

More to repetition than meets the ear

Belinda Seeff-Gabriel, Shula Chiat and Penny Roy look at the use of imitation tests in preschool language assessment

Verbal recall is a familiar task in child language assessment but has not until recently been considered essential. Tests such as the CELF include a sentence recall subtest and, informally, clinicians are likely to check if children can repeat words and sentences, but verbal repetition is unlikely to be assessed routinely. Repetition is widely seen as 'just' a test of auditory memory, telling us little about children's real language abilities. However, all the evidence points in the opposite direction: the accuracy of children's repetition tells us a great deal about their language abilities.

What repetition tests

How well we repeat material depends on the familiarity of the material. When repeating nonwords, words and sentences, we draw on our knowledge of lexical phonology and semantics, morphosyntax, and syntax. Nonwords are easier to repeat if they are phonologically similar to real words. Likewise, while our short-term memory span for unrelated items such as digits is around seven, our span for well-formed

sentences is much longer. Given the role of language abilities and knowledge, it is not surprising that children with language impairments typically show shortfalls in repetition (see box). Repetition tasks offer many advantages as an assessment tool:

- Repetition is a natural skill requiring relatively little concentration or effort. From an early age, most children readily repeat utterances and participate willingly in repetition tasks.
- As they are less reliant on experience of language and testing than other methods of language assessment, they are relatively independent of socioeconomic status, gender and nonverbal IQ.
- A limited range of items can yield a good deal of information if targets are carefully selected. For example, by varying the length and stress pattern of word and nonword targets, we can find out if children's performance is affected by these factors. Children's errors in sentence recall can be highly informative about morphosyntactic, syntactic and semantic difficulties.
- Repetition tasks allow us to target words and structures that are very difficult to assess using other methods of elicitation, such as picture description.
- Knowing exactly what the child is targeting makes scoring easier, but particularly for those children with unintelligible speech who are hard to assess using other methods for eliciting expressive language.
- If tests are standardised, we can determine whether a child's overall recall is in line with children of their own age, and as the targets are given and known, we can identify precisely the types of errors children make.

Assessing expressive language

The Early Repetition Battery (ERB) is a new clinical tool using repetition to assess young children's expressive language. It comprises the Preschool Repetition Test (PSRep), standardised on children aged two to six years, and the Sentence Imitation Test (SIT), standardised on children aged two-and-a-half to six.

The PSRep is made up of 18 real words and 18 phonologically matched nonwords, ranging from one to three syllables, with varying stress patterns. Children are scored for total number of items correct (allowing for systematic phonological processes in the child's speech). PSRep is informative about young children's phonological processing and memory skills, which underpin the acquisition of words and sentence structures.

The SIT is made up of 27 sentences

ranging from three to nine words, targeting a variety of morphosyntactic categories. Children are scored for number of correct whole sentences, and correct number of content words, function words and inflections. A special scoring system accommodates children with severe speech difficulties. Performance on SIT reveals whether children have intact or impaired morphosyntactic abilities and the nature of these difficulties.

Used together, PSRep and SIT are highly informative. However, they can be used separately. For most children under three years of age we would recommend PSRep alone.

ERB evidence

In a study of children referred to speech and language therapy services, we found performance on the PSRep at age two to three years was the best predictor of expressive morphosyntax at four to five years (Chiat and Roy, 2008). Those with PSRep scores within the normal range were at very low risk of difficulties with morphosyntax that are the hallmark of specific language impairment (SLI). Conversely, poor performance indicated an increased risk. However, PSRep can over-diagnose. Children can struggle with PSRep for a variety of reasons, including speech





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FACTS

Early repetition predicts later language abilities

ERB (The Early Repetition Battery): uses repetition to assess young children's expressive language

Evidence on repetition

Studies show performance on nonword repetition relates to performance on receptive and expressive language tests, and that nonword repetition differentiates typically developing children and children with SLI across a wide age range. See Gathercole (2006) and commentaries.

Nonword repetition and sentence repetition have been put forward as potential behavioural markers for SLI. Both achieve high levels of sensitivity and specificity (Conti-Ramsden, Botting and Faragher, 2001).

Most importantly, early repetition has now been shown to predict later language abilities. For example, Everitt (2009) found an adapted version of the Preschool CELF sentence recall task was as predictive as the expressive language assessment itself. This is in line with our findings on PSRep and SIT (Chiat and Roy, 2008; Seeff-Gabriel, Chiat and Dodd, in press).

difficulties, and reasons for low scores require further investigation.

SIT is directly informative about children's morphosyntactic abilities, and closely relates to performance on measures of expressive language. We find most children will attempt sentence imitation by age three. Patterns of errors indicate which elements of sentence structure are problematic for a child. The type of error (eg. omission, substitution) tells us more about the nature of the problem, providing guidelines for intervention.

While performance on the two tests is highly correlated, some children show mismatches, and this too is informative. For example, if children perform well on SIT, difficulties with PSRep are most likely due to speech problems. For case studies and further interpretation, read the ERB manual.

Repetition is not everything

We are not suggesting that repetition will detect all problems with expressive language, or that repetition tests are not sufficient in their own right. Clearly, these should be used with other tests as appropriate for the child. Our point is that repetition has potential that has not been adequately explored and invites further exploitation.

We are exploring this potential further. A

“Repetition has potential that has not been adequately explored”

Nuffield Foundation-funded project is using the ERB to distinguish language disadvantage from language disorder; we are preparing a questionnaire about ERB for those using it for screening and/or assessment; and are seeking funds to follow up, at age nine to 10, a sample of clinically referred children who were assessed on PSRep and SIT at ages three to five. Please contact us to find out more or contribute your views. ■

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References & resources

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