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The Research Synthesis of Diagnosis and Identification Procedure of Students with LD in Reading

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Abstract. The purpose of this study is to propose the diagnosis and identification model through a synthesis in Korea journals from 2004 to June, 2013. In Korea, the arguments that RTI models also must be adopted as an intervention model for students with LD as well as a diagnose approach are getting attention. This study addressed the following research questions: (a) What are the features of identification procedure researches in Korea? (b) Could an empirically-validated RTI model and evaluation be used to prevent learning problems for identification purposes in reading area? Throughout results, some recommend that trained development should include both general knowledge and provision of master teachers to support to general education teachers using RTI procedures.

1. Introduction

Recently, under IDEA reauthorization 2004, federal government suggests school districts to use RTI for identifying LD. RTI is effective educational practices and can be defined as assessment models in the general education so lots of states in United States implemented today its procedure when they diagnose and identify LD (Berkeley, Bender, Peaster, & Saunders, 2009; Johnson, Mellard, Fuchs, & McKnight, 2006; Werts, Lambert, & Carpenter, 2009).A key component of RTI framework is the use of evidence-based teaching practices (Swanson, Solis, Ciullo, & Mckenna, 2012). RTI models help determine whether students are at risk or not based on whether or not can responses to typical classroom instruction. It is efficient process for screening, intervening and monitoring to determine a students' response to scientific, research-based intervention. The purpose of RTI is not only to provide early intervention for students who are at risk for school failure but also to develop more valid procedure for identifying students with reading disabilities (Kavale, 2005). That is, RTI is a means of delivering early interventions to address academic problems, not school behavior problems. Therefore, IDEA supports reducing achievement gaps, emphasizing importance of scientifically based interventions, screening, and holding schools accountable to all students in the general education (Berkeleyet al., 2009; Ehren et al., 2009; Hughes et al., 2012; Klotz, 2007). Although there is no universally accepted model in every states, students are screened periodically based on high-quality instructions in the general classroom (Division for Learning Disabilities, Council for Exceptional Children, 2007; Fuchs, Mock, Morgan, & Young, 2003; Werts et al., 2009).

RTI is implemented in different ways in each states and districts, but many issues are resolved for implementation (Berkeley et al., 2009; Werts et al., 2009). First of all, there is no criterion for identify most appropriate screening measures and to minimize false negative (Gilbert, Compton, Fuchs, &

Fuchs, 2012; (Jenkins, & Hudson, 2007). Universal screenings is the first step to diagnostic and identify for providing an evidence-based instruction, but have not to settle educational curriculum, instructional methods, and proper technological skills (Jenkins at al., 2007; Jong, 2013). In addition, RTI models do not have concerted assessment methods which is better between protocol and problem-solving, which model could identify its responsiveness, and what experimental intervention is (Fiorell, Hale, Decker, & Coleman, 2009; Fletcher-Janzen, & Reynolds, 2008; Hain, Hale, &Kendorski, 2009; Jenkins at al., 2007; Jong, 2013). As a result, each state has different assessment methods for identifying students with LD (Fletchers, Francis, Morris, & Lyon, 2005).Lastly, they have questions related to implements who is responsible for delivery of the interventions, who will decide what research-based interventions are used, and whether the process is viewed as a processor to a formal evaluation for eligibility or if the process itself serves as the eligibility evaluation (D. Fuchs, Mock, Mogan, &Young, 2003). If educators, parents, and other stakeholders about state requirements do not clearly communicate together so that misunderstandings do not arise. It is also important that researchers and other leaders in the field be very clear when making reference to the "RTI" (Berkeley et al., 2009).

