condensing, and evaporating), but she is unsure of where the specific difficulties lie. She is aware that her students need to improve their conceptual understanding of this content standard.

29. Ms. Hawkins wishes to conduct some sort of assessment in order to identify the specific difficulties her students are experiencing. Which of the following would *best* meet her needs?
    A. a diagnostic assessment
    B. an informal assessment
    C. a standardized assessment
    D. a summative assessment

30. In an effort to refine both her instruction and assessment of this content, Ms. Hawkins conducts an item analysis of student scores from last year's final unit test over this material. She should definitely discard or substantially revise a test item that
    A. has a difficulty value between .50 and .75.
    B. has a discrimination value equal to +.30.
    C. has a discrimination value equal to -.50.
    D. has a difficulty value equal to .90.

31. Ms. Hawkins' unit test also includes a restricted-response essay item. She is concerned with the demonstrated level of understanding of several specific criteria in her students' responses. Which of the following would *best* facilitate her scoring of these responses?
    A. an objective answer key
    B. a holistic rubric
    C. a checklist
    D. an analytic rubric

32. Following the completion of the unit, Ms. Hawkins determines that her students have satisfactorily mastered these concepts. However, when her students take the statewide standardized assessment in the spring, she notices that her students perform very poorly on items addressing these same concepts. Considering the discrepancy between students' classroom performance and their standardized test results, what action is most appropriate when making decisions concerning school improvement?
    A. recommend that classroom instruction be consistent among 4th grade science teachers
    B. ensure alignment between instruction and what is measured on the standardized test
    C. select a standardized test that is more likely to yield higher scores in science
    D. identify the percentage of students predicted to perform well in advanced science classes

33. Ms. Hawkins wants to be sure that the term grades she assigns to her students' performance in science reflect each student's respective level of content mastery for that unit. Which of the following grading systems would *best* accomplish this goal?
    A. a criterion-referenced grading system
    B. a norm-referenced grading system
    C. a pass-fail grading system
    D. a portfolio grading system

34. Nolan is a student in Ms. Hawkins' class. He receives a raw score of 12 items answered correctly out of a possible 15 on the physical science portion of a standardized test. This raw score equates to a percentile rank of 45. His parents are confused about how he could answer so many items correctly, but receive such a low percentile rank. They approach Ms. Hawkins for a possible explanation. Which of the following is the appropriate explanation to offer to his parents?
    A. "I don't know...there must be something wrong with the way the test company figured the scores."
    B. "Although Nolan answered 12 correctly, numerous students answered more than 12 correctly."
    C. "Raw scores are purely criterion-referenced and percentile ranks are merely one form of norm-referenced scoring."
    D. "Raw scores are purely norm-referenced and percentile ranks are merely one form of criterion-referenced scoring."

35. In an attempt to try to encourage and motivate her students who are struggling academically, Ms. Hawkins decides to share her gradebook, especially test scores, with them in order to demonstrate how well others are performing. Another teacher advises her not to do this, as it is a clear violation of
    A. *The Code of Fair Testing Practices in Education.*
    B. *The Family and Education Rights and Privacy Act.*
    C. *The Standards for Teacher Competence in the Educational Assessment of Students.*
    D. *The No Child Left Behind Act.*

Assessment Literacy Inventory
Scoring Key

1. B
2. A
3. D
4. B
5. C
6. D
7. A
8. B
9. B
10. A
11. C
12. B
13. A
14. D
15. B
16. D
17. A
18. B
19. D
20. A
21. D
22. D
23. D
24. B
25. C
26. A
27. C
28. D
29. A
30. C
31. D
32. B
33. A
34. B
35. B

Alignment of Standards with items on *ALI*:

Standard 1—Items 1, 8, 15, 22, 29
Standard 2—Items 2, 9, 16, 23, 30
Standard 3—Items 3, 10, 17, 24, 31
Standard 4—Items 4, 11, 18, 25, 32
Standard 5—Items 5, 12, 19, 26, 33
Standard 6—Items 6, 13, 20, 27, 34
Standard 7—Items 7, 14, 21, 28, 35

