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2013

A review of a school psychologist's roles in the implementation of an RTI system

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A REVIEW OF A SCHOOL PSYCHOLOGIST'S ROLES IN THE

IMPLEMENTATION OF AN RTI SYSTEM

An Abstract of a Thesis

Submitted

in Partial Fulfillment

of the Requirements for the Degree

Specialist in Education

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May 2013

ABSTRACT

As schools continue to move into this era of accountability, they must consider system level changes that will address the needs of students as a whole. Using the problem solving model through a system of Response to Intervention (RtI), schools can use data to monitor discrepancies between expectations of learning and actual student outcomes. Not only can individual student data be used to problem solve about students but also, aggregated data as a whole can help inform system level decision making to reach accountability goals. Moving to a system of RtI takes many system level changes that can be daunting for school personnel. Often the system level skills and knowledge of a school psychologist are underutilized in this process. School psychologists can play a role throughout the planning, implementation, and evaluation stages of RtI by providing guidance through professional development, data mentoring, and program evaluation. A review of the literature helps support school psychologists in these roles as well as provides guidance about how to facilitate change to an RtI system.

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This Thesis by: Leigh Ann Thul

Entitled: A Review of a School Psychologist's Roles in the Implementation of an RTI System

has been approved as meeting the thesis requirement for the

Degree of: Specialist in Education

3/14/13

Date   Dr. Skaar, Chair, Thesis Committee

3/14/13

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3/14/13

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CHAPTER 1

INTRODUCTION

Federal legislation such as No Child Left Behind (NCLB) and the reauthorization

of the Individuals with Disabilities Education Act (IDEA) has mandated increased

accountability for school systems. This accountability means school systems must

demonstrate that they are educating all students through the provision of measurable,

positive outcomes. Outcomes must be the product of evidence based practices as well as

students' access to academic content that is challenging (No Child Left Behind Act of

2001 (20 U.S.C. 6301 Sec. 1001(9), 2001). Both NCLB and IDEA have identified the

problem solving method as one of the best ways to achieve improved student outcome

(Curtis, Castillo, & Cohen, 2008). The problem solving method includes asking a series

of questions to guide thinking about a problem. These questions include (1) Is there a

problem and what is it? (2) Why is the problem happening? (3) What can be done about

the problem? (4) Did the intervention work? (Tilly, 2008). The first question requires

problem solvers to define problems as the difference between expectations and current

actions (Tilly, 2008). The purpose of the second question is to identify interventions that

are linked to the problem and have a high likelihood of successful outcomes (Tilly,

2008). The third question requires implementing environmental modifications connected

to the problem to help remediate it (Tilly, 2008). Lastly, the fourth question requires

individuals to monitor the effectiveness of the intervention chosen to remediate the

problem (Tilly, 2008). Traditionally, this type of problem solving model has been used to

solve individual student learning problems; however, the problem solving method can

also be applied at a system level to increase the academic outcome of the whole system. At a school-wide level, implementation of a Response to Intervention (RtI) system is the prominent way that system-wide problem solving is currently being employed. In a study conducted by Hoover, Baca, Wexler-Love, and Saenz, (2008) survey data completed by state special education directors indicated that 28 states were already implementing RtI while 16 states were in the planning stages for its implementation at a state level. This study received survey data from 44 of 51 states (the District of Colombia was included separately) providing evidence that RtI is becoming a widespread practice across the country.

CHAPTER 2

DEFINING RESPONSE TO INTERVENTION

Building on the problem solving model, Gresham (2007) explains that "RTI is based on the notion of determining whether an adequate or inadequate change in academic…performance has been achieved because of an intervention" (p. 10). Kurns and Tilly (2008) build on this description by expanding to a three part working definition of RtI. They state that RtI is the practice of (1) providing high quality instruction/intervention to students while (2) using their learning rate and level of performance to make important educational decisions through (3) high quality instruction that is matched to a student's need. High quality instruction must be a practice that has been demonstrated (through scientific research) to produce high learning rates for most students. Using learning rate and level of performance refers to monitoring a student's growth on a specific dimension of an academic skill and comparing the student's progress to expected performance. Based on the monitoring data, educational decisions are made about the intensity and duration of interventions necessary for the student to make progress towards an expected educational standard or towards possible need for a special education evaluation (Kurns & Tilly, 2008).

Though applications of RtI at the secondary level are the subject of much new research, RtI is typically associated with the early elementary grades. Vaughn and Fletcher (2012) outline three reasons for this association:

> …(1) much of the research on screening, assessment and intervention has been conducted in kindergarten through third grade, (2) Reading First provided about $1 billion in funding for screening, progress monitoring, and multitiered intervention practices in high-poverty, underperforming schools nationally,

providing a jump start to the implementation of RTI-type models in kindergarten through third grade, and (3) the emphasis on prevention established a priority at the early grades with little consideration for what RTI might mean in the older grades (p. 2).

Because the majority of the literature found and reviewed for this paper was focused on RtI practices within the elementary school, the focus of the paper is largely on RtI in the elementary setting. Where possible, when research was able to be found, applications and implications for RtI practices within the secondary setting will also be discussed; however, the reader is cautioned about extrapolating suggestions for elementary practices to secondary grades as the research that was able to be found suggests that RtI may look very different in the secondary setting.

