Clearing the Confusion: Response-to-Intervention as a Set of Principles

Aaron C. Barnes and Jason E. Harlacher
School Psychology Program
University of Oregon

Abstract

Response-to-Intervention is a new method of service delivery being implemented in schools. However, the lack of emphasis on the flexible nature of Response-to-Intervention and the varying descriptions of its features within the literature may lead to confusion among school professionals. In order to provide more uniformity among the literature, 5 key principles and 4 features of Response-to-Intervention are outlined. Response-to-Intervention is described as a set of principles that do not change, but from those principles stem features that vary in their presentation between models.

Response-to-Intervention (RTI) is an innovative approach to service delivery within schools. As practitioners became increasingly frustrated with current practices (i.e., waiting for a student to fail before services can be provided) and were faced with the pressure of No Child Left Behind, they acknowledged that a more proactive and preventative approach was needed (National Association of State Directors of Special Education (NASDSE), 2006). RTI was offered as a way to answer this need. Defined as a multi-tiered method of service delivery in which all students are provided an appropriate level of evidence-based instruction based on their academic needs, RTI involves frequent assessment of students' progress, data-based decision making, and placement of students within a range of instructional supports. Gresham, VanDerHeyden, and Witt (2005) eloquently summarize the philosophy of RTI as finding "which children need what services, delivered with how much intensity."

With the adoption of a model that is different from traditional practices in many ways, practitioners would undoubtedly benefit from consistent guidance and a clear description of RTI. Such clarity would allow for a more effective and sustainable model, as there is recognition that a thorough understanding of RTI is needed for success (Ikeda et al., 2002; NASDSE, 2006). The purpose of this paper is

Correspondence to Jason E. Harlacher, University of Oregon, School Psychology Program 5208 University of Oregon, Eugene, OR 97403; e-mail: jharlach@uoregon.edu

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to address this concern by clarifying the principles of RTI from its features, and to illustrate the flexible and diverse nature of the model.

**Concerns with RTI**

Many schools are adopting RTI models in order to prevent reading difficulties among students, identify those at-risk for academic failure early on, and to create a better instructional match for students (Brown-Chidsey & Steege, 2005; NASDSE, 2006). However, as RTI crosses the “research to practice” gap, we fear it is being presented as a narrow and constricted model instead of the flexible and variable *set of principles* that it is. For example, Fuchs and Fuchs (2005) describe a two-tiered model of RTI, but there is little emphasis in their writing that RTI can look different in different locations. Brown-Chidsey and Steege (2005) describe another application of RTI, but they do not make clear that RTI may be implemented differently in different settings. Although such efforts to answer the question, “What is RTI?” are laudable, a sole emphasis on what RTI “looks like” may leave schools without knowledge of the principles of RTI.

Even if practitioners understand the principles of RTI, they may find varying descriptions of the essential features needed to implement an RTI model. For example, some authors describe three-tiered models of RTI (e.g., National Joint Committee on Learning Disabilities (NJCLD), 2005), whereas others describe two (Fuchs & Fuchs, 2005) and four tiers (Ikeda et al., 2002). Also, authors report a difference in the main features of RTI. Brown-Chidsey and Steege (2005) write that RTI’s core features are high-quality instruction, frequent assessment, and data-based decision making, yet NASDSE (2006) describe its core features as multiple tiers of intervention, a problem-solving orientation, and the use of an integrated data collection system. Although there is much overlap among authors and a general agreement that RTI is valuable (NASDE, 2006; NJCLD, 2005), such seemingly contrasting information may confuse practitioners about which features of RTI are needed and which description of RTI is “right.” A description of the principles of RTI, and how these principles translate into features, will aid in avoiding this confusion.

As schools transition from traditional models of service delivery to the use of RTI, there is concern that their understanding of RTI should encompass both the *why* and the *how* (Ikeda et al., 2002). On one hand, describing only what RTI looks like (i.e., the features) avoids the critical discussion of why RTI is needed (i.e., the principles). On the other hand, describing only the principles of RTI leaves schools with little guidance as to what features are needed. The purpose of this article is to address that concern by providing practitioners with an understanding of RTI as a *set of principles* that do not change, but from
those principles stem critical features that may look different from one site to another. First the principles of RTI are described. From there, the main features of RTI are presented and examples in the literature are used to illustrate how the features may vary while staying true to the principles.