Appendix C: Semi-Structured Interview Protocol

<table>
<tr><td>Project: Progress Monitoring in an RtI Context
Protocol: Semi-Structured Interview
Setting:
Interviewer: Ang Blanchette
Interviewee:
Time/Date:</td><td colspan="2">Elaborating Probes:
• Tell me more.
• Could you explain your response more?
• I need more detail.
• What does ___ mean?</td></tr>
<tr><td>Primary Questions and Responses</td><td>Responses</td><td>Reflective Notes (insights, hunches, themes)</td></tr>
<tr><td>Questions here will be selected from the list below depending on whether the interview is prior to or following the classroom observations and relevant document collection.</td><td></td><td></td></tr>
<tr><td colspan="3">Thank interviewee for participation. Assure confidentiality of responses. Address future participation.</td></tr>
</table>

Questions for Semi-Structured Interview <u>Prior</u> to Classroom Observation and Relevant Document Collection

1. How do you define progress monitoring? [Probe for knowledge of characteristics of formative assessment.]
2. What expectations does the school system have for progress monitoring? [Probe for available resources, requirements, and professional development provisions.]
3. Once a student is identified as at-risk and becomes a participant in the RtI process, what are your best sources of information for evaluating whether the student is progressing or not? [Probe for specific examples and details regarding resources, who administers, and frequency of assessment.]
4. Tell me about how you use progress-monitoring information. [Probe for how it may inform the evaluation and modification of instruction as well as assessment of student performance.]
5. Where do you see holes in your progress-monitoring practices? [Probe for areas of early literacy development that are not assessed and for issues with efficacy.]

Questions for Semi-Structured Interview <u>Following</u> the Classroom Observation and Relevant Document Collection

1. Reflect on the alignment of [name assessment source] with instruction.
   - Does it measure important early literacy skills?
   - Is it developmentally appropriate?
   - Does it mirror the instructional format(s)?
   - Does it align with the instructional sequence?
2. Tell me about the frequency of the data collection with [name assessment source]. [Probe: Is the frequency adequate to allow for ongoing evaluation?]
3. Does the intensity of the progress monitoring align with the intensity of intervention (i.e., RtI tier and frequency)?
4. Do you feel comfortable interpreting the information from [name assessment source]? Why or

why not? [Probe for who decided to administer the assessment, who administered the assessment, and where the assessment was administered.]

5. How immediately do the data inform instruction?
6. Do the student performance data inform intervention instruction?
7. Does the [name assessment source] suggest current instruction is adequate?
8. Does the [name assessment source] suggest modifications to instruction may be warranted?
    a. If so, what modifications would you make?
    b. If so, are there any challenges to implementing the modifications you want to make?
9. What strengths or weaknesses do the [name assessment source] reveal about the student? [Probe for consideration of the influence of instructional efficacy.]
10. What else do you want to know about the student?
11. Does the [name assessment source] contribute to determinations of student progress toward grade-level expectations?
12. Which sources of data are the most informative and why?
13. Which sources of data are the least informative and why?
14. Do you feel supported in your use of formative assessment by the school?
15. Is there a clear role for formative assessment in your school?
16. Do you feel PD would benefit your use of formative assessments? [Probe: What do you want to understand better?]

Appendix D: Classroom Observation Protocol

Project: Progress Monitoring in an RtI Context Protocol: Classroom Observation Setting: Participant: Observer: Ang Blanchette Time/Date: Length of observation:	Just prior to the observation: Be prepared to describe the project to any participants: (a) purpose of study, (b) observational data being collected, (c) what will be done with the data to protect the confidentiality of the participants, and (d) how long the observation will take. Confirm read and signed consent form(s). Turn on audio recorder and test it.
Descriptive Notes	Reflective Notes (insights, hunches, themes)
[Include a sketch of the setting.]	

Appendix E: IRB Approval

UNIVERSITY of VIRGINIA

OFFICE OF THE VICE PRESIDENT FOR RESEARCH
INSTITUTIONAL REVIEW BOARD FOR THE SOCIAL AND BEHAVIORAL SCIENCES

In reply, please refer to: Project # 2014-0408-00

November 12, 2014

Angelica Blanchette and Marcia Invernizzi
CISE (Curriculum, Instruction & Special Ed)
1390 Dunlora Dr.
Charlottesville, VA 22901

Dear Angelica Blanchette and Marcia Invernizzi:

Thank you for submitting your project entitled: "Progress Monitoring in a Response to Intervention Context" for review by the Institutional Review Board for the Social & Behavioral Sciences. The Board reviewed your Protocol on November 12, 2014.

