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A Literature Review of Implementing Response to Intervention for English Language Learners

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Response to intervention (RTI) has actively been used for identifying reading difficulties and providing supplemental instructions for students with disabilities. Recent developments of RTI show that the method expands its applicability to other areas and populations. In particular, it is difficult to distinguish learning disability (LD) from English as a second language acquisition. RTI could successfully be implemented for English language learners (ELLs). A systematic literature review has been conducted to delineate various components, strategies, and implications of RTI for ELL students. Twenty six articles that meet the criteria are analyzed for themes and important findings. The result of the literature review along with the implications of the identified studies is reported. It is identified that direct instruction used in tier 2 is an effective technique when infusing linguistic and cultural aspects of ELL with diverse needs.

Keywords: RTI, ELLs, early literacy intervention, literature review

Response to Intervention (RTI) has recently been implemented in school settings. The primary purpose of the model is to identify students who have difficulties in reading, construct a school-wide system that facilitates literacy development, and provide instructional strategies for at-risk students in reading. The main focus is given to its implementation in elementary school settings. However, the recent development of RTI expands its applications to other areas of disabilities and/or school settings, including those students who are learning English as their second language.

Nationwide, schools are working towards improving student achievement with the support of the No Child Left

Behind (NCLB, 2002). The NCLB (2002) requirements include creating a system that maintains accountability, parental involvement, highly-qualified teachers, and research-based instructional methods. In order to comply with the NCLB (2002) requirements that indicate schools must remain accountable, each state must report the percentage of students who test at the proficient or advanced level at the end of each academic year. Beyond state requirements, schools and districts are looking into structures that provide data on a more frequent basis. In order to meet these new types of demands, schools are required to create or adapt school structures that address these accountability measures. The

2004 reauthorization of the Individuals with Disabilities Education Act (IDEA) brought new challenges to schools with the option of implementing the RTI model. RTI suggests that schools provide services that apply to all students who are in need of academic improvement, especially in reading.

To remedy this lack of early intervention for at-risk learners, the 2004 IDEA allow school districts to evaluate how a student responds to scientific- and research-based intervention by using a RTI model that identifies such students before they fail to meet grade-level expectations. The RTI framework provides assurance that each student will receive high quality instruction when his or her lack of progress in the general curriculum is observed. RTI begins with the universal screening of all students. This screening provides valuable instructional information to the general education teachers and administrative personnel. In addition, the use of research-based interventions to remediate problems as soon as they are found may ensure high quality early intervention to those students who may have been overlooked in the past.

There are multiple methods to implement RTI (CDE, 2009; Fuchs & Fuchs, 2007). Each method relies on a tiered-service delivery model that takes place within three to five tiers of service (Fuchs & Fuchs, 2007). The three-tiered approach relies on core instruction taking place in the general education classroom. If students fail to progress in the general education curriculum, they are progressed to tier 2 where he or she receives supplemental instruction along with the core instruction. If students still fail to progress, they are moved to tier 3 intervention which consists of increased time in the targeted curricular area, a change to another curriculum that State Board of Education adopted, and a lower student to teacher ratio.

Typical application of RTI has usually been limited to primary school settings. While numerous studies have demonstrated the impact and effectiveness of RTI for students in the primary school settings,

limited attempts have been made in facilitating RTI for the secondary school settings (Duffy, 2007). For example, Duffy (2007) has reported that RTI is successfully implemented in elementary and junior high school settings. Although no systematic approach has yet been made in identifying the factors that contribute to the discrepancy of RTI in the primary and the secondary school settings, the function of RTI – that is to identify students who have difficulties in reading and to provide intervention for struggling students – may largely explain the difference. According to Vaughn et al. (2008), RTI is used to screen those students who have difficulties in reading and to provide intervention in order to satisfy each student's needs. Since identification of learning disability (LD) is done over the course of elementary school years (Johnson, Smith, & Harris, 2009) and the intervention applicable to high school students may not be equally effective to elementary students, it may require additional resources in shifting the focus (Vaughn et al., 2008). In other words, early identification and intervention along with differences of learning in elementary and secondary students can account for challenges.