Within all levels of a school setting, RtI is usually depicted as a triangle in which 80% of a student population typically responds to core instruction (the curricula taught within the classroom), 15% of a student population typically responds to the addition of supplemental instruction (i.e. small group interventions for a "boost" in a specific need area), and 5% of a student population typically responds to the further addition of intensive instruction (i.e. one-to-one instructional time focused on a certain skill; Brown-Chidsey & Steege, 2010; Ikeda, Neessen, & Witt, 2008). To determine what type of instruction (core, supplemental, or intensive) a student requires, data must be collected about the student's academic achievement. The addition of supplemental or intensive instruction in an elementary setting should have the ultimate goal of helping the student gain enough skills to meet an educational standard solely by receiving core instruction. This goal means that crucial components of RtI include movement between the levels of instruction and data collection about a student's performance. Brown-Chidsey and

Steege (2010) describe data as the only pathway between each tier, emphasizing its importance in the RtI system. In a secondary setting, Vaughn and Fletcher's (2012) empirical study with sixth through eighth grade students provided evidence for the notion put forth by Fuchs, Fuchs and Compton (2010; as cited by Vaughn and Fletcher (2012)), that it is not necessary for students to "'pass through'" consecutive levels of interventions; rather, students can be placed into the intervention at the level of intensity necessary based on their current reading achievement scores (p. 11). Though data is still necessary for monitoring students' progress within the intervention, it is not as necessary for determining the level of intervention needed by a student (Vaugn & Fletcher, 2012).

A system of RtI not only provides data about individual student's learning and needs, but also provides data at a system level to help schools demonstrate federally mandated accountability. By aggregating and monitoring all students' learning through the data collected in an RtI system, schools can identify how best to align resources to improve achievement as well as identify how effectively the general system is meeting the needs of all students (Ikeda et al., 2008). With this tiered system, the problem solving model is not only used to analyze individual student problems, but can also be used to identify, analyze, and remediate problems at a system-wide level.

School systems that utilize RtI understand that using interventions and data at a systemic level can impact more students' outcomes than focusing on child-specific problems (Knoff, 2008). Brown-Chidsey and Steege (2010) describe how RtI provides for the screening and monitoring of all students so that those needing additional assistance are provided intervention right away. This contrasts past models of student

assessment which assumed that students were performing satisfactorily unless otherwise identified. As Ikeda et al. (2008) describe, "…in the era of No Child Left Behind (NCLB), school administrators and teachers do not have the luxury of waiting until failure occurs then lamenting, '"We should have intervened 2 years ago!"' (p. 105). Through early identification of students' learning problems in an elementary setting, assistance can be provided to help the student get back on track with typical peers and also prevent further problems. RtI's foundation in using data and early intervention can also help limit the number of students who receive special education services and allow for more diverse needs to be met in the general education setting.

Using data to inform student and system level decision making is one of the biggest systems level changes that schools must implement when moving to a system of RtI. This means understanding how to choose the correct tools for data collection and analyzing this data in order to make decisions. Implementation of RtI also requires many other system level changes including building consensus among staff in support of RtI, providing continued support and monitoring for school staff once RtI has been implemented, and evaluating the system on a regular basis to ensure its sustainability. For many schools, the systems level changes that must occur to implement RtI successfully can be daunting. A systems level resource that many school leaders often underutilize is the knowledge and skills of their school psychologist. Curtis, Castillo, and Cohen (2008) indicated that one outcome of the 2002 Multisite Conference on the Future of School Psychology was a proposal for a change in school psychology's foundational core. This shift proposed that school psychologists move away from the medical model

of special education where child-centered problems are the focus towards a public health model where problem prevention as well as system level assessment and intervention are the a foci. This shift provides support for school psychologists' roles within RtI implementation.

This paper will describe necessary factors to consider when conducting systems change within a school; specifically factors in the context of the implementation of system-wide RtI. It will also identify ways in which school psychologists' skills and knowledge can provide leadership in the system level reform necessary for successful implementation of RtI. The roles that will be discussed are: professional development leader for fostering consensus and understanding of the RtI model, data mentor to staff members throughout implementation of RtI (including facilitating planning through needs assessment, building support and understanding for formative assessment, and providing guidance for the collection and analysis of data), and program evaluator for monitoring the implementation and sustainability of RtI. It is important to note that a school psychologist can provide leadership at all stages of RtI implementation beginning in the planning stages and continuing through evaluation stages.

CHAPTER 3

FOSTERING CONSENSUS FOR RTI THROUGH
PROFESSIONAL DEVELOPMENT

An important first step in beginning the change towards RtI is building consensus.

Brown-Chidsey and Steege (2010) describe consensus in the context of RtI as "the extent

that all the educators in the school…agree that RtI will be helpful for all of its students"

(p. 139). This concept is necessary so that all stakeholders in the educational system

understand the rationale behind RtI and what beliefs they must hold for RtI to succeed.

With the goal of bettering all student outcomes, school leaders recognize that it is

important to focus on systems-level interventions rather than child-specific problems

(Knoff, 2008). In implementing RtI in both elementary and secondary settings, a school

psychologist can first fill the role of professional development leader with a focus on

fostering consensus.

One way to work towards building consensus is providing preliminary

professional development to stakeholders in the school system to educate them about the

core components and principles of RtI. Brown-Chidsey and Steege (2010) outline a list

of principles that staff members must accept in order for RtI to be successfully

implemented in a school. These principles are presented in Table 1. Notice all principles

have an underlying theme (rooted in the problem solving model) that shifts belief away

from a child-centered view of educational problems to a systemic view that analyzes the

interaction between teaching and learning informed through data-based decision making.