Principles of RTI

RTI embodies a few central principles that were identified by analyzing the collective literature. Articles that discussed the general themes of RTI written by experts in the field, such as Fuchs and Fuchs (2005) and NASDSE (2006), as well as articles that provided concrete examples of either complete RTI models (e.g., Brown-Childsey, & Steege, 2005) or components of an RTI model (Vaughn, Linan-Thompson, & Hickman, 2003) were reviewed. Consistent principles and features discussed within these works were identified, and although the literature review was not an exhaustive review, 5 clearly defined principles of RTI were identified: (1) a proactive and preventative approach to education, (2) ensuring an instructional match between student skills, curriculum, and instruction, (3) a problem-solving orientation and data-based decision making, (4) use of effective practices, and (5) a systems-level approach. All of these principles are entwined with each other, so it is hard to discuss each separately. Instead, we emphasized the general philosophy behind RTI and briefly highlighted each principle in doing so.

RTI is more than just a way to identify students with disabilities. Instead, it is a way to ensure better academic outcomes for all students (Cummings, 2006). There is a focus on prevention, early intervention, and proactive action in order to provide students with adequate instruction before they show deficits in their skills (principle 1) (NASDSE, 2006). In preventing academic deficits, schools must ensure students have an appropriate match between their skills, curriculum, and instruction. If students are struggling, they are provided additional instruction that better suits their needs (principle 2).

Schools adhere to a problem-solving orientation, meaning that they follow a heuristic model in which problems are identified, corresponding interventions are implemented, and their effects are evaluated to determine if the problem is corrected (Deno, 2002; Shinn, 2002) (principle 3). Problems are defined as the gap between where students are currently performing compared to where they are expected to perform. Less focus is placed on “within-student” characteristics and, instead, a greater focus is on “controllable” environmental variables and instruction (NASDSE, 2006). Teachers and staff provide students with instruction that is evidence-based (principle 4), and progress
monitoring and data are used to determine how students are responding to their instructional placements. If a student needs different instruction, information is provided quickly to make that determination (principles 3 and 4); consequently, assessment, instruction, and feedback are intricately tied together (Harn, 2006). Finally, a systems-level approach (i.e., applying the principles of RTI to the entire school or "system", as opposed to only one student or one classroom) is used to monitor if the whole-school's effectiveness at closing the gap between expected- and current-levels of performance, and to decrease current and prevent future cases of academic difficulties (principle 5) (Coyne, Kame‘enui, Simmons, & Harn, 2004; Simmons et al., 2002).

Features of RTI

In this section, the question, "What does RTI look like?" is addressed. Again, it is important to emphasize that RTI has principles that do not change, but that its features may look different across locations. Four features are discussed: (1) multiple tiers, (2) assessment system, (3) protocol, and (4) evidence-based instruction. There is not necessarily a one-to-one relationship between a principle and a feature; instead, the features and principles overlap, although one feature may embody one principle more than another. Table 1 lists the 5 principles next to the 4 features discussed.

Multiple Tiers

Multiple tiers in RTI is the presence of a continuum of supports ranging from universal supports for all students to the most specialized instruction for those demonstrating such a need. This critical feature clearly separates RTI from traditional approaches to instruction and service delivery (Harn, 2006; NASDSE, 2006). The use of multiple tiers is a frequently-referenced point of difference between various conceptions of the RTI approach, as various authors advocate for a two (Fuchs & Fuchs, 2005), three (Vaughn, Wanzek, Woodruff, & Linan-Thompson, 2007), or four tiered approach (Ikeda et al., 2002). Exactly how many tiers should RTI have? What exactly should Tier II look like? The answers to these questions may differ across various settings, so in order to illustrate how various incarnations of the RTI approach utilize this feature, examples are provided below.