There are significant reasons why RTI should be implemented for secondary students in spite of the challenges. Leach, Scarborough, and Rescorla (2003) and Lipka, Lesaux, and Siegel (2006) reported that reading intervention for secondary students is still critical because many students receive inadequate reading instructions, have not been exposed to early intervention, do not cope well with the demand of learning to read, or develop late manifested reading problems. Various types of reading interventions have been developed and administered for students in the secondary level (see Gersten, Fuchs, Williams, & Baker, 2001; Kucan & Beck, 1997; Mastropieri & Scruggs, 1997; Mastropieri, Scruggs, & Graetz, 2003). A major obstacle identified in this process is the difficulty associated with school wide administration of intervention programs

(Johnson & Smith, 2008).

It is clear, therefore, that the implementation of RTI in a secondary setting would focus more on providing individual level interventions and developing school level support structure, not merely aiming at identifying at-risk students. Several premises should be made in constructing such an environment. First, general educators and special education teachers should closely collaborate in monitoring progress and determining optimum interventions (Johnson, Smith, & Harris, 2009). Many special education teachers are not familiar with general education pedagogy and the lack of general curriculum makes their comments ineffective (Pugach & Johnson, 1989). Conversely, general education teachers do not receive adequate training in responding to the unique needs of students with disabilities, and the use of jargon in various fields can be viewed as an obstacle. Instructions are provided in each content level. A lack of sufficient knowledge both in general education and special education also contributes to the difficulties associated with implementing RTI in a secondary school setting, where teachers assume that students should all have prerequisite skills, including reading.

Recently, significant effort to implement RTI for ELLs has been made. The primary focus of RTI for ELL students is also related to how to provide interventions for them. Rinaldi and Samson (2008) have suggested what should be considered in pre-referral for ELLs. Before pre-referral, the multidisciplinary team decides if adequate instruction and intervention in the general classrooms are provided for ELLs at risk for reading difficulties before they are referred to special education. If an ELL is still struggling with reading even after sufficient instruction is provided in the general classroom, either additional pre-referral should be provided or a referral process should be conducted.

Xu and Drame (2008) found that

effective RTI for ELLs in general classrooms is implemented by evidence-based instruction and appropriate accommodations that consider cultural and linguistic diversity. In addition, evaluation on the effectiveness of intervention contributes to effective RTI by providing formative assessment for ELLs in both English and their first language. However, it is doubtful whether ELLs are given appropriate instruction as well as if teachers evaluate students' progress with effective instruction.

Through a case study, Orosco (2010) demonstrated that sociocultural factors influence RTI for ELLs. The teacher who has had ELL training in this case study use sociocultural teaching methods to contextualize knowledge and meaning as well as incorporate literacy practices based on both home and community. Research indicates that students who are provided with RTI considering sociocultural aspects are more engaged and motivated by bridging their sociocultural experiences with curriculum and social context.

McIntosh, Graves, and Gersten (2007) compared the effectiveness of instruction provided by first-grade teachers in four classrooms of students with diverse backgrounds for two consecutive years. Reading fluency studied through observation and interviews. The study indicated that instruction for low performing students had a strong correlation with oral reading fluency and tier 1 plus Year 2 instruction is related to the effectiveness of teacher ratings. Furthermore, a first-grade teacher with sufficient knowledge of reading and curriculum could prevent students from reading failure. It would be effective for ELLs to incorporate intensive small-group instruction along with excellent whole-group instruction (McIntosh et al., 2007).

To complicate things further, ELLs with LD are even more difficult to identify and assess because of the challenge and confusion of distinguishing whether a student's struggle with reading stems from a

disability or language deficit. Unfortunately, most teachers do not have adequate knowledge on implementation of RTI for ELLs. Therefore, we want to further investigate the implementation of RTI for ELLs by addressing our research questions:

1. What do we know about RTI for ELLs?
2. What are the recommended RTI models for ELLs?
3. Are there any procedural similarities and/or differences in RTI models between ELL program and LD programs?
4. What are the characteristics of school settings that are suited for RTI implementation for ELLs?
5. What are the essential components of cultural aspects of RTI for ELLs?