Table 1

Core Principles Underlying Response to Intervention

1. All children can learn.

2. All children have a right to an efficacious education.

3. Not all children have disabilities, but they all might need extra help at various times as they make their way from kindergarten through grade 12

4. Differentiating instruction for individual students is an important part of general education

5. Education outcome data are effective tools for determining what types of extra support a student needs.

6. Multi-tier standard protocols and problem-solving methods are effective ways of addressing the learning needs of all students.

Note. Source: Brown-Chidsey & Steege (2010)

A school psychologist has the training and understanding of RtI necessary to provide professional development to build consensus among staff members. Godbar (2008) provides support for this concept stating that school psychologists are both content and communications specialists. Pertaining to RtI, school psychologists are content specialists because they understand concepts such as student learning, school reform, and student educational and psychological problems (Godbar, 2008). School psychologists are communications specialists because they have connections to stakeholders at many levels including teachers, families, and district leaders. Having connections at each of these levels provides insight into the systems level issues facing the school that may affect the implementation of RtI. Using these strengths, a school psychologist is in a

position to provide professional development to many stakeholders in the educational system in order to build consensus about the implementation of an RtI system.

To foster consensus, school psychologists must have knowledge of the components necessary to deliver professional development that is both high-quality and effective. In the early stages of implementation of RtI, building consensus can be difficult due to the shift in focus away from child-centered problems towards a more problem solving, system-level approach (Knoff, 2008). Without high-quality, effective training on RtI principles and expectations, it cannot be expected that RtI will be implemented with success. Garet, Porter, Desimone, Birman, and Yoon (2001) give several suggestions for providing high-quality, effective training from their empirical study that analyzed data from national teacher evaluation surveys (Teacher Activity Survey, part of the Eisenhower Professional Development Program). In providing training, school psychologists must focus on both the structural and core features of professional development. Structural features refer to the design characteristics of the professional development activities, while core features refer to the substance of the professional development (Garet et al., 2001). Three structural features that school psychologists must focus on include the type of professional development activity provided, the duration of the activity (including the initial time spent on training and follow-up supervision), and the degree to which the activity allows for collective participation of groups of teachers from the same grade/department or same school.

Addressing the first structural component, Garet et al. (2001) found that provision of professional development activities that were considered reform activities (i.e. study

groups, mentoring, coaching) were more positively correlated with an increase in teachers' knowledge and skills than traditional professional development activities (i.e. workshops, conferences). This finding was also linked to results that showed that longer duration of professional development, including more contact hours with a trainer, had a positive correlation with teachers' knowledge and skill acquisition. These two findings were related because typically provision of professional development in the form of study groups or mentoring resulted in longer duration of supervision with more contact hours. In addition, reform types of professional development were typically provided within the daily lives of teachers (as opposed to a workshop where teachers were off-site), providing for more participation among departments or grade levels. This collective participation was the third structural factor found to be positively correlated with increased knowledge and skills (Garet et al., 2001).

The study by Garet et al. (2001) also provided support for focus on three core features of professional development. These core features included focus on content, opportunities for active learning, and promoting coherence among teachers' experiences and expectations. All three of these factors were found to be positively correlated with increases in teachers' knowledge and skills (Garet et al., 2001). Focusing on content referred to providing professional development not only about the knowledge that students must acquire, but also the processes by which students learn the content. Promoting active learning within professional development meant the extent to which teachers engaged in meaningful discussion, planning, and practice of the skills that they learned. Lastly, focus on coherence among teachers' experiences and expectations

referred to making connections between specific professional development activities as well as connecting the activities to teachers' goals and state and district standards.

The Garet et al. (2001) study offers implications for the RtI, consensus-building professional development that school psychologists can provide. Though workshop-type professional development may be necessary to present initial explanations and concepts of RtI, more reform types of professional development should be provided as follow up. The Collaborative Strategic Planning model is one method (supported by systems change literature) of providing RtI system specific professional development to all stakeholders in the school (Stollar, Poth, Curtis, & Cohen, 2006; Stollar et al., 2008). Collaborative Strategic Planning (CSP) is

> …the application of a structured five-step problem-solving process to building-
> and district-level variables… [which] serves as both the primary process for
> guiding systems change to a three-tier model and the primary skill to be learned
> by those working in systems that are moving toward implementing such a model
> (Stollar et al., 2008, p. 87).

Because CSP can be used as both the training process as well as the end goal of three-tier (RtI) system wide change, it is an ideal model for school psychologists to use after initial, workshop-type professional development has been completed. A very important concept that must be understood by both the school psychologist (in the professional development role) as well as the staff receiving the professional development is that CSP is a process, not an event. As an event, CSP is cyclical in that it does not end when one strategy or procedure has been implemented, it continues and evolves as new systems level and student level problems arise (Stollar et al., 2006). Since CSP is the process as well as the end goal of training, the best way to learn it is

through practicing in an environment of professional development. This includes learning

the steps of CSP and how to use data to answer questions at each of these steps (Stollar et

al., 2006). As professional development leader, school psychologists can facilitate

learning about both what CSP is and how to use it.

To understand CSP, school psychologists must first teach school staff members

about each of the steps and provide preliminary practice using data at each step. The first

step of CSP is problem identification. According to Stollar et al. (2006), the overall

question asked in this step is "How effective is the school at promoting positive outcomes

for its student body?" (p. 184). This focus at the very beginning of the process brings to

light the federally mandated school accountability and helps focus school teams on

changing their behaviors and instruction to evidence-based practices that will help them

close achievement gaps. The primary purpose of this step is to show, through data, that a

discrepancy exists between desired student outcome and actual student outcome at a

systems level. As a professional development leader, a school psychologist's primary

role in the first step of CSP is to teach staff members about what problem identification

means and help them learn to develop objective and measurable problem identification

statements based on system-wide, student outcome data.