In Korea, the arguments that RTI models also must be adopted as an intervention model for students with LD as well as a diagnose approach are getting attention, as people have been informed more and more about RTI(Kim, 2009; Lee, 2009). According to announcing IDEA reauthorization, 2004, many researches in Korea proposed 'the Korean RTI models' based on review of Korean articles. Since 2005, lots of articles published related to RTI models such as exploration about applying possibility of RTI in Korea, consideration about RTI, and more proper alternative diagnostic models in Korea (Kang et al., 2008; Kim, et al., 2011; Jung, 2007, 2010). They argue that the RTI models is an alternative methods in special education laws for persons with disabilities and other(2008) and special education improvement act (2009) for identifying LD from IQ-achievement discrepancy to RTI model report (Kim et al, 2009). However, RTI is at an embryonic state because there is no concerted framework and selected screening studies, so it is difficult to screen and identify to accurately students as at risk or LD. In addition, according to interventions and synthesis related to intervention, it is difficult to identify the evidence-based practice in intervention studies and be failed to met the criterion to identify as the evidence-based practice (Jung, 2012; Kim, 2012; Kim, & Kim, 2013; Kim, & Lee, 2005; Na, &Seo, 2010). Many researchers argue that it is necessary to develop concerted diagnostic process, identification, updated formal assessment based on CBM, various measurements, evaluation model which are possible to evaluate each components including identification, evaluation about each aspect such as physics, cognition, emotion, behavior, and communication, and standardized measure process (Jung, 2013; Kim, & Kim, 2013; Hong, 2013). Lastly, general teachers are having trouble applying high-quality and evidence-based intervention and monitoring in progress (Kim, 2006; Lee, 2008) in educational system in Korea.

The construct of LD is imperfectly measured simply because the measurements tools themselves are not error free (Francis et al., 2005). Different approaches to classification and definition capitalize on this error of measurement in ways that reduce or increase the reliability of the classification itself. Similarly, evaluating similarities and differences among groups of students who are identified as LD and not LD is a test of the validity of the underlying classification, so long as the variables used to assess this form of validity are not the same as those used for identification (Morris & Fletcher, 1988).

The system of screening and progress monitoring, contained within an iterative process of data collection, analysis, and decision making, supports a proactive approach to ensuring academic success (Mellard & Johnson, 2008). Reading is the most important area because it relates to every field of learning. It is an essential skill to understand and to learn in most subjects, and also a vital tool to acquire knowledge during school ages (Hallahan, Lloyd, Kauffman, Weiss, & Martinez, 2005).). Specifically, RTI targets early reading problems (McMaster, Fuchs, Fuchs, & Compton, 2005; O'Connor, 2000; Vaughn, Linan-Thompson, & Hickman, 2003; Vellutino et al., 1996). Therefore,

the *National Reading Panel Report* (NRP; 2000) recommend that providing more intensive early intervention may benefit to evaluate responsiveness in normal school contexts (Al Otaiba & Fuchs, 2006). Through more intensive intervention, students with reading disabilities provide effective instruction and a valid means of assessing learner needs.

RTI models currently include reading only. In initial states of RTI implementation, reading was the primary focus given its impact across the curriculum. So, the school used the diagnostic assessment of reading to screen for students at risk. Performance on this assessment is provided in grade-level equivalents (Berkeley et al., 2009; Johnson, S.E., & Smith L., 2008; McMaster, Fuchs, Fuchs, & Compton, 2005). Despite effectiveness of early reading interventions, there are still mane students who struggle significantly with reading (National Center for Education Statistics [NCES], 2005). Students continue to struggle to achieve assessment in reading so that challenges about reading do not dissipate over times (Wanzek & Roberts, 2012). In Korea, the number of students who are demanded special education is increasing every year, but the number of students with LD is decreasing. It also means that RTI model has the pitfalls and weakness for applying in the school realistic in Korea (Kim, 2006). However, teachers do not currently have the background knowledge or skills needed to implement and RTI model even in beginning reading (Mastropieri & Scruggs, 2005). Also, there is no system for universal screening in the essential academic areas. Instead, students with potential learning problems were identified through teacher referrals, parental concerns, or performance in states, none of which supported efforts for early intervention (Johnson & Smith, 2008). In addition, there are no concerted results about following questions in terms of identification or assessment; Is teacher nomination an accurate means of identifying students who require services beyond primary prevention? What is an accurate means for distinguishing students with secondary prevention? Which assessments and benchmark scores provide a reliable means for deciding when to move students from tertiary to secondary prevention-and sometimes back again? (Fuchs, Fuchs, & Compton, 2010).

