

CHILD SPEECH ASSESSMENT

Independent and Relational Analysis

Stöel-Gammon (1988) considered that an analysis of a child's phonology should involve an independent and a relational analysis. The analyses are based on data from a single word (SW) and conversational speech (CS) sample, comprising around 200 words if possible. When recording the results, it is important to differentiate between what you found in the SW sample, and what happened in the CS sample. Stöel-Gammon noted that a completed independent and relational analysis comprises:

1. What the child attempted to produce (independent analysis of adult forms);
2. What the child actually produced (independent analysis of child's corpus);
3. What was produced correctly (relational analysis);
4. What was produced incorrectly (relational analysis);
5. The nature of the incorrect productions (phonological process analysis and other errors); and,
6. The extent or percentage of occurrence of phonological processes and other errors identified.

INDEPENDENT ANALYSIS (inventories and constraints)

The Independent Analysis is a view of the child's unique system without reference to the target (adult) phonology. It comprises a consonant inventory, a vowel inventory, a syllable-word shapes inventory (CV, VC, CVC...), and syllable stress patterns inventory.

Grunwell (1985) suggested this convention for summarising a child's syllable-word shapes:

$$C_{0-2}VC_{0-2}$$

This means that a child's sample shows that they are able to produce monosyllables containing zero to two consonants to the left of a vowel, and zero to two consonants to the right of a vowel.

Syllable stress is recorded simply as S = strong W = weak. Look for spondees (DUM DUM = SS) iambs (dah DUM = WS), trochees (DAH dum = SW) dactyls (DUM dah dah = SWW) and anapaests (dah dah DUM = WWS) and words with more than three feet (diplodocus).

By looking at what's NOT there in the sample, the examiner develops an account of inventory constraints (absent phonemes), positional constraints (e.g., a sound might not occur word finally, although it occurs initially), and sequential or phonotactic constraints (the C and V combinations that the child does not use).

RELATIONAL ANALYSIS (PCC, PVC, % occurrence of processes, PVM, SODA)

The Relational Analysis is a normative comparison that looks at what the child's system relative to an idealised version of the target (adult) phonology (the way it would be if each sound were pronounced "perfectly"), and comprises:

- Percentage of Consonants Correct in SW and CS
 - Percentage of Vowels Correct in SW and CS
 - Phonological Processes (Phonological Patterns) in SW and CS expressed as % occurrence
- Combining elements of traditional analysis and PVM, mismatches ("errors") are identified by sound class and position within words. Patterns are identified and described in terms of phonological processes.

Baker (2004) provides a practical framework for organising these data.

Baker, E. (2004). Phonological analysis, summary and management plan. *ACQuiring Knowledge in Speech, Language and Hearing*, 6, 1, 14-21.

Grunwell, P. (1985). *Phonological Assessment of Child Speech (PACS)*. Windsor: NFER-Nelson.

Stöel-Gammon, C. (1988). *Evaluation of phonological skills in pre-school children*. New York:

Thieme Medical Publishers.