The second step of CSP is problem analysis or "…generation of relevant

questions about how and why the identified problem may be occurring as well as

collection of assessment data to answer the generated questions" (Stollar et al., 2006, p.

185). School psychologists in the role of professional development leader must teach

staff about the necessity of problem analysis and how to ask clearly defined problem

analysis questions that are observable and measurable. The third step of CSP is goal setting. School psychologists in the role of professional development leader need to guide teams in how to set clear goals, based on data, that will anchor the development and evaluation of action plans (Stollar et al., 2006). The fourth step of CSP is plan development and implementation. In this step school psychologists must guide teams in how to create an action plan that addresses the identified problem and helps attain the identified goal. The last step in the CSP process is to conduct plan evaluation. Through monitoring both the implementation of the intervention and its effect on student outcomes, school teams can revise any part of the intervention by backing up to earlier stages of CSP to analyze data and create more goals. A school psychologist can help best facilitate CSP step five through fulfilling the role of program evaluator, a role that will be further discussed in the fifth chapter of this paper.

Collaborative Strategic Planning is an ideal way for school psychologists to provide high-quality, effective professional development that is specific to RtI. Due to CSP being a process that is taught through doing (as both the training process as well as the end goal of three-tier (RtI) system wide change), used as a professional development method it employs many of the structural (design characteristics) and core (substance) components described as most successful in the Garet et al. (2001) study. The structural features discussed by Garet et al. (2001) included the type of professional development activity provided, the duration of the activity (including the initial time spent on training and follow-up supervision), and the degree to which the activity allows for collective participation of groups of teachers from the same grade/department or same school.

Through CSP, teachers are provided a reform-type activity (as opposed to a traditional (i.e. workshop) type activity) in that they work with data to learn about a new process as well as how to successfully use it. The duration of the training is extensive due to the cyclical nature of CSP, and groups of teachers collectively participate in the process throughout the school system. Core features discussed by Garet et al. (2001) included a focus on content, opportunities for active learning, and promoting coherence among teachers' experiences and expectations. Through facilitating CSP, school psychologists can provide a focus on the content of RtI and problem solving, provide opportunities for active learning by allowing school teams to apply CSP information to the implementation of RtI within their own system, and promote coherence among teachers' experiences and expectations through guiding teams of teachers through the same problem solving experiences. By teaching staff members about the CSP process as well as guiding them through it, school psychologists can help foster deeper consensus for the implementation of RtI.

CHAPTER 4

PROVIDING DATA MENTORING THROUGHOUT IMPLEMENTATION OF RTI

Once it has been decided that RtI will be implemented and consensus has been fostered, a school teams need to gain a better understanding how RtI will fit into their existing system and build the infrastructure needed for it to be in place. As part of these processes, a school psychologist can fill the role of data mentor or, "…the person with expertise in collecting, organizing, displaying, analyzing and interpreting data…[someone to] assist all in understanding and using data" (Kurns & Tilly, 2008, p. 15). VanDerHeyden (2009) points out that without someone in the role of data mentor, school systems have a tendency to over assess and under intervene. Because of this tendency, the data mentor must help the system establish assessment practices that are efficient, effective, and produce usable data since in an RtI system, data is the most important tool in monitoring individual student's progress as well as the progress of a system as a whole. Godbar (2008) makes the case that a school psychologist in the role of data mentor is very fitting since developing and monitoring the success of interventions for students in special education is a daily job task. She suggests that the role of system level data mentor is a "logical outgrowth" of a school psychologist's typical work (p. 2195). Three ways school psychologists can provide data mentoring to school staff include facilitating planning for RtI through conducting needs assessment, aiding in building understanding and support for formative assessment, and providing guidance on the collection and analysis of data (Godbar, 2008). By fulfilling these roles,

school psychologists can also better facilitate the first and second steps of the Collaborative Strategic Planning process, problem identification and problem analysis.

Facilitating Planning and Implementation of RtI through Conducting a Needs Assessment

The first way school psychologists can fulfill the role of data mentor is to help schools conduct a needs assessment. Nagle and Gagnon (2008) state that "a needs assessment is a systematic process of collecting and analyzing data in order to identify needs and problems to be addressed in program planning, development, and modification" (p. 2207). Before a system of RtI can begin, it is necessary to understand the needs of the system in which it is being implemented. In essence, it is important to consider the question posed by Stollar et al. (2006) in the problem identification step of Collaborative Strategic Planning (CSP) "How effective is the school at promoting positive outcomes for its student body?" (p. 184). Conducting a needs assessment can inform both where there are discrepancies between desired outcomes for students and actual student performance and possible reasons why these discrepancies may exist. In this way, it can help facilitate the first two steps of the Collaborative Strategic Planning (CSP) process, problem identification and problem analysis. By helping schools conduct a needs assessment, school psychologists can more thoroughly specify the needs of the system and how RtI can help meet those needs.