Perhaps the most common model described in terms of number of tiers is a three-tiered model. Vaughn and colleagues (2007) describe a model in which all students receive general instruction in tier I (e.g., 60 minutes of core program), supplemental instruction in tier II (e.g., 30 minutes of supplemental instruction), and additional and specialized instruction in tier III. The Heartland Area Education Agency 11
Table 1
Principles and Features of Response-to-Intervention

<table>
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<th>Principles</th>
<th>Features</th>
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In central Iowa has set up a four-tiered system, ranging from a general education teacher consulting with parents at the first level, to Individual Education Plan consideration occurring at the fourth level (Ikeda et al., 2002). Fuchs and Fuchs (2002) have proposed and implemented a contrasting system, in which there are only two tiers. Parents are consulted during the second tier, and non-responders to the tier-two intervention are referred for IEP/Special Education evaluation. Although the number of tiers, and to a lesser extent what occurs at each tier, differs between these examples, they all fall under the general principles of RTI because they have provided increasingly intensive levels of instruction with the ultimate goal of promoting positive academic outcomes.

One example that would not meet the criteria of a multi-tiered level of support under an RTI model is the use of what is commonly called a pre-referral team (Kovaleski, 2002). Although such teams can be effective in improving student outcomes, particularly when they use a problem-solving approach and implement interventions with fidelity (Kovaleski, Gickling, Morrow, & Swank, 1999), this is not considered a multi-tiered approach to learning because the team is not coordinating increasingly intensive levels of support. What can be misleading is that such teams may measure a student’s response to an implemented intervention, but the criteria for multiple tiers is the notion that all students have equal access to a range of coordinated, school-wide supports, not whether or not students are receiving additional support (Harn, 2006; NASDSE, 2006).
**Special Education referral.** Within the multiple-tiers of RTI, a common question asked is when should a referral for Special Education services take place. There are three general views within the literature on this: (1) the evaluation can occur after a student receives tier II instruction, such as the model described by Fuchs and Fuchs (2005) (in this model, tier III is special education); (2) as part of tier III, therefore, a student placed in tier III may or may not be qualified for special education services (Marston et al., 2003), or (3) after tier-III supports have been provided, resulting in a four-tiered model with tier II as a standard intervention, tier III as an individualized problem-solving, and tier IV as special education (Ikeda et al., 2002; Reschly, 2005). At this point, the lack of consensus in this area appears to be due to differences in state, district or local policies and preference (e.g., a belief that individualized problem-solving should occur within tier III before a referral to special education is conducted) and differences in available personnel and resources (e.g., do schools have enough resources to sustain a four-tiered model?) (Reschley, 2005). Regardless of when a referral to special education occurs, however, the principles of RTI are met within the above examples because they all provide increasing levels of support based on the student's need.

**Assessment System**

A formal and organized assessment system is a second key feature of RTI implementation. An RTI model uses assessment in order to place students into appropriate tiers and to progress-monitor students to determine how well they are responding to their current instruction (Coyne & Harn, 2006; NASDSE, 2006). In order to adhere to the overarching principles – particularly instructional match and data-based decision making– the assessment system must be used to inform instructional placements (NASDSE, 2006). That is, the data collected must provide frequent and ongoing information about how students are performing so that schools can respond quickly if students are not meeting academic standards. Such an assessment systems relies on the regular assessment of students' progress so that decisions regarding instruction can be made quickly. Here, we must point out how assessment, progress monitoring, and instruction are intricately tied together within RTI.

Schools may vary on the specific assessment tools they use, how often they meet, and who is responsible for assessment. For example, Kame‘enui, Good, and Harn (2005) describe the use of Dynamic Indicators of Basic Early Literacy Skills (DIBELS). Within their model, all school personnel are involved in the use of DIBELS to gather information about student progress. Data are collected either at benchmark
(fall, winter, spring), monthly, or weekly, depending on the students’ level of instructional support, and the information is used to determine if the student is benefiting from their current instruction or if he or she needs more intensive support.