The first action that the Board takes with a new project is to decide whether the project is exempt from a more detailed review by the Board because the project may fall into one of the categories of research described as "exempt" in the Code of Federal Regulations. Since the Board, and not individual researchers, is authorized to classify a project as exempt, we requested that you submit the materials describing your project so that we could make this initial decision.

As a result of this request, we have reviewed your project and classified it as exempt from further review by the Board for a period of four years. This means that you may conduct the study as planned and you are not required to submit requests for continuation until the end of the fourth year.

This project # 2014-0408-00 has been exempted for the period November 12, 2014 to November 11, 2018. If the study continues beyond the approval period, you will need to submit a continuation request to the Board. If you make changes in the study, you will need to notify the Board of the changes.

Sincerely,

Tonya R. Moon, Ph.D.
Chair, Institutional Review Board for the Social and Behavioral Sciences

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www.virginia.edu/vpr/irb/sbs.html

Appendix F: Log of Data Collection Activities

Tchr = Teacher
Ch = PALS Progress Monitoring Instructional Checklist
ALI = Assessment Literacy Inventory
I1 = Pre-interview
I2 = Post-interview
O# = Classroom Observation #
D# = Documentation #

Date	**Activity**	**Participant(s)**	**What**
12/1/2014 (TchrCCh)	PALS Progress Monitoring Instructional Checklist	Teacher C	Self-assessment of instructional effectiveness relevant to progress monitoring
12/1/2014 (TchrACh)	PALS Progress Monitoring Instructional Checklist	Teacher A	Self-assessment of instructional effectiveness relevant to progress monitoring
12/1/2014 (TchrBCh)	PALS Progress Monitoring Instructional Checklist	Teacher B	Self-assessment of instructional effectiveness relevant to progress monitoring
12/8/2014 (TchrCALI)	Assessment Literacy Inventory (ALI)	Teacher C	Inventory of assessment knowledge
12/8/2014 (TchrCI1)	Pre-interview	Teacher C	Discuss current practices, assessment experience, progress monitoring
12/8/2014 (TchrAI1)	Pre-interview	Teacher A	Discuss current practices, assessment experience, progress monitoring
12/8/2014 (TchrBI1)	Pre-interview	Teacher B	Discuss current practices, assessment experience, progress monitoring
12/10/2014 (TchrAO1)	Classroom Observation	Teacher A-1st	Observing for progress-monitoring practices with at-risk students
12/10/2014 (TchrBO1)	Classroom Observation	Teacher B-1st	Observing for progress-monitoring practices with at-risk students