Nagle and Gagnon (2008) state that needs assessment information collected should be both quantitative and qualitative. They suggest that in order to conduct a multifaceted assessment it is important to use multiple measures from multiple informants. Collection of existing quantitative social indicator data such as student

demographics, (i.e. race, socioeconomic status, and parent education levels), enrollment, and attendance can provide insight into certain patterns and discrepancies in student achievement (Godbar, 2008; Nagle & Gagnon, 2008). Systematic observations in classrooms, meetings, and other facets of the system can also provide valuable quantitative needs assessment data.

Qualitative information should also be a part of the needs assessment. Survey data such as questionnaires and interviews can help generate and/or answer relevant questions about why a discrepancy in expectation and outcome is occurring. Nagle and Gagnon (2008) suggest that the development of questionnaire items requires a certain degree of expertise. Given the support for school psychologists in the role of data mentor (Godbar, 2008), school psychologists are likely candidates for monitoring the development of needs assessment questionnaires. To create useful questionnaires, items need to be structured so that data collected from them are easily quantifiable. Structured questionnaires include questions that are easy to understand, elicit the desired information, and motivate respondents to participate (Nagle & Gagnon, 2008). To facilitate these criteria, the readability of the items needs to be taken into account as well as methods of controlling for social desirability in responding (Nagle & Gagnon, 2008).

Another qualitative method of data collection is interviewing. When conducting interviews, school psychologists as data mentors need to consider how they will ensure that information is gathered from a representative sample of stakeholders. If school psychologists are not conducting the interview themselves, then training staff members on how to create rapport and keep the interview pertinent to a specified topic is a

necessary data mentoring job task (Nagle & Gagnon, 2008). Lastly, narrative observations of relevant facets of the system can qualitatively inform needs assessments.

Needs assessment data collection can also take the form of a resource inventory. In looking ahead to the fourth step of the Collaborative Strategic Planning process, plan development and implementation, teams will need to match each hypothesized reasons for the identified problems with an improvement strategy and resources (Stollar et al., 2006). To help inform this later step, it is useful to gather information about existing school and community resources that can contribute to the implementation of RtI and other facets of system intervention (a process known as a resource inventory; Nagle & Gagnon, 2008). To conduct a resource inventory, it is necessary to survey service providers within the community and school district. Using survey techniques described above (questionnaires and/or interviews), it is essential to identify who is providing the service, what criteria clients receiving the service must meet, and the capacity of the service program (Nagle & Gagnon, 2008). One of the outcomes of a resource inventory can be identifying services that were previously unknown. By gaining a better idea of what resources are already available in a school district or community, data mentors can consider this information in CSP step four when it is necessary to match hypothesized reasons for problem occurrence with improvement strategies and resources.

Using both quantitative and qualitative needs assessment data methods, school psychologists can help teams identify and analyze the needs of their system. Needs assessment data can also help teams gain a better understanding of what resources exist to help implement RtI and other system level interventions. Before a system of RtI can be

successfully implemented it is necessary to gain a better understanding of the system in which it is being implemented. By assisting in this important process of data collection, school psychologists can better facilitate the first two steps CSP (problem identification and problem analysis) before RtI is implemented to help gauge how it will best serve the needs of the school.

<div align="center">Building Understanding and Support for Formative Assessment</div>

The second way that school psychologists can fulfill the role of data mentor is to help increase teachers' and administrators' understanding of the use of formative assessment to create the original quantitative data used within a problem solving model. This understanding is important at both the elementary and secondary levels. Many teachers and administrators are familiar with summative data collected that is collected for external purposes (i.e. NCLB proficiency data) but are less familiar with collecting and interpreting formative data that can be used to make instructional decisions within a classroom and school (Godbar, 2008). To help build support for the use of this formative data, Schaughency, Alsop, and Dawson (2009) state that it is important to emphasize formative data's functionality. Functionality in this case is defined as the ability to improve the professional decision making process by reducing the number of inaccurate conclusions reached, raising awareness of problems at a systems level, and accurately understanding the cause of learning problems for individual students. Formative data is also functional because it can also be used as a tool of communication with both internal (i.e. parents, teachers) and external (i.e. administrators) stakeholders (Schaughency et al., 2009). Using formative data allows teachers, parents, administrators, etc. to

communicate and monitor students' progress towards individual goals as well as monitor systems' progress towards accountability goals. This type of data informs the problem solving process by providing data that shows a discrepancy between expectations and current performance (problem identification).

By assessing key academic outcomes, it is possible to see if students are reaching necessary benchmarks for ultimate mastery of skills (VanDerHeyden, 2009). This type of formative assessment based on the learning sequence of skills is called universal screening: a key component of Tier 1 of an elementary RtI system. By monitoring students' progress with universal screening it is easier to discover and remedy students' current learning problems as well as provide support to help prevent the occurrence of more complex learning problems later in a student's school career. VanDerHeyden (2009) uses a very helpful metaphor to describe the importance of using universal screening at an elementary level to find and remedy individual learning problems early on:

> Schooling may be compared to running a marathon. Early in the schooling process there seems to be such a long way to go and such a lot of time to get there that a slow pace may not seem particularly problematic or alarming. As such, it may be easy to fall behind. Runners who fall only slightly behind on each mile during the first half of a marathon will find themselves having to attain impossible paces in the later miles to meet their end goal. Similarly, instruction builds across the years of schooling, and failing to meet expected learning outcome goals and to grow at the expected pace signals the need for intervention early, before the deficits accumulate and create insurmountable obstacles to the final goal (p. 35).

