RESEARCH-TO-PRACTICE SUMMARY

Monitoring the Development of Literacy Skills in Preschool Children

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An important area for preschool teachers to monitor in students is the development of emergent literacy skills, as these skills lay the foundation for conventional reading. However, it can be difficult for the teacher to select a test for use because there are many measures available on the market that purport to assess the same skills, albeit through differing methods (e.g., pictures versus auditory, timed versus untimed). This study examined three measures with differing formats that were administered to 4-year-old students attending Head Start in an effort to determine if the different methods affected performance. Results indicated that the three tests did overlap, meaning that administration of all three had not been necessary, yet relationships between individual tasks were mostly low to moderate, suggesting that method did matter. Implications of these results for practice and future research are discussed.

Early childhood educators are tasked with helping young children develop emergent literacy skills, which lay the foundation for future conventional reading (Whitehurst, Zevenbergen, Crone, Schultz, Velting, & Fischel, 1999). These early skills include letter identification (Lonigan, Burgess, & Anthony, 2000), phonological awareness, (Kirby, Parrila, & Pfeiffer, 2003; Lonigan et al, 2000), vocabulary (Landry, Swank, Smith, Assel, Gunnewig, 2006), and print awareness, which is the knowledge that written letters represent sounds (Landry et al., 2006). Myriad research has suggested that if children receive proper instruction in these areas during the preschool years, the majority will enter school and successfully learn to read (Landry et al., 2006). These findings underscore the critical need for early data-driven instruction and intervention.

One of the questions facing early childhood educators, however, is how best to assess student progress in literacy skills. Frequently, teachers make their own tests, but this practice should be discouraged because it may produce measures that are psychometrically unsound (Phanuef & Silberglitt, 2003). That is, teacher-generated tests may not adequately measure the intended skills and, thus, produce results that are invalid. A better option would be to purchase a commercially available test that has been standardized and that has established reliability and validity properties.

Currently, there are a number of standardized tests of emergent literacy skills for preschoolers on the market. However, it can be confusing for the early childhood educator to

decide which measure to use because many include tasks whose titles suggest that they assess similar skills, yet utilize different methods. For example, many measures include a rhyming task, but the task is presented through a variety of methods across tests including picture matching, auditory discrimination, timed, and untimed. To date it is unknown to what extent these varying administrations may impact student performance.

The purpose of this study was to examine the relationship between three measures of emergent literacy skills currently available to the preschool educator-- the *Phonological Awareness Literacy Screening-PreK* (*PALS PreK*; Invernizzi, Sullivan, Meier, & Swank, 2004), the *Center for Improving the Readiness of Children for Learning and Education—Phonological Awareness, Language, and Literacy System* (*CIRCLE: C-PALLS*; CIRCLE Group, 2004), and the *Individual Growth and Development Indicators* (*IGDI;* Early Childhood Research Institute-Measuring Growth and Development [ECRI-MGD], 1998). Although all three of these tests purported to measure similar skills, including letter identification, vocabulary, and phonological awareness, differing methods of administration were employed. For example, all three tests included a beginning sounds task, but two measures used pictures, while the third employed auditory means to assess student skills in this area. Furthermore, two measures were untimed, while one was timed. All three tests were administered because it was unclear how these differing test formats may have affected outcomes and it was important to obtain accurate progress data in determining the effectiveness of instruction for these students.

Although administering the three tests may have produced a more complete picture of student progress, it was very time consuming. The time it takes to assess should be a consideration of the teacher because lengthy administration can cause fatigue in the young child, leading to results that misrepresent his skill development. Furthermore, time spent in testing distracts from instructional time, which limits the classroom learning experience (Schappe, 2005). Because of these issues, this study sought to determine how closely related the three tests—the *PALS PreK* (Invernizzi, Sullivan, Meier, & Swank, 2004), the *CIRCLE: C-PALLS* (CIRCLE Group, 2004), and the *IGDI* (ECRI-MGD, 1998)--were and if administration of all three was necessary. It was hypothesized that tasks purporting to measure similar skills, such as rhyming and beginning sounds, would be strongly related and conversely, those tapping different skills would not be strongly related to one another when student results were considered.

MAJOR FINDINGS OF THE STUDY

The relationships between the three larger tests and their component tasks were examined through a variety of methods. When the individual tasks that purported to measure the same skills were compared, it was found that the letter identification tasks were strongly related despite testing method employed—timed versus untimed and upper and lower case forms presented together versus in isolation. Conversely, when the PA tasks were compared, the relationships were weak to moderate. These tasks were administered in a variety of ways, including timed versus untimed, picture versus auditory, and response production versus "yes/no" format. It is unknown how the differing formats may have impacted student performance. Finally, when the two vocabulary tasks were compared, there was a moderate relationship. Although both were administered via pictures in a timed format, they included different pictures, which could have influenced student responses. It could be that the pictures for one of the measures included objects more familiar to students than the other.

