

Assessing vocabulary depth in school beginners

Britta Juska-Bacher & Ladina Stocker
University of Teacher Education Bern
britta.juska@phbern.ch,
ladina.stocker@phbern.ch

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Vocabulary knowledge comprises two dimensions: vocabulary breadth and vocabulary depth. Although these components show a tendency to correlate, their relationship depends on how the constructs are conceptualized and measured (Schmitt 2014). Vocabulary breadth – commonly defined as the number of words stored in one’s mental lexicon (Hadley & Dickinson 2018) – is estimated in small pre-school children from e.g. parental questionnaires or audio recordings; in school children it is usually assessed on the basis of a sample and subsequent extrapolation to the size of the child’s lexicon.

Being a woolly and multidimensional construct, operationalizing and measuring vocabulary depth is far more complicated and far less investigated. In comparison to vocabulary breadth, depth cannot be evaluated by a dichotomous assignment of “known” vs. “unknown”, but forms a continuum of knowledge that calls for a gradual evaluation.

Furthermore, the multidimensionality of the construct (e.g. Richards 1976) impedes capturing depth as a whole by a single test or even battery of tests (Schmitt 2014). For the present purposes, we thus define vocabulary depth in narrower terms as “precision of meaning (semantic knowledge)”.

In most studies reviewed, vocabulary depth in this sense is measured by explanations of word meaning, which children give in an interview. However, the measurement is demanding at the beginning of school because children still lack the (meta-)linguistic skills to give differentiated explanations of meaning. Their definitions are still quite concrete, subjective and contextualized; they learn to give more abstract and decontextualized definitions only later in school (Anglin 2005).

Our project entitled "Development of vocabulary and reading. An investigation in primary school", investigates the mutual influence of a range of vocabulary and reading skills from 1st to 3rd grade, among others vocabulary depth. In the absence of a German-language test adapted for this purpose, we used the vocabulary subtest from the German edition of the "Wechsler Intelligence Scale for Children". This test can be used across different years, takes into account different word types, and can be carried out in a reasonable time. However, it is part of an IQ test and provides a value for the calculation of IQ, but no detailed information about vocabulary depth.

The aim of the present paper is twofold. On the one hand, we present our method of vocabulary depth assessment. In order to use this test as an objective, valid and reliable measurement tool of vocabulary depth, evaluation categories were created for each word with the help of dictionaries, comparison to adult definitions and team discussions. The oral responses from 348 1st graders to 15 items, taking into account multiple word types (nouns, adjectives, verbs) as well as polysemous words were rated accordingly.

On the other hand, we discuss the relationship of this measure of vocabulary depth to vocabulary breadth (assessed via the PPVT) as well as links to reading skills, further factors such as phonological awareness, non-verbal cognitive skills and socio-demographic variables.

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