By using formative assessment, staff members can assess their students' learning on a sequence of academic skills. This assessment can then inform teachers about students' instructional needs and also help pinpoint those students who may need early

intervention to prevent further learning difficulties. This assessment data can also be analyzed on a systems level and inform school teams about necessary system change. This aggregated data can be used to define a discrepancy between the achievement of the system as a whole and the desired academic outcomes (helpful in the problem identification step of CSP). When helping school staff members to understand the importance of the use of formative data, it is useful to remind them about its functionality. Formative data can help staff members improve their professional decision making process by reducing the number of inaccurate conclusions reached, raising awareness of problems at a systems level, and accurately understanding the cause of learning problems for individual students. (Schaghency et al., 2009). Ultimately, formative data can be used as a communication tool between all school stakeholders to convey students' progress towards individual and systems level goals.

Providing Guidance about the Collection and Analysis of Universal Screening Data

The third way that a school psychologist can provide data mentorship is through helping schools begin using formative assessment in a systematic way: universal screening. Universal screening is "the systematic assessment of all children within a given class, grade, school building, or school district, on academic…indicators that the school personnel and community have agreed are important" (Ikeda et al., 2008, p.103). In an RtI system, this is the data collected in the first tier of the model. Universal screening not only informs teachers about their students' skills, but when aggregated, can also provide information about the school as a whole system (Ikeda et al., 2008). This way the school system can identify how well the general education curriculum is meeting

the needs of all students, as well as which students are at risk for academic failure and require further levels of support to meet expectations. In line with the core principals of RtI explained by Brown-Chidsey and Steege (2010), universal screening can help shift problem solving discussions away from child-centered problems towards examining the interaction between students and instruction. It can also inform RtI leadership teams engaging in CSP about problem identification and possible need for change within the school as a whole.

To begin a system of universal screening at the elementary level, schools must choose measures that meet several criteria. Ikeda et al., (2008) state that universal screening measures must be able to: "identify potential problem areas, help answer questions about efficacy of the core program, be disaggregated and used by teachers, be easily administered to groups of students, be brief in administration time, be repeated over time, and be reliable" (p. 107). Curriculum Based Measures (CBMs) are the most widely used form of universal screening in an elementary system of RtI. They have an extensive research base providing evidence for reliability and validity as measures of achievement (Shinn, 2008). CBMs also meet criteria stated by Ikeda et al., (2008). The most important feature of CBMs is not that they come from a specific curriculum but that that the testing process is standardized and that test materials are of equal difficulty and representative of the curriculum being used (Shinn, 2008). CBMs should consist of six types of foundational tests: Reading CBM (measures words read correctly in 1 minute passages), Maze CBM (measures comprehension through multiple-choice, cloze reading technique on 3 minute passages), Spelling CBM (measures correct letter sequences on

words dictated to students orally), Written Expression CBM (measures correct word sequences and words spelled correctly on three minute writing probes with a story starter), Mathematics Computation CBM (measures math computation skills on two or four minute probes), and Math Applications CBM (measures math application skills on four minute probes; Shinn, 2008). These types of foundational CBMs should be considered as part of elementary universal screening because they are dynamic, meaning that they are designed to be sensitive to short term interventions, and are designed to assess change across various academic disciplines (Shinn, 2008).

To begin using CBMs as a universal screening tool in Tier 1 of an elementary RtI system, schools must engage in benchmark assessments of all students. This benchmark assessment typically happens three times per year (Shinn, 2008). By monitoring every student in a school system, schools can work towards improving educational outcomes at both the individual student level as well as on a system wide level. Looking at data on every student helps educators make decisions about which students need more interventions support (through Tier 2 and/or Tier 3 intervention) and also helps pinpoint areas for potential system change. For students who are not at-risk (making progress at a similar rate as peers or having skills at a level similar to their peers), benchmarking their skills three times a year will likely be sufficient. For students who show more need, CBMs can be used to strategically monitor their progress at a more frequent rate. Using CBMs more frequently helps to monitor whether an intervention is successful for a student and also when a student reaches a level of skill where intervention is no longer needed.

Preliminary findings from the Vaughn and Fletcher (2012) study indicate that the reliability and validity of universal screening measures used at an elementary level are not always transferred to a secondary level. However, their study indicated that reliable, valid, and efficient universal screening may be able to be obtained from state-level reading assessments already in place as part of a school's No Child Left Behind accountability system. In addition, oral reading fluency CBMs as well as reading comprehension CBMs (MAZE) were found to be reliable and valid; however, these measures were associated with much less change over time and the frequency of administration of these types of measures likely does not need to be at a level similar to elementary levels.

At a system level, whether in elementary or secondary, universal screening data can also be used to monitor the progress of a system as a whole. Just as universal screening data helps determine the success of the interaction between an individual learner and the instruction, system wide data can help determine the success of the interaction between learners as a whole and the curricula used in the school. Using universal screening data, a school psychologist can not only help schools problem solve at an individual student level but also about the curricula and instruction being used at a system wide level. In order for schools to be the most successful at a system-wide level, they need to work towards alignment between curriculum (what is taught), instruction (how it is taught), and assessment (how we know it was learned; Ikeda et al., 2008). This alignment can be a feasible system level goal when school psychologists help fill the role of data mentor by conducting a needs assessment before the implementation of RtI,

fostering teachers' understanding and support for formative assessment, and offering

guidance into the collection and analysis of universal screening data.