Method

In order to gain further knowledge of RTI and ELLs and to delineate the extent to which RTI can be used for students with ELLs, a literature review study was conducted. For this literature review, we have chosen a number of criteria for the article selection process. These criteria are listed below:

1. Articles were peer reviewed and data-based studies published between 2000 to 2011.
2. Studies had to include either quantitative, qualitative, or mixed method designs, and were an opinion or theoretical paper.
3. Studies examined the use of RTI for ELLs.
4. Studies were concerned with any topic related to the implementation of RTI for ELLs.

Data Collection

This literature review explored the use of RTI for ELLs within the past 10 years. We first decided on key words for this search by examining articles written about the implementation of RTI for ELL students. After the key words and time frame were determined, we decided to use

four different types of search engines to gather our articles. We used the following descriptors to search through Education Full text, PsychINFO, Proquest, and Eric: learning disabilities, reading disabilities, RTI, response to instruction, response to intervention, non-responders, responders, tier 2 intervention, early literacy, reading difficulties, at-risk, continued risk, and reading intervention. This procedure yielded 159 articles, and with careful examination, we were able to decide on articles that fit our literature review criteria. A total of 38 articles were included in our second step of the elimination process.

Data Analysis and Coding Procedures

We adopted the coding sheet from the Trent, Kea, and Oh (2008) article and modified this sheet to meet the needs of our study. This coding sheet included the following information: (a) method of research, (b) participant information, (c) type of study (quantitative, qualitative, or mixed methods), (d) data collection procedures, (e) data analysis procedures, (f) RTI stages, (g) soundness and quality of research, and (h) school setting. Using this method, we were able to eliminate 12 articles, leaving us with 26 articles in our final findings (see Table 1). With these articles, four authors in dyad groups read each article and filled out coding sheets that were created for the purpose of eliminating unrelated articles. Upon comparison of individually completed coding sheets, we came to an agreement that yields interrater reliability of 0.94.

Results

Features of RTI for ELL

Although there are few studies on literacy intervention for ELLs who are at risk for reading difficulties, we found 16 studies which examined the effectiveness of intervention for early grade ELLs (K-2), one study for secondary ELLs, and one study for grade 2 through 8. When it comes to tiers, fifteen studies provide early literacy intervention in tier 1 and tier 2. One study

provides supplemental instruction in tier 1 and one study evaluate the effects of intervention provided in tier 2 and tier 3.

Gyovai, Cartledge, Kourea, Yurick, and Gibson (2009) investigated the effect of Early Reading Intervention (ERI) curriculum for kindergarten/first-grade ELLs. Ross and Begeny (2011) investigated the differential effects of a one-on-one and small-group intervention in reading fluency. Four more articles examined the effectiveness of early intervention by providing ELLs in primary grades with the specific reading programs that teach foundational skills of early literacy (phonological awareness, letter-sound recognition alphabetic decoding, reading fluency, comprehension) in a direct, explicit, and systematic manner (Cirino et al., 2009; Gyovai et al., 2009; Kamps et al., 2007; Lovett et al., 2008; Tong, Irby, Lara-Alecio, Yoon, & Mathes, 2010; Vaughn et al., 2006).

Recommended RTI model for ELLs

Through this literature review, components of the recommended RTI model for ELLs are considered. The first 13 studies suggest effective strategies and teaching methods for implementation of RTI for ELLs. Gilbertson and Bluck (2006) compared the effects of interventions of 1-second response wait time with 5-second response wait time and 1-second interval duration with 5-second interval duration on letter naming performance. Gilbertson, Maxfield, and Hughes (2007) examined the relative effects of two response modes (see/say and hear/point) on letter naming rates. Second, language support activities were employed to modify the existing program to satisfy their linguistic and cultural diversity (Cirino et al., 2009; Vaughn et al., 2006; Vaughn, Mathes, Linan-Thompson, & Francis, 2005). Lastly, recommendations on teachers' roles are provided for effective RTI. Orosco and Klingner (2010) suggest recommendations on implementing RTI for ELLs by describing what factors affect a deficit-based RTI model. Two articles recommend

what teachers do for effective RTI for ELLs (Wilkinson, Ortiz, Robertson, & Kushner, 2006; Garcia, & Tyler, 2010).