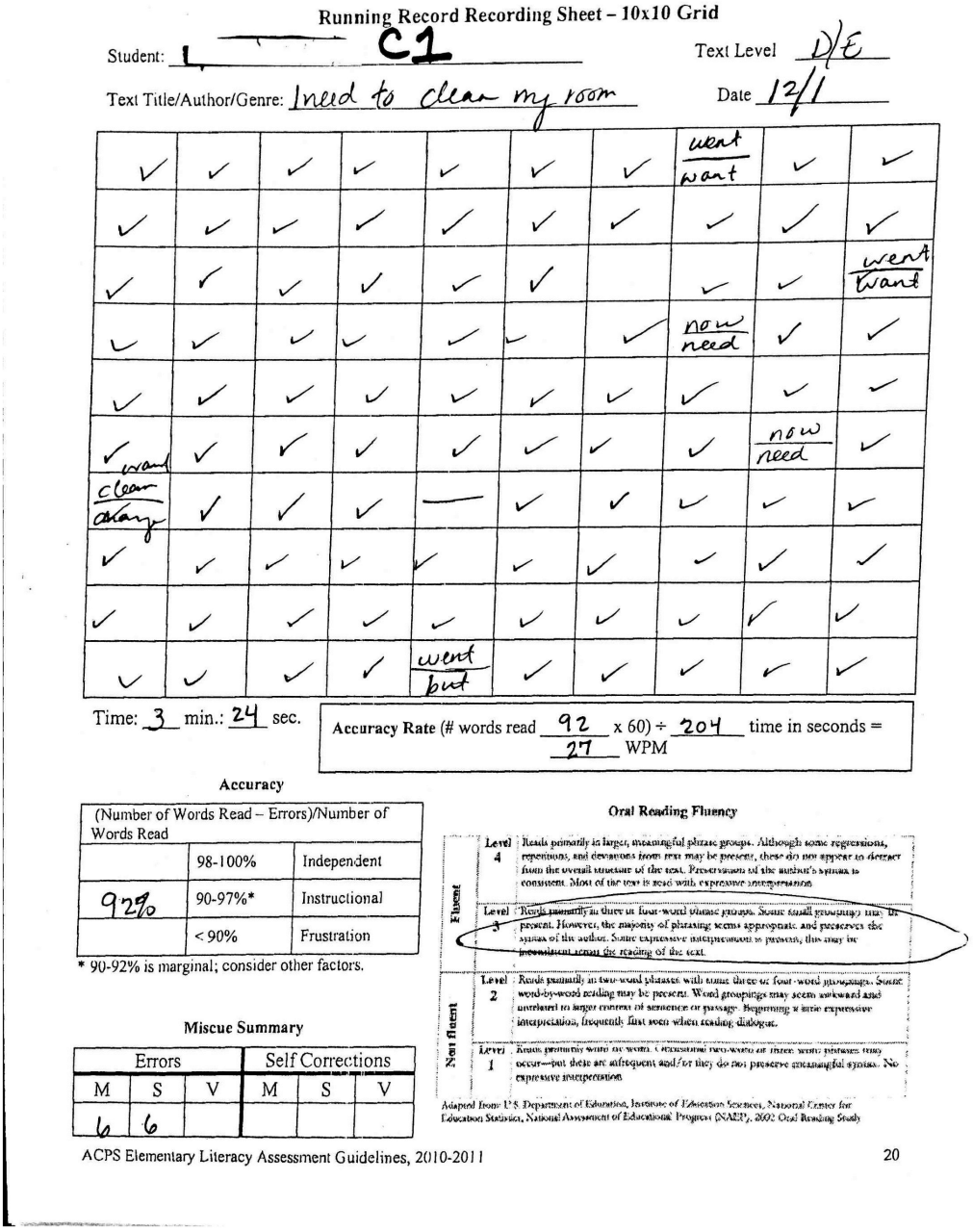
12/10/2014 (TchrBALI)	Assessment Literacy Inventory (ALI)	Teacher B	Inventory of assessment knowledge
12/10/2014 (TchrCO1)	Classroom Observation	Teacher C-1st	Observing for progress-monitoring practices with at-risk students
12/11/2014 (TchrAO2)	Classroom Observation	Teacher A-2nd	Observing for progress-monitoring practices with at-risk students
12/11/2014 (TchrCO2)	Classroom Observation	Teacher C-2nd	Observing for progress-monitoring practices with at-risk students
12/11/14 (TchrADOC1)	Documentation	Teacher A	Letter naming PM from 11.10.14 for A1-A6
12/11/14 (TchrADOC2)	Documentation	Teacher A	Letter naming PM from 11.17.14 for A1-A6
12/11/14 (TchrADOC3)	Documentation	Teacher A	Letter naming PM from 11.25.14 for A1, A2, A5, A6
12/11/14 (TchrCDOC1)	Documentation	Teacher C	Running Record PM samples
12/11/14 (TchrCDOC2)	Documentation	Teacher C	High Frequency Word PM samples
12/11/14 (TchrCDOC3)	Documentation	Teacher C	Reading group lesson plan samples
12/12/2014 (TchrAO3)	Classroom Observation	Teacher A-3rd	Observing for progress-monitoring practices with at-risk students
12/12/2014 (TchrBO2)	Classroom Observation	Teacher B-2nd	Observing for progress-monitoring practices with at-risk students
12/12/2014	Documentation	Teacher B	Running Record PM sample

(TchrBDOC1)			
12/12/2014 (TchrBDOC2)	Documentation	Teacher B	Class chart –observational record sample
12/12/2014 (TchrCDOC4)	Documentation	Teacher C	School System guidance on RtI/SBIT
12/12/2014 (TchrCO3)	Classroom Observation	Teacher C-3rd	Observing for progress-monitoring practices with at-risk students
12/15/2014 (TchrAO4)	Classroom Observation	Teacher A-4th	Observing for progress-monitoring practices with at-risk students
12/15/2014 (TchrCO4)	Classroom Observation	Teacher C-4th	Observing for progress-monitoring practices with at-risk students
12/16/2014 (TchrAO5)	Classroom Observation	Teacher A-5th	Observing for progress-monitoring practices with at-risk students
12/16/2014 (TchrBO3)	Classroom Observation	Teacher B-3rd	Observing for progress-monitoring practices with at-risk students
12/16/2014 (TchrCO5)	Classroom Observation	Teacher C-5th	Observing for progress-monitoring practices with at-risk students
12/17/2014 (TchrAO6)	Classroom Observation	Teacher A-6th	Observing for progress-monitoring practices with at-risk students
12/17/14 (TchrCO6)	Classroom Observation	Teacher C-6th	Observing for progress-monitoring practices with at-risk students
12/17/14 (TchrAALI)	Assessment Literacy Inventory (ALI)	Teacher A	Inventory of assessment knowledge
1/20/2015	Pre-interview	Teacher C	Discuss observed practices and other follow-up inquiries.