CHAPTER 5

FACILITATION OF PROGRAM EVALUATION FOR
ENSURING THE SUSTAINABILITY
OF AN RTI SYSTEM

As schools move past the initial stages of planning and implementing RtI,

evaluation of the system is essential in order to judge the success of RtI in meeting

system level goals, consider where more resources may be needed within the system, and

ensure RtI's sustainability (Curtis et al., 2008). Johnson, Hays, Center, and Daley (2004)

define sustainability as, "'the process of ensuring an adaptive prevention system and a

sustainable innovation can be integrated into ongoing operations to benefit diverse

stakeholders'" (p. 137). To ensure sustainability, summative and formative evaluations

are important in systems level change because they allow stakeholders to understand the

successes of a system as well as continuously reflect on areas of strength and weakness in

program implementation (Godbar, 2008). When schools reach the point of addressing

sustainability and conducting program evaluation (the fifth stage of the Collaborative

Strategic Planning (CSP) process introduced in chapter three), school psychologists can

best facilitate these procedures through fulfilling the role of program evaluator. Godbar

(2008) provides support for school psychologists in this role stating that training for

school psychologists closely matches the desired competencies of a program evaluator.

These competencies include understanding core research methods, understanding

standard evaluation practices, and having content expertise in their area of work. In some

ways, to be a successful program evaluator, a school psychologist must blend the roles of

professional development leader and data mentor. Helping teams conduct program

evaluation requires school psychologists to teach teams about the different types and purposes of program evaluation as well as how to collect and use data within the process.

Summative Evaluation

The first type of program evaluation that can be facilitated by school psychologists is summative evaluation. Davidson (2005) described summative evaluation as done primarily for the purpose of reporting outcomes of a program rather than for informing the improvement of the program itself. Boulmetis and Dutmin (2005) further parsed out summative evaluation by describing three possible purposes for conducting the evaluation. The first purpose is to determine the program's efficiency or the relationship between the program's costs and the end products. In this type of evaluation, the merit of the program is determined by whether resources invested in the program are being used in the most efficient manner possible. The second purpose of summative evaluation is effectiveness. Boulmetis and Dutmin (2005) describe this type of evaluation as answering the question, "'Did the activities do what they were supposed to do?'" (p. 6). In this type of evaluation, the merit of the program is judged by how successful the program was in changing the attitudes, knowledge, or skills of the clients for whom it was implemented. The third type of summative assessment described by Boulmetis and Dutmin (2005) is impact evaluation. This type of evaluation examines to what extent long-term and sustained changes occur in the population target by the program. In essence, this type of evaluation facilitates data collection about the sustainability of a program.

Considering program evaluation in the context of implementing a system of RtI, the data collected through a process of summative evaluation may be used to demonstrate that funding in the program returned a favorable outcome (efficiency), that continued funding is warranted (efficiency and/or effectiveness), that system wide student academic outcome goals are being reached (effectiveness), or to show that an RtI model is a better alternative than what was previously being employed by the school system (effectiveness and/or impact; adapted from Boulmetis & Dutmin,2005; Davidson, 2005).

In the role of program evaluator, a school psychologist can help teams decide which of the aforementioned types of evaluation to conduct by helping to define the types of questions they wish to be answered through the evaluation. Part of this decision may be made by considering to whom the program evaluation information is being disseminated. Schalock (2000) described the difference between promoters and stakeholders in a system. Promoters include "policymakers, funders, and consumers who are demanding results-based accountability, outcome reviews, and performance reporting" (p. 2). Stakeholders include "governing/corporate boards, policy analysts, administrators, and consumers who are increasingly having to respond to cost containment, service reforms, and practice guidelines" (p. 2). Going back to Godbar's (2008) argument that school psychologists are communication specialists in that they have connections to stakeholders at many levels (i.e. teachers, families, and district leaders), school psychologists are in an opportune position to help teams understand what type of information is needed by different levels of promoters and stakeholders when deciding the type of summative program evaluation to be conducted. Once the audience

and the purpose of the evaluation have been determined, school psychologists can then facilitate the collection of data pertinent to the specified evaluation. This data collection will be discussed further at the end of this chapter.

<center>Formative Evaluation</center>

The second type of program evaluation that can be facilitated by school psychologists is formative evaluation. Simply speaking, Davidson (2005) described this type of evaluation as "An evaluation for the purpose of improvement" (p. 17). Likely, throughout the process of summative program evaluation, there will be areas where outcomes were not reached and the need for improvement was identified. Davidson (2005) also states that this type of evaluation provides helpful information whether the program being evaluated is new and "'trying to find its feet'" or whether the program is mature and seeking to stay current with implementation strategies and procedures (p. 8). Besides informing a program about areas of improvement, formative program evaluation can also facilitate the monitoring of program fidelity. If it was revealed through summative evaluation that expected outcomes were not being achieved, one possible area to investigate further is the fidelity of the program delivery meaning, were the procedures of the program being delivered as intended (National Registry of Evidence-based Programs and Practices (NREPP), 2012).

To help address areas of improvement as well as the fidelity of implementation, it is helpful for school psychologists as program evaluators to guide school teams back through some of the steps of the Collaborative Strategic Planning (CSP) model at a more in-depth level. As stated previously, CSP is a cyclical process in that it does not end

when one strategy or procedure has been implemented, it continues and evolves as new systems level and student level problems develop (Stollar et al., 2006). Again, in some ways, to be a successful program evaluator, a school psychologist must blend the roles of professional development leader and data mentor. Guiding school teams back through steps of the Collaborative Strategic Planning model requires school psychologists to continue to teach school staff members about each step, as well as use the school's own data collected through RtI, summative evaluations, and other methods to identify and improve weak areas within implementation. These improvements can be made by coaching school teams through the structured problem solving process.