Another model by Rockley and colleagues (2007) in Emporia, Kansas describe the use of DIBELS, the Gray Oral Reading Test (Wiederhold & Bryant, 2001) and the Idaho Reading Indicator (Idaho State Department of Education, n.d.). Here, the special education teachers are responsible for data collection, and each student receiving supplemental support in instruction (i.e., students in tiers II or III) is assessed either weekly or bi-weekly. District-level literacy coaches meet on a monthly basis with the special education teachers to whom they are assigned and help them to review their data and plan instruction. Also, team leaders, who are personnel who oversee the district-level coaches, meet weekly with their coaches to review the data and to provide further support about placement decisions. Team leaders, special education teachers, and their coaches work from a collaborative, problem-solving orientation. In one final example, Marston and colleagues (2003; 2007) describe a model in which general education teachers are primarily responsible for progress monitoring individual students, but special education teachers, Title I teachers, and school psychologists all partake in progress monitoring students and the coordination of collecting school-wide data. In this model, the district uses Curriculum-Based Measurement and early literacy measures that it developed to assess students. This data is reviewed at either 6- or 8-week intervals to determine if the current instruction is working or not for the student.

The examples above describe various approaches of assessment within an RTI model, but the principles of instructional match and problem-solving orientation/data-based decision making should be evident. Before the third feature of an RTI model is presented, two elements within an assessment system, reviewing the data and the frequency of assessment, are discussed to further highlight the flexibility of the RTI model.

**Reviewing the data.** Descriptions of the roles of each of the participants in assessment system is not always clearly explained in the literature, but there is a clear expectation that the school staff and teachers meet regularly to review the data to make decisions about students’ progress and instructional placements. This may be accomplished, for example, by school psychologists meeting weekly with teachers to review their data, as described by Coyne and Harn (2006), or it may occur by district-level employees meeting with school staff on a weekly or monthly basis, as outlined by Rockley and colleagues (2007). Most often, the reviewing of data and instructional decisions
takes place through a school-based team. This team typically consists of people from various disciplines, including school psychologists, Title I teachers, and social workers (Kaminski et al., 2006; Marston et al., 2003), or it may consist of only general education and special education teachers (NASDSE, 2006). Regardless of the team’s exact make-up, its goal is to examine the data collected on a regular basis and to place students within the multiple tiers and protocol (discussed in the next section) outlined by the school (NASDSE, 2006). The team must use a problem-solving approach and make data-based decisions in order to meet the principles of RTI.

Frequency of assessment. The frequency of assessment may vary between schools and is affected by school resources and the severity of the student’s academic difficulties. Benchmarking may occur three or four times a year (Good & Kaminski, 2002). Vaughn and colleagues (2007) report that students in tier-II are progress monitored twice a month, and students in tier-III are monitored weekly. In another model, Kameʻenui and colleagues (2005) report that students in tier II are assessed one to two times a month and students in tier III are assessed two to four times per month. Although different schools may use different assessment systems, procedures, and progress monitoring timelines, the principles of RTI are met by using formative assessment (i.e., ongoing assessment used to inform student progress while the instruction is occurring) (Howell & Nolet, 2000) to guide their instructional placements and decisions.

Protocol

Protocol refers to the approach schools use when determining what resources and level of intervention a student needs. Such a feature of RTI stems from several of the principles noted above, but it primarily involves the problem-solving orientation principle. There are three approaches schools can use: (a) a problem solving protocol, such as those employed by the Heartland model in Iowa (Ikeda et al., 2002), (b) a standard protocol, as outlined by Fuchs and Fuchs (2005) and Vaughn and colleagues (2003), or (c) a combined protocol, which incorporates features of both the standard and problem-solving protocol (see Kameʻenui et al., 2005 and Reschly, 2005).