RTI Procedural Suggestions for ELL and LD

Haager's (2007) paper explains how the RTI model is a better model for ELLs than the "wait to fail" model, but there are areas in which educators need to understand how this model will work for ELLs. Barrera and Liu (2010) indicated the importance of making appropriate comparisons and testing and appropriate comparisons of what has been taught in assessment with ELLs. Among the articles we found for this literature review, there are four articles (Klingner, & Artiles, 2006; Haager, 2007; Linan-Thompson, Cirino, & Vaughn, 2007; Garcia & Tyler, 2010) that address the procedural differences that need to be considered when using RTI for ELL students. Within these articles, three areas are recommended to help with implementing RTI with ELLs: (a) instruction in general education classrooms, (b) assessments for progress monitoring, and (c) quality of reading intervention. These areas of need will be further illustrated with key components and suggestions to better implement RTI for ELL students.

Professional Development for RTI

In 18 experimental research studies, a few include information on how professional training was provided for teachers or teaching assistants. Bilingual teachers who speak Spanish and English are chosen to examine how effectively Peer-Assisted Learning Strategies (PALS) are working for first-grade ELL students on their reading achievement (Calhoon, Otaiba, Cihak, King, & Avalos, 2007). Calhoon et al. (2007) provides a one-day workshop to guide those teachers through the PALS manual and a role-play activity. In addition, special education teachers participate in the reading intervention program after being

Table 1: Summaries of articles

	Study	Purpose	Sample	Method
1	Callahan, 2006	To compare the effect of a reading intervention program to that of a comprehensive English language development (ELD) program on ELL's achievement	389 ELLs at Grade 9 - 12; 220 boys, 169 girls	Experimental
2	Calhoun, Otaiba, Cihak, King, & Avalos, 2007	To examine the effect of peer-assisted learning strategies (PALS) on reading achievement of first-grade ELLs and English Proficient students in a bilingual immersion program	76 first-grade students in a bilingual program; 80% Hispanic, 24 ELL with limited English proficiency; 6 first- grade teachers	Experimental
3	Cirino, Vaughn, Linan-Thompson, Cardenas-Hagan, Fletcher, & Francis, 2009	To examine English and Spanish reading achievement 1 year after intervention for ELLs who participated in treatment and comparison conditions in either English or Spanish	300 first-grade Hispanic students; 45% female, 55 % male 215 student with second grade follow-up data	Experimental
4	Gilbertson, & Bluck, 2006	To examine differences in instructional pace for their effects on LNP	4 Latino kindergartner; 3 boys, 1 girl	Experimental
5	Gilbertson, Maxfield, & Hughes, 2007	To examine the relative effects of two response modes; see/say and hear/point on acquisition and retention rates on letter naming fluency performance	6 kindergartener; 3 boys, 3 girls	Experimental

6	Gyovai, Cartledge, Kourea, Yurick, & Gibson, 2009	To investigate the effects of Early Reading Intervention curriculum (ERI) on PA and phonics instructional program in English for ELLs with diversity	11 kindergartener, 1 first-grade; 6 beginner ELLs, 2 intermediates, 4 advanced	Experimental
7	Healy, Vanderwood, & Edelston, 2005	To examine the possibility of using an RTI model with ELLs to determine who needs additional intensive services	15 first-grade; 7 males, 8 females; 14 Spanish speaking, 1 Vietnamese	Experimental
8	Kamp, Abbott, Greenwood, Arreaga-Mayer, Wills, Longstaff, & Walton 2007	To demonstrate the importance of direct instruction for ELL in a second tier of intervention evidence-based secondary-tier intervention	318 first-and second-grade; 170 ELL, 148 English-only; 164 Male, 154 Female; 99 Spanish speaking, 71 others	Experimental
9	Linan-Thompson, Vaughn, Prater, & Cirino, 2006	To determine how many and which students would respond to a comprehensive intervention, and whether a positive initial response to intervention could be maintained through second grade	First-grade Hispanic; 64 students for Spanish intervention; 48 students for English intervention	Experimental
10	Linan-Thompson, Cirino, & Vaughn, 2007	To identify a viable means for determining RTI by providing examination of the number of students who respond to intervention and their outcomes a year later.	81 bilingual first-grade students using Spanish and English	Experimental