(TchrCI2)			
1/20/2015 (TchrAI2)	Pre-interview	Teacher A	Discuss observed practices and other follow-up inquiries.
1/20/2015 (TchrBI2)	Pre-interview	Teacher B	Discuss observed practices and other follow-up inquiries.

Appendix G: Progress-Monitoring Documentation Samples

Teacher C Running Record



Running Record Recording Sheet – 10x10 Grid

Student: C1 Text Level D/E

Text Title/Author/Genre: I need to clean my room Date 12/1

✓	✓	✓	✓	✓	✓	✓	went / want	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓		✓	✓	went / want
✓	✓	✓	✓	✓	✓	✓	now / need	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓ want	✓	✓	✓	✓	✓	✓	✓	now / need	✓
clean / clean my	✓	✓	✓	—	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	went / but	✓	✓	✓	✓	✓

Time: 3 min.: 24 sec.

Accuracy Rate (# words read 92 x 60) ÷ 204 time in seconds = 27 WPM

Accuracy

(Number of Words Read – Errors)/Number of Words Read		
	98-100%	Independent
92%	90-97%*	Instructional
	< 90%	Frustration

* 90-92% is marginal; consider other factors.

Miscue Summary

Errors			Self Corrections		
M	S	V	M	S	V
6	6				

Oral Reading Fluency

Fluent	Level 4	Reads primarily in larger, meaningful phrase groups. Although some regressions, repetitions, and deviations from text may be present, these do not appear to detract from the overall structure of the text. Preservation of the author's syntax is consistent. Most of the text is read with expressive interpretation.
Fluent	Level 3	Reads primarily in three- or four-word phrase groups. Some small groupings may be present. However, the majority of phrasing seems appropriate and preserves the syntax of the author. Some expressive interpretation is present; this may be inconsistent across the reading of the text.
Non fluent	Level 2	Reads primarily in two-word phrases with some three- or four-word groupings. Some word-by-word reading may be present. Word groupings may seem awkward and unrelated to larger context of sentence or passage. Beginning attempts at expressive interpretation, frequently first seen when reading dialogue.
Non fluent	Level 1	Reads primarily word-by-word. Occasional two-word or three-word phrases may occur—but these are infrequent and/or they do not preserve meaningful syntax. No expressive interpretation.

Adapted from U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Oral Reading Study

ACPS Elementary Literacy Assessment Guidelines, 2010-2011 20

Teacher C High-Frequency Word Spelling

12/8/12
12/9/

High-Frequency Chart

Use one chart for each guided reading group and write their names across the top. Check (√) every time the student writes the word correctly without your support. There is no sequence within the level. Teach the words as they appear in the guided reading books.

Level A (1)	C5 12/9	C4	C1	C3	C2
am					
at					
can					
go					
is					
me					
my					
see					
the					
to					
up					
we					
Level B (2)	**C5**	**C4**	**C1**	**C3**	**C2**
and					
do					
got					
had					
has					
he					
his					
in					
it					
like					
look					
on					
Level C (3-4)	**C5**	**C4**	**C1**	**C3**	**C2**
are					
come					
did					
for					
get					
have					
here					