Previous research articles have examined outcomes of reading intervention and instructions. Although there are lots of researches related to reading and identifying, it has still difficulties to find middle ground about criteria on diagnostic and identification. However, it is necessary to analyze and find answer the following research question. This study addressed the following research questions: (a) What are the features of identification procedure researches in Korea? (b) Could an empirically-validated RTI model and evaluation be used to prevent learning problems for identification purposes in reading area? One final goal of this study is to find appropriate measurements of student progress to determine whether an identification models and procedures have been effective for a particular student. As interventions with established efficacy data are identified, the school can adopt procedures described in the literature to measure their effectiveness and to implement interventions with existing assessment tools.

2. Methods

I collected data through published articles for research synthesis.

First, I conducted research synthesis to analyze process of diagnose and identification in school setting when interventions were practiced. For this synthesis, I conducted a comprehensive search of the literature. At first, I conducted a computer search of KERIS, DBpia, NDSL, RISS, Nanet, and Google Scholar to locate studies published between 2004 and June, 2013. I will used in various combinations of "learning disabilities" "reading disabilities", "reading intervention", "reading", "reading identification", "screening", "diagnostic", and "response to intervention" to capture the greatest possible number of articles. I also searched abstracts and articles from prior synthesis and reference lists to pledge that all articles were identified.

I then manually searched the eight major journals in the areas of special education and learning disabilities: *Journal of Learning Disabilities, Journal of Play Therapy, Journal of Special Children Education, Journal of Emotion and Behavior Disorder, Journal of Special Education: Theory and Practice, Journal of Special Education, Journal of Speech & Hearing Disorders, and Journal of Special Education & Rehabilitation Science.*

Studies were be selected if they meet all of the following criteria:

·   Participants were students with reading disability. Students with reading disability were defined as students with identified reading difficulties. Students with low achievers or unidentified reading difficulties are not included. Only disaggregated data on students with reading disability were used in the synthesis. Also participant were in Grade 1 through 12 (age 8-19).

·   Studies were accepted when research designs used treatment-comparison, single-group, or single-subject designs. Also researches were accepted when they were presented process of diagnose and identification.

·   The language of researches was Korean.

I did employ extensive coding procedure to procedures to organize significant information from each study. I will adapt previously designed code sheets were developed for post intervention synthesis (Jeon et al., 2010; Jung, 2010; Solis et al., 2012). Coding sheet was used to record relevant descriptive criteria as well as results from each study, including data regarding participants (e.g., grade, number, levels of reading development), design (e.g., single subject research, experimental research), intervention information (condition, surrounding, person implementing intervention), screening, diagnostic, and results.

3.   Summary

The primary of RTI models is the prevention and remediation of academic difficulties through effective classroom instruction and intense intervention. It is important that researchers and other leaders continue to investigate issues related to RTI. A critical component of an RTI model is the inclusion of research-based practices. However, many researches do not address the areas of research-based interventions for various tiers in general. Many issues be addressed via synthesis at least one lesson in each tier. Therefore, successfully implement RTI models may improve achievement outcome in all students, especially those most at risk for reading difficulties if the scaling issues can be address.

The implementation of screening and progress-monitoring tools, although still in its infancy, provides an objective means of early identification of student needs. Early identification is important given the shift in student demographics and the need to maintain an objective and nondiscriminatory system of screening for academic and behavior problems (Donovan & Cross, 2002). An empirically-validated RTI model could be used to prevent learning problems in children, and provide an opportunity to support instruction, assessment, and interventions on the basis of individual student needs (Hale et al., 2010; Johnson et al.,2008). Therefore, lack of specificity in identification, intervention implementation, selection research-based practices, and fidelity raises concern about how constantly the eligibility process will be implemented both special and general school. As a result, some recommend that trained development should include both general knowledge and provision of master teachers to support to general education teachers using RTI procedures.

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