As students demonstrate a failure to respond adequately to a level of instruction or intervention, the protocol embodies how to respond to that student’s need. With the standard protocol, students receive a set “dose” of additional instruction (e.g., 30 additional minutes of phonics instruction in a small-group setting for all students scoring below benchmark in reading). In contrast, the problem-solving protocol focuses on designing an individualized intervention for students. For example, the problem-solving team may decide on 30
additional minutes for a student (similar to the standard protocol), or they may determine the lack of progress requires an altogether different intervention, such as providing more opportunities to respond, additional fluency practice with a skill, or reinforcement of desired behavior. Although both models involve a focus on instructional and alterable variables, as exemplified by the problem-solving orientation principle, the protocols differ in what type of intervention is indicated for students who make less than adequate progress. The standard protocol is set (i.e., all students receive the same standard intervention), but the problem-solving protocol is more fluid and unique to each student (Gresham et al., 2005).

Evidence-Based Instruction and Intervention

The final feature of RTI models is evidence-based instruction and intervention (We note that the words “instruction” and “intervention” are interchangeable, as each refers to the curriculum the student is exposed to and the manner in which that curriculum is delivered.). The goal of RTI is to improve student outcomes for all students, and in order to do so, it is imperative that students receive high-quality instruction that is evidence-based (Cummings, 2006; NSDSE, 2005). (“Evidence-based instruction” refers to instruction that has empirical evidence supporting its effectiveness; Brown-Chidsey & Steege, 2005). By providing good instruction to all students, schools can increase the probability of achieving desirable levels of student performance and rule out poor instruction as a cause of low performance. While all students may benefit from evidence-based instruction, this has particular bearing on students who are evaluated for a disability because poor instruction must be ruled out before a student can be identified for special education services (NJCLD, 2005; NSDSE, 2005).

Generally speaking, this involves a core instructional program provided within the general education setting to all students, and supplemental instruction for students who are below desired levels of performance (NJCLD, 2005). Instructional features associated with positive academic outcomes, such as high rates of opportunities to respond, immediate corrective feedback, and groups differentiated by skill level, are also components of the instruction within RTI models (Brophy & Good, 1986; Kame’enui et al., 2005; Vaughn et al., 2007). Fidelity checks are frequently conducted to ensure treatment integrity, and there is general agreement that the academic block is judiciously protected from interruptions, thus promoting ideal conditions for academic learning (Harn, 2006). Although the exact nature of instruction may differ between any two settings, the use of an evidence-based program and a focus on the big ideas of the academic subject being taught ensures the principles of RTI, particularly effective practices, are being met.
To illustrate how the specifics of the instruction may vary among schools, two examples are discussed. Coyne and colleagues (2004) describe a reading model in which first graders received core instruction within the regular education classroom that was between 60 and 90 minutes comprised of small-group and whole-group instruction (the time varied depending on the school). Students needing additional support received an additional 30 minutes of instruction: the first 15 minutes of the supplemental instruction focused on phonological awareness and the alphabetic principle, but the last 15 minutes focused on having student practice reading connected text. In contrast, Vaughn and colleagues (2003) implemented a model that had core instruction similar to Coyne and colleagues, but their supplemental instruction was 35 minutes and consisted of instruction in fluency, phonemic awareness, word analysis (e.g., spelling rules, strategies for decoding), and reading at their instructional level with previews and review of vocabulary words. Even though the supplemental instruction is somewhat different between the two examples, each one follows the principle of effective practices by focusing instruction on the big ideas of reading identified as critical for reading success (National Reading Panel, 2000).

Parameters of judging response to treatment. Within RTI, a complex question is judging how or when a student has “responded” or “not responded” to an intervention. Schools have a few choices, one of which is to set a criterion and judge a student as “responded” when that criterion is met. Vaughn and colleagues (2003) demonstrated that using an a priori criterion can lead to students meeting that criterion who no longer need additional support. Another option is the use of a student’s rate of growth. Here, a student’s rate of progress is compared to an expected rate of progress, based on either a normative framework or to a criterion for acceptable growth. Those students who are not progressing at an acceptable rate are considered “non-responders” (Kaminski et al., 2006). Another option is to judge response by using a “dual discrepant” criterion, based on the student’s final level and their rate of growth. Students who progress at both an acceptable rate and reach an established criterion are determined “responders”. Fuchs, Fuchs, and Compton (2004) report that this method is the most reliable when compared to other indicators of response to treatment. One final option is the 3-point decision rule, which requires setting a goal for a student, graphing the data, and drawing an aimline, and then making instructional decisions when a student has 3 consecutive data points below the aimline. This is perhaps the most straightforward and popular way to determine if a student is responding to an intervention.
**Ongoing Professional Development**