11	Lovett, De Palma, Frijters, Steinbach, Temple, Benson, & Lacerenza, 2008	To explore whether struggling readers from different primary language backgrounds differ in response to phonologically based remediation	166 struggling readers; 90 EFL, 76 ELL	Experimental
12	McIntosh, Graves, & Gersten, 2007	To examine the effectiveness of the instructional practices in classrooms of ELL according to the RTI model	4 first-grade teachers of ELL; 111 students from 11 native languages	Experimental
13	O’connor, Bocian, Beebe-Frankenberger, & Linklater, 2010	To determine the effects of the type of intervention for students with low language skills and their responsiveness to procedures	78 kindergartners with poor language skills; 35 ELLs	Experimental
14	Ross, & Begeny, 2011	To evaluate the differential effects of a one-on-one(1/1) and small-group(SG) reading fluency intervention	5 second-grade Spanish speaking ELLs	Experimental
15	Tong, Irby, Lara-Alecio, Yoon, & Mathes, 2010	To assess Hispanic ELLs’ response to instructional intervention on English language and literacy acquisition	196 Hispanic students, 76 teachers	Experimental
16	Vaughn, Mathes, Linan-Thompson, & Francis, 2005	To identify the critical elements of effective intervention programs for bilingual students either in English intervention or Spanish	64 first grade students in Spanish intervention, 41 first grade students in Eng intervention	Experimental

17	Vaughn, Mathes, Linan-Thompson, Cirino, Carlson, Pollard-Durodola, & Francis, 2006	To examine how well reading skills in English influenced skills in their native language	48 Hispanic students ; 13 teachers	Experimental
18	Wilkinson, Ortiz, Robertson, & Kushner, 2006	To incorporate a comparison of eligibility decisions made by the cooperating district's multidisciplinary teams to those made by an expert panel, and analysis of factors for different decisions	21 Spanish speaking ELLs with LD in bilingual special education classrooms; 11 boys, 10 girls	Experimental
19	Orosco, & Klingner, 2010	To describe how teachers' understanding, beliefs, judgements, professional development, and training affected the RTI decision-making process	Latino ELLs with reading difficulties in an urban elementary school at the primary level (K-2)	Qualitative
20	Barrera, & Liu, 2010	To examine the problems and challenges of using general outcomes measurement (GOMs) within the response to intervention model in the identification and assessment of struggling ELLs	Non applicable	Theoretical/Opinion
21	Garcia, & Tyler, 2010	To provide an overview of instructional characteristics of ELLs with LD and offers a framework for instructional planning and collaboration	Non applicable	Theoretical/Opinion

22	Haager, 2007	To provide a commentary on issues regarding the use of RTI with ELLs	Non applicable	Theoretical/Opinion
23	Klinger, & Artiles, 2006	To provide comprehensive overview on articles that offer possible solutions on difficulties to identify ELLs with LD and conduct an appropriate assessment	Non applicable	Theoretical/Opinion
24	Orosco, 2010	To discuss and examine the challenges that schools encounter in developing RTI with ELLs from a sociocultural perspective	Non applicable	Theoretical/Opinion
25	Rinaldi, & Samson, 2008	To provide recommendations to help professionals to be better informed and make decisions	Non applicable	Theoretical/Opinion
26	Xu, & Drame, 2008	To examine the learning context of young ELLs relative to culturally and linguistically responsive intervention	Non applicable	Theoretical/Opinion

trained for five days through the Learning Disabilities Research Program (Lovett et al., 2008).