Teacher A Individual Letter-Name Recognition

[redacted] 11/10/14

pals QUICK CHECK A2

▶ Lower-Case Alphabet Recognition

m	e	h	q	r
x	i	p	s	u
y	t	k	a	z
l	v	d	n	o
g	f	c	w	b
j				

UPDATED ON: 1/28/2009

Teacher A Group Letter-Name Recognition

pals QUICKCHECK

Letters missed

4

▶ **Lower-Case Alphabet Recognition**

g	s	y	f	p
k	t	q	x	a
j	b	v	e	l
c	h	z	o	n
i	r	m	u	w
d				

Appendix H: Classroom Observation Data Samples

Teacher C Classroom Observation #2

Project: Progress Monitoring in an RtI Context Protocol: Classroom Observation Setting: Teacher C Classroom Participant: Teacher C Observer: Ang Blanchette Time/Date: 10:30-11:45am/12.11.14 Length of observation: 75 minutes	Just prior to the observation: Be prepared to describe the project to any participants: (a) purpose of study, (b) observational data being collected, (c) what will be done with the data to protect the confidentiality of the participants, and (d) how long the observation will take.] Confirm read and signed consent form(s). Turn on audio recorder and test it.
Descriptive Notes	Reflective Notes (insights, hunches, themes)
10:30 TchrC at dry erase easel, has whole group at the rug to prep for writing expectations at the Work on Writing learning station	
10:45 Tchr C with on/above group Students writing high-frequency words with dry erase on the table TchrC has a list of the words for each student so she can note student performance Then moved on to reading with a leveled text: on own to stopping points and then discuss with Tchr	Diff/3 Cool! HFW/S/3 progress monitoring, DOC, Moderate Comp/2
11:00 Tchr C with another on/above group Same instruction as 10:45 group	Diff/3

11:15 Tchr C with C4 (C5 absent) Taking a RR (Rigby PM) with C4 TchrC: "Try your best" Wait time as student read. TchrC: "Good job" TchrC: "We're going to start a new book today. But first I want you to write some words for me." C4 writing on dry erase board *am, at, can, go, is (am, et, can, Go, is, me, my, see, the, to, up, we…)* TchrC is checking off words on spelling checklist TchrC provides feedback on handwriting for lowercase t	Diff/3 another absentee issue (the secretary in the main office has warned me to wash my hands a few extra times because the school is currently struggling with a stomach bug, strep, and cold w/fever) progress monitoring, DOC, Moderate no instructional feedback on performance Is there a theme of a tradeoff progress-monitoring documentation vs. feedback? HFW/S/3 progress monitoring –no feedback on spelling performance (correct or error), DOC, Moderate
11:30 next group started with dry erase boards and book boxes for privacy TchrC: "Think about what the word looks like. Think about the letters you're getting ready to write." Students write high-frequency words on their boards while teacher is checking on her list. TchrC: "Write this one again." Tchr erased word that had an error. Repeat as needed. TchrC: "Read the word, say the letters, read the word." Getting instructional feedback and practice. Started reading *What is at the Top?* (Ready Reader) –Taking a RR with C1 using 100s box. 11:45 Tchr with on/above group	Diff/3 HFW/S/3 progress monitoring, DOC, Moderate FEED instructional feedback –does this inhibit ability to record student performance? progress monitoring, DOC, Moderate, FEED (SR after RR portion) Diff/3

Samples: Spelling checklist first seen 12.10.14, RR from today
Reflection: Tchr C is consistently demonstrating high expectations for her students. Learn/3 When routines are not followed, she immediately prompts students to make corrections. For example, when the whole group came to the rug at the beginning of literacy time she looked around the room and said, "I see chairs left out, and that means our classroom is not safe. And I see papers left out on tables, and that means we're not done with clean up." A few students promptly scrambled to take care of the things she pointed out. These high expectations extend to student performance. Tchr C is seems to be in tune with each student's potential, sets goals appropriately, and holds them to her expectations (with support as needed). For example, she did not expect phrasal reading with her at-risk readers who are still early beginners. She did expect phrasal reading with her late beginners and coached them with this skill in reading group accordingly.

Teacher B Classroom Observation #2

Project: Progress Monitoring in an RtI Context Protocol: Classroom Observation Setting: Teacher B Classroom Participant: Teacher B Observer: Ang Blanchette Time/Date: 9:45-10:30am/12.12.14 Length of observation: 45 minutes	Just prior to the observation: Be prepared to describe the project to any participants: (a) purpose of study, (b) observational data being collected, (c) what will be done with the data to protect the confidentiality of the participants, and (d) how long the observation will take.] Confirm read and signed consent form(s). Turn on audio recorder and test it.
Descriptive Notes	Reflective Notes (insights, hunches, themes)
9:45 Students are finishing up snack and coming to the rug. B2 came up to me: "Are you the lady who was in the purple shirt last time?" Me: "Yes, yes I was wearing a purple shirt." B2: "B1 and I were supposed to be writing about Pumpkin Jack." (This was in response to me being at the writing table with B1 & B2 two days ago and asking, "What are you suppose to be doing when you come to writing table?" that day.) [sweet boy to be so invested in telling me that correction] TchrB commented about having 5 students out sick: "I can't remember the last time that we had everyone in our class here."	
9:55 First group with TchrC only has one student – all others out sick TchrB does a RR with the student TA is running a handwriting station Parent volunteer is helping students with read-around-the-room As soon as the reader was through the running record portion of the book and was reading to finish the book, TchrB called over to a couple students who were off task –One little boy came over with a laptop that was stuck in some way and was near tears	Diff/3 progress monitoring, DOC, Moderate Is this opportunity planned or possible only because others are out sick? LF/3 COW/2 reading group interruption INTERRUPT