One final topic to discuss is ongoing professional development. Although professional development was not identified as a principle or feature, we consider it a vital piece that encompasses all of the features of an RTI model. There are two factors to consider about professional development within RTI. One, it is critical that the professional development within RTI models is ongoing. As opposed to a "train and hope" approach, in which staff receive training at one point in time and no follow-up, RTI calls for ongoing professional development in which skills and concepts are reviewed frequently and consultation is continuously provided (NASDSE, 2006). This continuous level of support ensures that staff become fluent with the skills, understand the process of RTI, and perform their roles accurately. Two, even though staff may learn how to use RTI and the skills it calls for, they will likely need ongoing professional development to understand the why behind it. Understanding the rationale behind RTI is considered just as vital to implementation as learning how to do RTI (Ikeda et al., 2002; NASDSE, 2006).

This ongoing professional development should include components on (1) beliefs and attitudes in education (e.g., discussing the rationale behind a problem-solving approach), (2) the knowledge base needed to translate that information into practice (e.g., knowing the relationship between assessment and instruction within RTI), and (3) the skills needed to implement RTI (e.g., knowing how to collect and analyze data). Also, this professional development should be provided to the entire district, including leadership personnel (e.g., superintendents, policy-makers), administration (e.g., principals, district level admins), direct providers (e.g., teachers, instructional staff), and related servers (e.g., school psychologists, counselors). We refer the reader to NASDSE (2006) for more detail, but two examples of professional development are discussed.

Jefferson County Schools (JCS) in Golden, Colorado provide initial trainings in the summer and fall to their schools, but then hold "late starts" on Friday mornings throughout the school year, during which the staff focus on various topics, such as receiving consultation or reviewing data, before students arrive. In addition, JCS staff can take courses at a local university in basic classroom management, organizing reading curriculums, and designing interventions as part of their professional development (Montgomery & Ilk, 2007). In another example from Rockley and colleagues (2007), school staff receive initial trainings at the beginning of the year, and then weekly or monthly meetings are held in which district-level staff provide trainings and support to their special education teachers and schools. Such ongoing
support and training helps to ensure that school staff understand the concepts behind RTI and to secure integrity of implementation (Ikeda et al., 2002).

Summary and Conclusion

Response-to-Intervention is a method of service delivery schools can use to improve academic outcomes for all students, as well as improve the identification of students with disabilities (NASDSE, 2006). As illustrated in Figure 1, a preventative and proactive problem-solving approach at the systems-level, along with a focus on providing instructional match to each student's needs using effective practices, are the core principles of RTI. From those 5 principles, schools may differ in how they design and utilize the key features of RTI (multiple tiers, protocol, assessment systems, and evidence-based instruction).

![Response-to-Intervention](image)

*Figure 1. Model of the principles and features of RTI.*

Generically speaking, response to intervention can refer to any process of implementing an intervention and then collecting data to determine if that intervention was effective in correcting the problem. For example, a teacher may identify a student with low test scores in math, and then implement an intervention in which the student works one-on-one with the teacher before school each day. The teacher then checks the student's progress by administering a brief math test each week. The teacher is measuring the student's "response" to the "intervention", but this is not RTI as described here. "RTI" within the math example can be conducted with or without regards to effective practices, a proactive approach, or any of the principles or features...
outlined in this article. RTI as laid out in this article embraces a set of clearly delineated principles and features. It calls for a systemic change in education that goes beyond providing an intervention and monitoring a student’s response (see Figure 1). It is a philosophical approach to education in which the idea that all children can learn is emphatically believed (NASDSE, 2006).

References


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