Mixed teaching members are also used in research where teaching assistants and kindergarten or first grade teachers are chosen and trained to measure the effectiveness of how early intervention is important for students with language difficulties. Training include introductions and practices of new activities, reviewing data on student progress, and meeting with researchers to make specific plans and activities that could be matched to students' skill levels (O'Connor, Bocian, Beebe-Frankenberger, & Linklater, 2010). McIntosh et al. (2007) examined the effectiveness of the teachers' instructional practices in multiple language settings. The result indicates that teachers who provide a tier 2 intervention or a tier 1 with tier 2 intervention refer fewer to special education support and their students show higher oral reading fluency than those who had no intensive interventions. On the other hand, psychology graduate and undergraduate students who were not trained were chosen during the experiment (Gilbertson & Bluck, 2006; Gilbertson et al., 2007; Healy, Vanderwood, & Edelston, 2005).

Cultural Aspects of RTI for ELLs

While it is assumed that many studies would consider cultural diversity as a significant aspect of program implementations for research design or primary focus on theoretical framework, a relatively small number of articles consider the significance of cultural diversity. For example, only 12 studies report socioeconomic status as a relevant component in determining and conducting RTI programs. Six studies utilize more than one language while six studies implement RTI in Spanish only. Only two studies devote a significant portion of its contents to cultural diversity. For example, Xu and Drame (2008) and Brown and Doolittle (2008) discussed the extent to which cultural diversity can impact reading

difficulties. Further, they suggested how RTI could be an appropriate reading intervention tool for ELL students. Orosco (2010) investigated the challenges in RTI with ELLs from a sociocultural perspective and emphasized the sociocultural approach to integrate students' knowledge into practice.

Discussion

Features of RTI for ELLs

Sixteen articles reported RTI implementation on at-risk ELLs in the early primary grades K-2 and 15 studies provide early literacy intervention in tier 1 and tier 2. Kamps et al. (2007) examined the effect of three reading programs along with evidence-based direct instruction in small groups of three to six for at-risk ELLs as secondary-tier intervention. The programs that employed direct instruction were found to be strongly effective with the students. Calhoon et al., (2007) explored the effects of PALS for first grade ELLs in a bilingual program. PALS is designed to be used in general classrooms to support all students, including ELLs who are at risk for reading difficulties. This study report students who are taught PALS make significant gains in phoneme segmentation fluency, nonsense word fluency, and oral reading fluency. It is meaningful that ELLs can benefit from instruction provided in tier 1 (Calhoon et al, 2007). In addition, Callahan (2006) demonstrated that English language development curricula and instruction

Next, commercially available reading programs for ELLs at risk for reading problems are also reported to be effective. Gyovai et al. (2009) provide the Early Reading Intervention (ERI) based on a model-led-test approach that employs the components of effective instruction, such as active student responding, and indicates the positive effect on the phoneme segmentation skills and letter-sound correspondence skills. Especially, if the intervention had been provided for the requisite 30 minutes daily over six to eight months instead of only 20 minutes for three and a half months, the

result would have been more robust. Cirino et al. (2009) reported one-year follow-up data from at-risk ELLs who are taught *Proactive Reading* (Mathes, Torgesen, Wahl, Menchetti, & Grek, 1999) as supplemental instruction. The program was originally designed and validated for monolingual English struggling students; therefore, the reading program was modified to satisfy at-risk ELLs' needs by including an oral and vocabulary component and providing language support activities. The ELLs who are provided the intervention make and sustain favorable outcomes through second grade.

Recommended RTI model for ELLs

There are three components of implementation of RTI for ELLs. First, effective strategies and teaching methods can be helpful. Kamps et al. (2007) indicated the importance of evidence-based direct instruction and small group instruction as critical components of early intervention for ELLs at risk for reading difficulties. Gibertson and Bluck (2006) compared the relative effects of slow pace with fast pace on letter naming performance (LNP). Fast pace intervention is provided for four students by applying 1-second response wait time between modeling a letter and responding, and 1-second interval between feedback and the next letter. The 5-second pace is done the same way as 1-second pace. The study reports that lower pace on LNP is moderately more effective than the fast pace. Gilbertson et al. (2007) provided two response modes (see/say and hear/point) with six ELLs. Equal amounts of opportunities to practice were given to them. The students practiced orally reading printed letters by seeing and saying them in see/say intervention while they practiced pointing to a printed letter that was orally read to them in hear/point intervention. Students who receive verbal intervention have made more significant gains in letter naming rates than those who receive pointing intervention.