TchrB had to stop the room with a chime to correct the noise level –corrections were made TchrB talking with another student who came up to the reading table while the student was still reading his RR book TchrB holding up her hand and then pointing and then waving away to signal to a student to get help from one of the other adults in the room (x2) (TchrB is trying to keep her attention on the student reading to her) TchrB followed up the RR with some decoding and comprehension coaching with the book read TchrB: "I have three adults in the room and I feel like I'm by myself."	reading group interruption -(this student appeared worried about being off and not knowing how to get help. I infer that he picked up on the lack of support from the other adults and knew to respect the Tchr and not interrupt which left him lost and worried about needing help.) INTERRUPT reading group interruption INTERRUPT reading group interruption INTERRUPT reading group interruption INTERRUPT FEED instructional feedback –**after** the RR recording student performance [nearly 15 minutes to complete the RR – the TIME to do this is a significant factor. That was ONE check with ONE student.)

10:10 TchrB called over another student, got him started reading independently with a familiar book, and then went to check on other students, came back to student at the reading table.	reading group interruption
10:13: TchrB rang the chime and students transitioned to new spots [most know where to go, but some are at the chart trying to figure it out, some students from each spot need support –finding supplies (e.g., stamp pads for stamps) or come up to the teacher to share work or tell her something]	Diff/3 more adult support needed
10:15: second student who was called to the table cleans up his books and moves to writing table, B1 & B2 are at the reading table. Students got out their literacy binder from their reading tubs and started using the pointers to track their ABCs on the uppercase ABC page –they were complimented "my super students" by the Tchr as she got back over to the table TchrC guides the group through letter name & letter sound practice	LN/3
Then COW activities with Gingerbread Man: tracking, rebuild with sentence strips, cut apart one line to rebuild words. B2: "Look those two words are the same!" (*Run, Run*) 10:30 Switch to 3rd rotation	LS/2 COW/2 Diff/3

Reflection: TchrB has a gentle calm way "Sweetheart, it would be so much better if you raised your hand instead of saying it over and over talking over me." "That wasn't your best move was it?" She has 5 students absent. In contrast to TchrA's classroom of 24, this classroom of 18 feels more under control. TchrB was able to gently use her voice to redirect students as they went to their stations for literacy and the majority of the class stopped, listened, and redirected as needed. I have seen this exact same effort not work in

TchrA's room because there is just too much activity (i.e., little voices making noises, little bodies moving) to wrangle the whole group's attention.
I find myself wanting the parent volunteer, but much more so the TA, to take some ownership for helping the rest of the class while TchrB is instructing reading groups. (I wrote this immediately before the TchrB comment about 3 adults.)
Document: RR from today

Appendix I: Action Communication: Professional Development for Classroom Teachers

3/14/15

More Formative Assessment Does NOT Mean More Grades!

Presented by Angelica D. Blanchette
Longwood University
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The email that inspired this presentation…

The Big Question: Why?

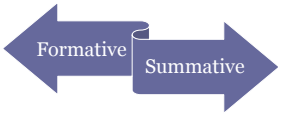
- What is driving the need for 12 data points each nine weeks?
- What do you think?

If we're talking about formative assessment, let's get on the same page.

Black and Wiliam (2009) state that assessment is formative:

> to the extent that evidence about student achievement is elicited, interpreted, and used by teachers, learners, or their peers, to make decisions about the next steps in instruction that are likely to be better, or better founded, than the decisions they would have taken in the absence of the evidence that was elicited (p. 6).

The Assessment Continuum



"assessments *for* learning" compared to "assessments *of* learning"

(Stiggins & Chappuis, 2006)

Herein lies the crux of our problem…

…the term *assessment* is not synonymous with *grades*!