In addition to comparisons of the individual tasks, the larger tests were also compared to determine redundancy or "overlap." This comparison was made in effort to determine if administration of all three tests was necessary, given the considerable time taken from classroom instruction. These analyses demonstrated that the tests did, in fact overlap, suggesting that it may not have been necessary to use all three tests to get adequate information about students for instructional decision making purposes.

IMPLICATIONS FOR PRATICE

This study demonstrated that it may not have been necessary to administer three full tests of emergent literacy skills to preschoolers, as the tests overlapped. The early childhood educator should be cautious about "over-testing" because lengthy testing can produce invalid results for a young student and also distracts from the classroom experience (Schappe, 2005). However, the findings also suggested that much future research needs to be conducted to determine which tasks together provide the most accurate data regarding student progress.

Future studies should be conducted with much larger and more diverse sample sizes, including even younger students as research has shown that literacy development begins very early in a child's life. Furthermore, this study only reviewed three measures-- *PALS PreK* (Invernizzi et al., 2004) , the *CIRCLE* (CIRCLE Group, 2004), and the *IGDI* (ECRI-MGD, 1998). There are many other tests available on today's market that should be examined to ensure utilization of the best possible methods for assessing the preschool student's acquisition of literacy skills. Finally, it would be beneficial to conduct longitudinal studies to determine how well preschool literacy measures predict later reading performance. This would enable the early childhood educator to identify at-risk students and intervene at a young age in an attempt to ameliorate future problems.

As this field progresses, teachers should select preschool emergent literacy measures with a critical eye. Any measure selected should have the appropriate psychometric properties, that is validity and reliability, for the students tested. Additionally, the teacher will want to consider the cost of the test, the training required in learning to administer and interpret, and administration time. A test should be efficient and economical in that it provides the teacher with solid data for decision-making without detracting from the instructional process. Certainly this is a field ripe for exploration and examination and, with today's increasing calls for accountability in our nation's schools, is an area of necessity.

TIPS FOR TEACHERS

As the field advances and further research is undertaken, there are a few considerations for teachers currently working with the preschool population. As myriad research has indicated that problems with emergent literacy skill acquisition in the early years are directly associated with future reading difficulties, it is important to focus instruction and monitor student development in these areas. "Tips for teachers" include:

- The use of multiple methods in evaluation of student skills: A single test administration may be influenced by such variables as a child's language abilities, distractibility, and comfort level with the examiner (Cabell, Justice, Zucker, & Kilday, 2009). The use of a

multimodal assessment that includes repeated direct observations of behaviors (e.g., identifying words that rhyme or alphabet letters) can help to alleviate concerns that may be raised with a single administration of a standardized test. Furthermore, other experts in the field have suggested that indirect assessments also should play a role in evaluating skill development. These assessments are informal and typically involve ratings of the child's behavior and skills by the teacher or parent, who has multiple opportunities to observe (Cabell et al.) . Although these indirect assessments would not provide sufficient data for decision making on their own, combined with direct assessments of student behaviors and skills, they can add information that is useful in scaffolding instruction (Lonigan, Allan, & Lerner, 2011).

- A portfolio system: Generally, a portfolio includes observations of children's behaviors, anecdotal records, checklists, and work samples. The portfolio system enables the teacher to monitor children's progress in meeting specified curricular goals through both direct and indirect assessments across the school year (Brassard & Boehm, 2007). For example, a portfolio might include a checklist containing broad-based skills related to concepts of print and a video of the child manipulating a book and responding to prompts (e.g., "Point to the words on the page.").

- Progress monitoring assessments: Although there are currently no widely available instruments for monitoring preschoolers' emergent literacy skills progress (Lonigan, Allan, & Lerner, 2011), curriculum embedded measures can be developed for a particular system. Curriculum embedded measures include items taken directly from a particular curriculum and can be used to monitor the child's progress in that program. However, the early childhood educator should be cautioned that developing and interpreting these types of measures requires great care. For further information, the reader is referred to Brassard and Boehm (2007).

As the field progresses and new instruments and technologies are developed, preschool teachers are tasked with identifying measures of assessment that are technically adequate, easy and efficient to administer, and that provide immediate instructional benefit. In doing so, essential questions should be asked about the purposes for assessment (e.g., to inform instructional delivery, or to identify students in need of additional support), the teacher's proficiency in administration and interpretation, and the impact on the learning experience (e.g., student time away from instruction).

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