Justice, L. M., Bowles, R. P., & Skibbe, L. E. (2006). Measuring preschool attainment of print-concept knowledge: A study of typical at-risk 3-5 year old children using item response theory. *Language, Speech, and Hearing Services in Schools, 37*, 224-235. Need doi number

**Purpose/Rationale for Study**

The purpose of this study is to determine the psychometric quality of a criterion-referenced measure that was thought to measure preschoolers’ print-concept knowledge. According to Justice, Bowles & Skibbe (2006), the goal of this study is to characterize the Preschool Word and Print Awareness (PWPA) measurement quality for 3-5 year old children using an item response theory model and to examine the extent to which PWPA performance differentiated Print Concept Knowledge for three groups of at-risk children relative to typically developing advantaged children (Justice, Bowles, & Skibbe, 2006, p. 226).

**External Validity**

The participants in the study were 128 preschool children. The participants were between the ages of 3-5 year olds with a mean age of 53 months. There were 65 boys and 63 girls in this study. Eighty-two percent of the children were Caucasian (n=105), 12% were African American (n=15), and 2% were Asian American. An additional 4% of the sample (n=5) was characterized by caregivers as other. In terms of socioeconomic status, 38% of the children (n=49) resided in low-socioeconomic status homes as documented by their eligibility to attend preschool programs that used poverty guidelines as eligibility. Thirty-four of the low SES children were Caucasian, 9 were African American, 2 were Asian American and 4 were considered other (Justice, Bowles, & Skibbe, 2006, p. 226-227). Twenty-seven percent (34 children) had language impairments. The participants were selected based on the following criteria: First, children were required to be native speakers of English and reside in a home in which English was a primary language spoken. Secondly, children must pass a bilateral hearing screening at 25dB or 30dB at 500, 1000, 2000, and 4000 Hz. Thirdly, children must not have no history of gross motor, hearing, cognitive, or neurological impairment as indicated by the parental questionnaire or formal screening. The study took place in the homes of the participants, in a laboratory setting, or at their preschool or day care.

**Procedures -**  The participants were individually tested. The Preschool Word and Print Awareness (PWPA) measure was administered to the participants and lasted no more than 45 minutes. The PWPA test measures children’s knowledge of 14 concepts about print (e.g. location of the front of the book, location of the title of the book, reading from left to right, identifying the first letter of a word, as well as identifying a capital letter). These concepts are administered during an adult-child shared storybook reading using the picture book *Nine Ducks Nine*. The examiner begins the test session by explaining to the child what exactly they will be doing. For example, the examiner might say to the child that they would be reading a book together and informing the child that he or she will need to help the examiner read the book. During the shared storybook reading, the examiner focuses on developing print awareness skills. Print awareness may include skills that focus on the child pointing to the front of the book, identifying the title of the book, knowing where to begin reading and so forth. Children who provide a correct response receives a score of 1 and if they provide an incorrect response they receive a score of zero.

**Internal Validity**

The authors did not provide any information on whether the students were randomly assigned to group. There was no information on whether there was a control group or an experimental groups. However, the authors did indicate that the children were put into groups. There was a total of four groups. The groups are middle SES TL, low SES TL, middle SES LI, and low-SES LI. All the children were tested using the Preschool Word and Print Awareness Assessment. Therefore, all the children were exposed to the same materials. In terms of instructional time, it took 45 minutes to administer the test. The authors did define and provide detailed information on the Preschool Word and Print Awareness Assessment. According to Justice, Bowles, and Skibbe (2006), the PWPA is an individually administered measure of children’s knowledge of 14 concepts about print. The concepts include being able to identify the front of the book, identifying the title of the book, identifying capital letters and so forth. The authors provided some information on procedural fidelity and interrater reliability. The authors indicated that independent scoring via videotape of test administrators’ consistency in providing directions, sequencing tasks, and providing feedback during task administration was studied for a randomly selected 25% of 38 test administrations by two trained observers working independently. The authors indicated that point-by-point agreement in scoring was 94%. Data was collected using a pre-test and post-test scores of the Preschool Word and Print Awareness Assessment.

**Data Analysis**

Specifically, this study estimated partial credit model (PCM) using two standard Rasch-based fit statistics, Infit and Outfit. Infit assessed the match between the expected item responses and actual item responses. Outfit is more sensitive to large deviations from expectations (Justice, Bowles, & Skibbe, 2006, p. 228-229).

**Results**

According to Justice, Bowles, & Skibbe (2006) the results indicated that the “partial credit model (PCM) fit analysis showed good fit between the overall data and the partial credit model, indicating that the Print Word and Print Awareness (PWPA) provided a valid estimate of the latent Print Concept Knowledge (PCK) trait.” Socioeconomic status and language ability were significant predictors of PWPA scores when age was used as a covariate. “The results showed that PWPA to be suitable for measuring preschoolers’ print concept knowledge (PCK) and to be sensitive to differences among children as a function of risk status” (Justice, Bowles, & Skibbe, 2006, p. 224).

**Limitations**

I liked the fact that this study examined the PWPA assessment because by doing this we will have a standard assessment that focuses on concepts of print. The authors indicated in the general procedures section (p. 227) that there were other literacy and language measures. The authors did not provide information about the other literacy and language measures and so I did not have any idea what the other assessments was about. It would have been great if the authors had provided a sample of those measures in the appendix.

**CRITIQUE AND DISCUSSION OF A RESEARCH STUDY: Include these elements in your written critiques**

\*Include the Internal/External Validity checklist with your written critique This was not included. -.2

The *reference* for the article being critiqued should be in APA (6th ed.) style.

This is partially correct. -.2

The *purpose* of the study is a brief description (usually 1-3 sentences) of what the study examined. The research questions or hypotheses often provide a concise statement of the purpose of the study. This is well explained.

*Method* refers to how the study was conducted. In this section you should briefly describe what was done in the study. The following questions cover some of the information that is important. What variables were studied? How was each variable measured? What was the size of the sample? How was the sample selected? What are the demographics of the sample? How long did the investigation last? What data was collected? How were the data analyzed? See Internal/External Validity checklist on BB for more guidance.

This is well summarized, but a bit longer than necessary. Please note the need for concise writing, and also note that critiques do not typically contain a great deal of summary.

In the *Results/Findings* section, describe what was found in the study and the conclusions the investigator drew from the findings. More explanation would be useful in this section- particularly how the PWPA can be a useful tool to better understand children’s print concept knowledge and why that matters for early intervention and instruction.

The last section, *critical comments* are very important. In this section, you have the opportunity to comment on the value of the research as conceptualized, conducted, and reported and on the practical value of the research for the field, teachers, students, and schools. Think about the following issues: 1) new conceptual contributions of the study; 2) new methodological contributions of the study; 3) validity of the study; 4) research design; 5) the adequacy of the written report and suggestions for improvement; 6) suggestions for future research direction and effort; 7) the appropriateness of the design in relation to the research questions.

I’d like to see more detail here- how is this research useful or valuable to the field? How might you extend or expand it? -.1

Score 9.5/10