

Assessment of Phonemic Awareness Skills

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A Screening Measure for Classroom Use

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Literacy is a critical component for success in a modern society and a literate population is essential for the functioning of modern societies. Unfortunately, it is estimated that approximately one in three or four children will experience significant difficulties in learning to read (Adams, 1990) and there is considerable evidence to suggest that children's reading difficulties are persistent across time (Smart, Prior, Sanson, & Oberklaid, 2001). For example, Juel (1988) reported an 88% probability that children would remain poor readers in fourth grade if they were poor readers at the end of the first grade.

Given this continuity of reading (dis)ability, there has been increased attention to early intervention to prevent children from experiencing reading disabilities and their subsequent negative consequences. Large controlled studies (Vellutino & Scanlon, 2001) as well as comprehensive reviews of the literature (National Research Panel, 2000) suggest that most young readers can benefit from systematic, frequent remediation. However, early intervention requires that children at risk for reading problems be identified *before* they receive formal reading instruction (Foorman, Francis, Shaywitz, Shaywitz, & Fletcher, 1997). Thus, it is necessary to identify pre-reading skills that are predictive of future reading success in order to identify those students most likely to need remediation.

Fortunately, a wealth of research has shown that language-based measures are the best predictors of later reading achievement (Vellutino & Scanlon, 2001). In fact, a meta-analysis of the literature on prediction of reading disabilities found that nonverbal skills like visual-motor integration were weakly related to future reading levels whereas verbal skills like phonemic awareness, letter knowledge, print concepts, and expressive vocabulary were moderately correlated with later reading proficiency (Scarborough, 2001).

Among verbal skills, phonemic awareness has a unique attribute - it has demonstrated a reciprocal causal influence with learning to decode print (Adams, 1990, 2001; Ball, 1993; Pressley, 2002; Scarborough, 2001; Share & Stanovich, 1995; Vellutino & Scanlon, 2001). Children who understand that spoken words are composed of a series of discrete sounds that can be manipulated are more likely to become skilled readers than children who are insensible to the individual sounds within words (Bus & Van Ijzendoorn, 1999; Ehri, Nunes, Willows, Schuster, Yaghoub-Zadeh, & Shanahan, 2001; Snow, Burns, & Griffin, 1998). In turn, skilled readers are

more able to hear and manipulate the sounds within words. Although knowledge of the alphabet is one of the best predictors of eventual reading achievement, it does not appear to be a causal influence. That is, teaching the letter names does not seem to substantially improve later reading acquisition (Whitehurst & Lonigan, 2001). Unfortunately, the relationship of other verbal skills with reading acquisition is unclear.

Given this causal relationship between phonemic awareness and reading, it has been suggested that teachers assess beginning readers to ensure proper development of phonemic awareness skills (Honig, Diamond, & Gutlohn, 2000; Snow et al., 1998; Zygouris-Coe, 2001). For example, Sodoro, Allinder, and Rankin-Erickson (2002) opined that “accurate assessment of phonological awareness is critical for teachers” (p. 224) and the Consortium on Reading Excellence (1999) suggested that a phonemic awareness screening test be administered “to all kindergarten children mid-year and to all first graders in the fall” (p. 15). Screening tests appropriate for kindergarten and first grade classrooms must, however, meet three criteria (Howell & Nolet, 2000; Salinger, 2001).

First, they must be simple to administer and easy for the student to take. Second, they must provide reliable results. Finally, any classroom assessment must be cost effective (Choate, Enright, Miller, Poteet, & Rakes, 1992). This paper presents a phonemic awareness screening measure that meets these three criteria.

Measure

General Description

The *Mountain Shadows Phonemic Awareness Scale* (MS-PAS; Watkins & Edwards, 1998) is a sound categorization task designed to assess young readers’ phonemic awareness. The MS-PAS is designed to be administered to an entire first grade class. It may also be administered to kindergarten students, but in small groups of 6-8 students rather than an entire class. Directions to students are standardized and scoring instructions are provided with the MS-PAS. It is a 20-item group administered test which takes around 15 minutes to complete. Both same and different sound categorizations are used. The ten ‘same’ items consist of a target picture and three response option pictures. The name for each picture is read aloud and children are then asked to mark the picture that begins with the same sound as the stimulus word. This is followed by ten ‘different’ items where four pictures are presented, their names are read aloud, and children are instructed to mark the picture of the word that begins with a different sound than the other words. Both same and different components are preceded with practice items to ensure that children understand the task. The picture format reduces memory load and allows a purer assessment of phonemic awareness.

Reliability

Reliability evidence was initially based on students tested in intact classrooms in a suburban, southwestern school district. Students were of White ethnic origin (91%) and lower middle to middle class (less than 10 percent received free and reduced lunches). Internal consistency reliability (quantified via coefficient alpha) of the MS-PAS was .90 for 137 students tested in the final month of kindergarten and .89 for 929 students tested in the first month of first grade.

Internal consistency reliability of the MS-PAS was next evaluated in a nationally representative sample of 4,112 students from the first three grades in the Republic of Trinidad and Tobago tested at the beginning of the school year. Coefficient alpha for this large normative sample was .89 (Worrell, Watkins, Runge, & Hall, 2002). Next, reliability of the MS-PAS was assessed with 63 first grade students from Pennsylvania (Wyganski, 2000). The internal consistency reliability of the MS-PAS among these students was .89. Finally, 161 central Pennsylvania kindergarten students were assessed at the end of the school year. These students were almost exclusively of White ethnic origin and 30% received free or reduced-cost meals. Among this sample, internal consistency reliability was .91 (Runge, 2003).

Availability

A complete copy of the MS-PAS, including instructions and scoring forms, is available without cost on the web at <http://espse.ed.psu.edu/spcy/Watkins/Watkins3.ssi>. Alternatively, a paper copy is available upon receipt of a self-addressed and stamped (sufficient for 3 ounces) 9 x 12 envelope.

Summary

The MS-PAS is easy to administer and to take. Small groups or entire classes can be assessed in around 15 minutes. Directions are standardized and easily understood by kindergarten and first grade students. Simple scoring rules make it easy to use and time efficient. Its reliability (.89 to .90) exceeds that recommended by measurement specialists for screening tests (Salvia & Ysseldyke, 2001). Its authors' release of the MS-PAS for non-commercial applications makes it cost efficient. Thus, the MS-PAS is a sound tool for classroom teachers and other educational professionals charged with assessing the early reading skills of young children.

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