Introduction
Early delays in oral language development often lead to later difficulties in reading and writing (Roskos, Tabors & Lenhart, 2009). Quick and accurate measures of oral language are important for identifying children at-risk for later reading difficulties and monitoring their growth toward important indicators of early literacy skills within an RTI framework.

It is important, however, to minimize practice effects when measures are administered repeatedly. Practice effects are defined as “...the amount of overall change in scores from test to retest” (Slade et al., 2008, p. 204). Practice effects are a common concern in the field of educational measurement, particularly as related to test-retest reliability (Thorndike & Thorndike-Christ, 2010).

IGDI Picture Naming
IGDI Picture Naming is an individually administered, 1-min measure of expressive language for children 3 to 6 years of age.

The stimulus set consists of approximately 120 randomly ordered individual photos and line drawings of everyday objects with the lexicon of typical 5-year-olds.

The administrator describes and demonstrates the task, and instructs the child to “name the pictures as quickly as you can”.

More information can be found at http://igdis.umn.edu/

Method
Participants were 19 four- and five-year-old children attending a state-funded preschool program for children considered at-risk in a large urban school district.

This study used a repeated measures design.

The dependent measure was IGDI Picture Naming (ECRI-MGD, 1998).

We administered 30 IGDI pictures to each participant one time per week for 5 weeks. Fifteen pictures were repeated each week, while 15 were novel. Pictures were shuffled before each administration to ensure random administration of items.

We recorded the number of pictures named correctly in repeated and novel conditions.

Results
Mean and Standard Deviation of Repeated and Novel Pictures by Week

<table>
<thead>
<tr>
<th>Week</th>
<th>Mean (SD) Repeated</th>
<th>Mean (SD) Novel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12.53 (1.26)</td>
<td>12.95 (1.35)</td>
</tr>
<tr>
<td>2</td>
<td>12.21 (1.51)</td>
<td>12.53 (1.47)</td>
</tr>
<tr>
<td>3</td>
<td>12.58 (1.02)</td>
<td>11.12 (1.38)</td>
</tr>
<tr>
<td>4</td>
<td>12.58 (0.96)</td>
<td>13.26 (1.19)</td>
</tr>
<tr>
<td>5</td>
<td>12.16 (1.01)</td>
<td>12.26 (1.52)</td>
</tr>
</tbody>
</table>

A t-test for dependent samples was used to compare the group means for repeated pictures named (M = 12.16) versus novel pictures named (M = 12.26) in test session five. Using an alpha level of .05, there was no statistically significant difference, t(18) = -0.28, p = 0.782, between the group means. The standardized effect size as measured by Cohen’s d was 0.06.

A t-test for dependent samples was also used to compare the group means for repeated pictures only in weeks one (M = 12.53) and five (M = 12.16). Using an alpha level of .05, there was no significant difference, t(18) = 1.51, p = 0.149, between the group means. The standardized effect size as measured by Cohen’s d was 0.34.

Discussion
Results suggest few to no learning effects on the IGDI Picture Naming measure when administered one time per week for five weeks to these participants.

There was a decrease in the variability of the mean scores for repeated pictures across the study, suggesting that participants became more consistent in their responses across time.

Anecdotal information suggests that participants often provided the same responses each week even if responses were incorrect. While older learners may seek out answers to test items they believe they have answered incorrectly, preschool children may not display this behavior.

Limitations
This study included a small number of participants and was limited in duration.

The test included only 30 pictures, some of which were already known to participants.

Specific participant responses were not recorded precluding the analysis of item-level data.

References


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