Bloom comments on formative evaluation as a means to:

> "…provide feedback and correctives at each stage in the teaching-learning process. By formative evaluation we mean evaluation by brief tests used by teachers and students as aids in the learning process. While such tests may be graded and used as part of the judging and classificatory function of evaluation, we see much more effective use of formative evaluation if it is separated from the grading process and used primarily as an aid to teaching" (as cited in Wiliam, 2006, p. 48).

Let's compare

Consider a student who is learning letter names.

What would assessment *for* learning look like?

How would assessment *of* learning be different?

So how do both types of assessment live together without ending up with constant assessment?

- Teachers and administrators agree on the value of the purpose of formative assessment:
  - To evaluate instructional effectiveness
  - To inform instructional modifications
  - To build a record of progress for students

- Policy-makers agree too:
  IDEA (2004) requires, "for a child suspected of having a specific learning disability," who has "participated in a process that assesses the child's response to scientific, research-based intervention," that documentation must include the collection of "*student-centered data*." (§300.311)

Effective use of formative assessment is…

- Purposeful in evaluating instruction and student progress by being grounded in how students learn to read and write
- Collaborative between teachers and students (Reflective)
- Dynamic in how it is incorporated into instruction and in how it indicates learning (Multidimensional)
- Informative, providing descriptive feedback for instructional planning (Identifies strengths and Zone of Proximal Development)
- Ongoing, supporting continuous improvement
- Authentic
- Developmentally and culturally appropriate

Cooper (1997) and McLaughlin & Overturf (2012a 2012b)

Our Roles in Achieving Effective Practice

School System/Administrators	Teachers
• Support teacher use of formative assessment • Develop a clear role for formative assessment • Provide professional development required for implementation of effective formative assessment practices	• Utilize content knowledge to set formative assessment goals • Integrate formative assessment through differentiation • Collaborate to maximize the benefits of formative assessment

IRA Position Statement on Formative Assessment (2013)

Blanchette (manuscript in preparation)

Tell Their Story…

- Who are we talking about?
- What does "integrated" look like?

Systematic Record Keeping is Key!

Let's try it

- Define and identify story elements

- Automatically recognize grade-level sight words

Final Reflection

- Can any information from this presentation help you make better sense of the assessments you are required to desire to do?
- What's *YOUR* big take-away?

Thank You!

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Appendix J: Action Communication: Memo for Administrators

Can your teachers bring the "*student-centered data*" required by the Individuals with Disabilities Education Act (IDEA, 2004, §300.311) to discussions about Response to Intervention (RtI)?

Do education teams in your building feel confident about the data informing eligibility determinations for special education testing?

If these questions make you stop and ponder, then you may be interested in the findings from a case study recently completed with three kindergarten and first-grade teachers. The study examined the use of progress monitoring, at the classroom level, with students who were part of the RtI process.

Study: Progress Monitoring with Kindergarten and First-Grade Students in a Response to Intervention Context (May, 2015)
Investigator: Angelica D. Blanchette, Doctoral Candidate, University of Virginia

Finding: Educators may not all be thinking about the same thing when you refer to progress monitoring.
Recommendation: Start conversations about progress monitoring practices with common, clear criteria that are grounded in the purpose of progress monitoring and that include the criteria of record keeping and instructional integration.

Finding: Contextual factors that may influence teachers' use of progress monitoring practices include access to resources, clarity of expectations, instructional schedule consistency, and group size.
Recommendations:

- Ask teachers about their progress monitoring resource needs and work to fulfill those needs.
- Provide progress monitoring guidelines with clear expectations about what progress monitoring should be, whom it is for, and how often it should be done.
- Make every effort to avoid inconsistencies to the instructional schedule, such as assemblies that interrupt literacy instruction blocks.
- Prioritize smaller class and group sizes, particularly for struggling students, whenever possible.

Progress monitoring is not a one-size-fits-all phenomenon!

Finding: Strong knowledge of early reading development and specific knowledge of progress monitoring may support the integration of progress monitoring into instruction. Progress monitoring may also be promoted in classrooms with teachers who integrate differentiation at the individual student level.
Recommendation: Provide professional development in the areas of early reading development, progress monitoring practices, and differentiation.

Progress monitoring is not a one-size-fits-all phenomenon!
What will *you* do to help your teachers find the right fit for their students?