Second, early literacy interventions that modify the existing program and

provide language support activities have been found to be effective (Cirino et al., 2009; Vaughn et al., 2006). ELLs at risk for reading failure could benefit from language support activities that employ effective ways for ELLs such as using visuals and gestures, clarifying meaning, and making explicit explanations on directions. Vaughn, Mathes, Linan-Thompson, and Francis (2005) described critical elements of early literacy intervention for ELLs either in English or Spanish by suggesting four major phases to the development of the interventions: the development of an English intervention (Mathes et al., 1999), the designing of language support activities to modify the English intervention, the development of a Spanish intervention, and the designing of an oral intervention in English and in Spanish. One of the language supports is to define the words that students may have not known in order to ensure that they understand the instructions and tasks they are asked to perform.

Lastly, teachers need to implement interventions considering ELLs' culturally and linguistically diverse backgrounds. Orosco and Klingner (2010) described how RTI is implemented for Latino ELLs with reading difficulties. It is shown that teachers use mainstream instruction and assessment that are of little relevance to ELLs' native culture and language, and school psychologists apply the discrepancy model to every student. In addition, the participants do not have adequate teacher preparation regarding the various cultural and linguistic needs of the students. It is recommended that teachers provide assessment and instructional practices that satisfy students' linguistic and cultural diversity, understand RTI components and develop expertise in implementing RTI for ELLs. Garcia and Tyler (2010) suggest that teachers use strategies that support ELLs' language development. Wilkinson et al. (2006) have identified the differences in making eligibility decisions for ELLs between an expert panel and multidisciplinary team. The study emphasizes the importance of

collecting multiple sources to decide whether or not ELLs are eligible for special education service.

RTI Procedural Suggestions for ELL and LD

As mentioned in the results section, four articles from our literature review emphasize the three areas of consideration regarding the implementation of RTI with ELL students. These areas include: (a) instruction in general education classrooms, (b) assessments for progress monitoring, and (c) quality of reading intervention. First, instruction provided in general education classrooms is considered to be the first tier of the RTI model, and for ELL students' language development, it is important to understand that the field of education does not know a lot about effective instruction for ELLs with LDs (Baker, Gersten, Haager, & Dingle, 2006; Gersten, Baker, Haager, & Graves, 2005; Haager, 2007). With early intervention and high-quality explicit instruction, ELLs will benefit more in reading instruction and this will further help with decreasing false positives in LD identifications. In order for general education teachers to provide robust instruction for ELL students, Garcia and Tyler (2010) suggest that general education teachers use strategies that support cognitive and academic development by using techniques such as reducing independent information retrieval, self-monitoring skills, study skills, and utilizing students' preferred learning modalities. Furthermore, Linan-Thompson et al. (2007) suggest that teachers need to provide explicit, systematic, and intensive interventions to ELL students who are at risk of falling behind in reading.

Second, as RTI emphasizes the use of assessments to screen students, it is important to consider the validity of screening and progress monitoring tools and its effectiveness with ELL students (Haager, 2007). These assessment tools are effective for gathering information needed on a student's current level of performance to provide much needed help, but using these

tools to label a child should be done with caution. Beyond screening, progress monitoring is suggested for the RTI model to carefully track a student's improvement in reading skills. Similar to any intervention, feasibility of teachers or specialists in using the progress monitoring method (such as CBM) may be one of the many critical issues that can be overlooked while implementing RTI.

Lastly, reading intervention provided to ELL students who are at risk should be further discussed. Garcia and Tyler (2010) suggest that an intensive reading intervention provided by a reading specialist or special education teacher with an understanding of ELL instructional methods would be helpful for ELL students with LD. Although direct instruction is known to be highly effective with ELL students and LD students, we also need to keep in mind that the fidelity of these instructions being delivered is just as important as determining which students need help. In order to provide assistance in this area, teacher education programs need to ensure that pre and in-service teachers are being trained to work effectively with ELL students who may be at risk of failing to read.