To begin, school psychologists in the role of program evaluator should direct team members' attention back to the third step of CSP, goal setting. Through a summative evaluation, returning to these goals and evaluating whether each one was met will likely have been completed. Once areas of weakness within the outcomes of each goal are identified, they can provide a first step in starting formative assessment including further facilitation the first two steps of CSP, problem identification and problem analysis. This can help program evaluators operationally define new problems in the areas defined as weakness and generate hypotheses as to why these new problems may be occurring. By using new data collected through problem analysis to continue through the Collaborative Strategic Planning (CSP) model, school psychologists as program evaluators can facilitate the setting of new goals and help in developing new action plans. Using CSP as a cyclical teaching and evaluation model, as intended, program evaluators and school teams ensure that weaknesses in the system of RtI implementation are

continually addressed. This way, both the success of RtI in meeting system level goals and the consideration of where more resources are needed are always at the forefront of the implementation of RtI. This continued focus on improvement within the system is important to facilitate sustainability in changing to a system of RtI. Sustainability is ultimately the most important goal program evaluation because it means that RtI has been "integrated into ongoing operations" within the school system (Johnson et al., 2004, p. 137).

No matter which type of evaluation is being conducted, summative or formative, program evaluation relies on a program evaluator to use data in answering the proposed questions. Schalock (2000) urged program evaluators to keep in mind two key concepts when considering data collection, data relevance and data quality. Data relevance refers to how relevant the data are to the evaluation's purpose. Often times, many forms of data are available to program evaluators but focusing on what will be the most relevant to the purpose of the evaluation saves precious time and money when conducting program evaluation (Schalock, 2000). In discussing data quality, Shalock (2000) suggested that program evaluators keep in mind three criteria for data: "...complete (available for all program participants), timely (current and cover the period of the analysis), and accurate (reflect actual events and characteristics)" (p. 51).

When considering relevant and quality data, collection methods as part of program evaluation can sometimes look similar to those used in conducting needs assessment before a change to a system is put into place (see Chapter 4 of this paper). Schalock (2000) suggests that program evaluation data should be both quantitative and

qualitative, while Godbar (2008) gives several suggestions for both types. Quantitative data could include things like the universal screening data collected through a system of RtI, original needs assessment data collected at the outset of the system level change, student demographic information, student attendance information, and achievement test scores (Godbar, 2008). Qualitative data could include questionnaires, surveys, interviews, observations, and focus groups (Godbar, 2008). As long as data being collected meets the criteria of being relevant and of proper quality, they will likely help inform a successful program evaluation.

In the role or program evaluator, a school psychologist's first focus needs to be guiding teams towards which type of program evaluation to conduct, summative, formative, or both. Summative evaluation can help stakeholders in the system see successes when system level changes (such as RtI) occur. Summative evaluations can also help teams show areas of weakness in system level implementation and can spur the need for a formative evaluation. In formative evaluation, it is most important for school psychologists to guide teams back through a structured problem solving process (such as Collaborative Strategic Planning) in order to operationally define new problems, analyze why these problems may be happening, set new goals for the system, and create implementation plans to help the system meet these new goals. Whether conducting summative or formative program evaluation, school psychologists need to rely heavily on data. Keeping in mind the relevance and quality of data (Schalock, 2000) and also quantitative and qualitative methods (Godbar, 2008), school psychologists can help school teams collect data that will help answer the specific questions asked within the

program evaluation. In the role of program evaluator, it is in some ways necessary for a school psychologist to blend the roles of program evaluator and data mentor in order to teach school teams about program evaluation as well as facilitate the use of data throughout the process.

CHAPTER 6

CONCLUSION

As schools continue to move into this era of accountability, they must consider

system level changes that will address the needs of all students. Using the problem

solving model within a system of Response to Intervention (RtI), schools can use data to

monitor discrepancies between expectations of learning and actual student outcomes.

Not only can individual student data be used to problem solve individual discrepancies

but aggregated data can help inform system level decision making to reach accountability

goals (Ikeda et al., 2008). Moving to a system of RtI takes many system level changes

that can be daunting for school personnel. Often the system level skills and knowledge of

a school psychologist are underutilized in this process; however, school psychologists can

play a role throughout the planning, implementation, and evaluation stages of RtI by

providing guidance through professional development, data mentoring, and program

evaluation.

By guiding professional development, school psychologists can help ensure that

school staff understands the RtI process as well as the underlying beliefs (Brown-

Chidsey, & Steege, 2010) that must be held to make RTI successful. By keeping in mind

both the effective design characteristics and the effective content topics of professional

development put forth by the Garet et al., (2001) study, school psychologists can be sure

to offer high quality professional development. Through data mentoring, school

psychologists can help schools understand the needs of their system through needs

assessment, build understanding and support among school staff for the use of formative

assessment, and provide guidance in the collection and analysis of universal screening data.

Lastly, school psychologists can provide direction for continued improvement of the RtI process through conducting program evaluation. By helping teams decide which type of program evaluation to conduct; summative, formative, or both, school psychologists can help teams demonstrate overall positive outcomes of the RtI system (summative) as well as guide teams through continued problem solving of the weak areas of system level implementation (formative). By helping school teams conduct program evaluation on their RtI system, school psychologists can promote the ultimate goal of the system change: a sustainable RtI process that is "integrated into ongoing operations" within the school system (Johnson et al., 2004, p. 137).

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