This *Literate Nation—Science Series, Research That Resonates* is designed to provide parents, educators, and legislators with a deeper understanding of the science that supports effective literacy policy. Literate Nation’s Literacy Policy’s objective is to declare that all students can learn to read for knowledge, to write accurately and coherently, and to think critically about printed material. This series, Research that Resonates, is also a tool for educators interested in providing the best instructional practices that are both driven by a deep understanding of pedagogy and guided by quality, formative assessments.

**Literate Nation White Paper: Research that Resonates Screening, Formal Assessment, and Gathering Data**

**Literacy Policy Section 3**

2013 | Science Core Group | Articles from Dian Prestwich
Early Response to Intervention Measures and Criteria as Predictors of Reading Disability in the Beginning of Third Grade


**Abstract**

We explored the usefulness of first and second grade reading measures and responsiveness criteria collected within a response-to-intervention (RtI) framework for predicting reading disability (RD) in third grade. We used existing data from 387 linguistically diverse students who had participated in a longitudinal RtI study. Model-based predictors of RD were analyzed using logistic regression; isolated measure/criteria combinations for predicting RD were analyzed using classification analysis. Models yielded superior classification rates compared to single measure approaches and did not systematically misclassify English learners. However, particular first and second grade measure/criteria combinations also showed promise as isolated predictors of RD in word reading/text fluency. Model-based approaches were required for acceptable classification of students with RD in comprehension. Although the former finding is promising for early identification of students in need of more intensive instruction in lexical or fluency-based skills, the latter finding reaffirms literature attesting to the complexity of RD in comprehension and difficulty of predicting deficits using early measures of reading, which primarily assess word reading skill. Results replicated well in an independent sample, thus enhancing confidence in study conclusions. Implications regarding the use of RtI for predicting RD are discussed.

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Universal Screening for Writing Risk in Kindergarten


**Abstract**

Early identification of students at risk for writing disabilities is an important step in improving writing performance. Kindergarten students (*n* = 84) were administered a set of researcher-developed writing tasks (letter writing, sound spelling, word spelling, and sentence writing) and school administered reading tasks (Dynamic Indicators of Early Literacy Skills [DIBELS], Phoneme Segmentation [PSF], Nonsense Word Fluency [NWF], and Letter Name Fluency [LNF] subtests [DIBELS]) in January. The students were identified as at risk based on a norm-referenced writing assessment and teacher ratings collected in the spring. The classification accuracy of the writing and reading tasks was estimated using receiver operating characteristics (ROC) curves. For both risk criteria, individual reading and writing assessments demonstrated comparable accuracy (area under the curve [AUC] statistics range = .57-.87). However, classification accuracy was strengthened when reading and writing measures were combined (AUC range = .75-.92). The results suggest that the most accurate approach to universal screening of writing difficulties may include a battery of reading and writing measures.

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Predicting Reading Ability for Bilingual Latino Children Using Dynamic Assessment


**Abstract**

The study investigated the predictive ability of a dynamic assessment designed to evaluate later risk for reading difficulty in bilingual Latino children at risk for language impairment. During kindergarten, 63 bilingual Latino children completed a dynamic assessment nonsense-word recoding task that yielded pretest to posttest gain scores, residuum gain scores and modifiability scores. At the end of first grade, the same participants completed criterion reading measures of word identification, decoding, and reading fluency. The dynamic assessment yielded high classification accuracy, with sensitivity and specificity at or above 80% for all three criterion reading measures, including 100% sensitivity for two out of the three first-grade measures. The dynamic assessment used in this study has promise as a means for predicting first-grade word-level reading ability in Latino bilingual children.

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Examining the Predictive Validity of a Dynamic Assessment of Decoding to Forecast Response to Tier 2 Intervention


Abstract

The purpose of this study was to examine the role of a dynamic assessment (DA) of decoding in predicting responsiveness to Tier 2 small-group tutoring in a response-to-intervention model. First grade students (n=134) who did not show adequate progress in Tier 1 based on 6 weeks of progress monitoring received Tier 2 small-group tutoring in reading for 14 weeks. Student responsiveness to Tier 2 was assessed weekly with word identification fluency (WIF). A series of conditional individual growth curve analyses were completed that modeled the correlates of WIF growth (final level of performance and growth). Its purpose was to examine the predictive validity of DA in the presence of three sets of variables: static decoding measures, Tier 1 responsiveness indicators, and prereading variables (phoneme awareness, rapid letter naming, oral vocabulary and IQ). DA was a significant predictor of final level and growth, uniquely explaining 3% to 13% of the variance in Tier 2 responsiveness depending on the competing predictors in the model and WIF outcome (final level of performance or growth). Although the additional variances explained uniquely by DA were relatively small, results indicate the potential of DA in identifying Tier 2 nonresponders.

An Analysis of Consistency Between Team Decisions and Reading Assessment Data Within an RTI Model


Abstract

Data-based decision making by teams is central to implementation of response to intervention (RTI) models. Few studies have examined the actual decision-making process within RTI systems of service delivery. The purpose of this study was to examine the tier assignment decisions for students across grade-level teams in three K-5 elementary schools implementing identical RTI models for reading. Decisions of grade-level teams primarily composed of teachers were compared against the recommendation made by the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) universal screening measure during fall and winter assessments across a 2-year period. Results showed teams had high overall levels of agreement with the DIBELS recommendations, especially after Grade 1 and during winter of each year. When teams initially disagreed with the DIBELS recommendations, increased agreement in the use of data-based decisions was present over time. Implications for the data decision-making process within an RTI model are discussed.

Screening for At-Risk Readers in a Response to Intervention Framework


Abstract

This article examines universal screening, one component in a response to intervention approach for serving struggling learners. In a response to intervention framework, screening is the principal means for identifying early those students at risk of failure and likely to require supplemental instruction; as such, it represents a critical juncture in the service delivery continuum. Our focus is students at risk for unsatisfactory reading achievement. We first examine classification accuracy and the factors that affect it. Then, relying on studies conducted since 1998 that examine the classification accuracy of reading screens, we summarize research on candidate measures with potential for identifying students at risk for reading disabilities and identify areas in need of more research.

Progress Monitoring as Essential Practice Within Response to Intervention


Abstract

Response to intervention (RTI) encompasses a process for evaluating whether students react to evidence-based instruction as expected. In this study we propose a sample framework for RTI implementation within the context of elementary-level instruction in reading that is based on available research. We identify critical aspects of both instruction and assessment that must be addressed by schools as they operationalize RTI. Also within this multitiered framework, we describe how progress monitoring data can be used to provide salient information regarding the presence of a learning disability. Last we discuss additional challenges rural schools may face when carrying out RTI.
This article explains the elements of reading fluency and ways to assess and teach them. Fluent reading has three elements: accurate reading of connected text, at a conversational rate with appropriate prosody. Word reading accuracy refers to the ability to recognize or decode words correctly. Reading rate refers to both word-level automaticity and speed in reading text. Prosodic features are variations in pitch, stress patterns, and duration that contribute to expressive reading of a text. To assess reading fluency, including all its aspects, teachers listen to students read aloud. Students’ accuracy can be measured by listening to oral reading and counting the number of errors per 100 words or a running record. Measuring reading rate includes both word-reading automaticity and speed in reading connected text using tests of sight-word knowledge and timed readings. A student’s reading prosody can be measured using a checklist while listening to the student. To provide instruction in rate and accuracy, variations on the repeated readings technique are useful. To develop prosody, readers can listen to fluent models and engage in activities focused on expression and meaning. Opportunities to develop all areas of reading fluency are important for all readers, but especially for those who struggle.