Professional Development for RTI

Even though only a few studies indicate how to train teachers or teaching assistants in their research, a trained teacher is considered a key factor for successful RTI for ELLs or those at risk for LD. Rinaldi and Samson (2008) insist that all teachers who implement RTI with ELLs be required to have experience and training on various topics, such as practices of formal and informal evaluation, accommodations of the classroom for ELLs, and understanding acquisition of a second language. Orosco and Klingner (2010) argue that teachers who teach ELL students should be equipped with the knowledge of second language acquisition. Bilingual teachers would provide appropriate accommodations and instructions when understanding ELL students' traits and customs, as Calhoon et al.

(2007) found in their project. However, matching all ELL students to bilingual teachers would be impossible, therefore, providing specific training and practices of how to teach ELLs with the RTI program is essential for all teachers who work with ELL students.

Cultural Aspects of RTI for ELL

Brown and Doolittle (2008) denoted that carefully designed RTI should include cultural competencies into its intervention. Students' cultural background should be an integral part of program construction, along with experience and intervention both provided in English and in their native language. That is, language proficiency in their first and second languages should be equally prioritized so that interventional outcomes could be maximized. However, only six studies implement two languages by means of providing reading interventions among the twenty-six articles we reviewed. While not all studies utilize experimental design, this finding is still substantial and demonstrates that the importance of cultural diversity has not been taken into consideration fully. Therefore, it is suggested that future studies focus on comprehensive literacy development in students' first and second languages and that interventional strategies should dovetail appropriate measures in cultural sensitivities for students.

Secondly, and more importantly, successful implementation of RTI for ELL students is based largely upon readiness of participating teachers for cultural diversity. Xu and Drame (2008) and Brown and Doolittle (2008) suggest that classroom teachers and teachers who provide interventional support should be familiar with the importance of cultural values in reading difficulties and appropriately respond to the diverse needs. Xu and Drame (2008), for example, note that social-emotional interaction, an outcome desired from RTI for ELL students, would not be constructed naturally. Systematic planning and understanding by key personnel are

valuable and highly critical. Brown and Doolittle (2008) further discuss that participating personnel should be knowledgeable in both RTI and its implication for ELL students. Therefore, it is very important that teachers and key personnel in the school-wide implementation of RTI are familiar with culturally sensitive pedagogy and first and second language acquisition. There is a need to carry out more studies to provide pre-service and in-service teacher training program and their application into practice.

Limitations

This literature review has limitations that the authors would like readers to consider. First, the number of articles that have quantitative data (experimental design) is limited; therefore, the findings have mixed types of papers published about RTI and ELLs. Second, the number of articles included in this review is limited due to the fact that RTI has not been implemented with the emphasis of ELL student. Lastly, the suggestions provided in this review are limited to students who are Hispanic because of the fact that this group is the largest ELL group in America.

Conclusion

Although the number of studies focusing on ELLs has been growing, it is not clear to identify and to assess its effectiveness ELLs with LDs. ELLs struggling with reading difficulties have a tendency to be underrepresented or overrepresented because it is difficult to distinguish problems in second language acquisition from learning disability. This literature review concludes that it is effective to provide evidence-based intervention to ELLs at risk for reading in a small group in explicit and systematic way. This early literacy intervention that is implemented as supplemental instruction in Tier 2 can prevent them from falling behind in reading achievement. Struggling ELLs can also benefit from high-quality, explicit instruction provided in general educational

settings, Tier 1.

Teachers should acquire sufficient knowledge about second language acquisition and learning disabilities as well as referral procedures for ELLs with LDs. In addition, it is critical to consider ELLs' linguistically and culturally diverse needs to provide more effective intervention. Professional development and teacher training to provide knowledge about identification and assessment of ELLs with LDs will contribute to implementing appropriate and preventive intervention for them.

There have been few studies on RTI for ELLs struggling with reading. Most studies have been done with Spanish-speaking students. Additional research is needed to understand how to identify, assess, and provide intervention for ELLs with LDs using a larger sample, and longitudinal studies assessing participants with more diverse ethnicities, language, and culture.

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