

## Is reading a blog the same as reading a book?

### The structure and predictive validity of self-report measures of reading habits

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Many theories of language processing assign an important role to linguistic experience, but how does one actually measure an individuals' linguistic experience? A handful of self-report measures of reading exposure have previously been proposed (e.g., 1) but much is still unknown about the validity of these measures. Are all occasions of linguistic experience – from blog to novel – equivalent, or does linguistic experience consist of multiple underlying dimensions, each with different relationships with language-related outcomes? The answer to this question is crucial for measurement of individual differences, as using total scale scores when the scale actually reflects multiple underlying dimensions can mask important correlations between measures and hypothesized outcomes. In two studies, we bring a psychometric approach to these questions.

In Study 1, 217 undergraduates completed two reading habits subscales (1): Comparative Reading Habits (subjects' ratings of themselves relative to their perceptions of others) and Reading Habits (time spent reading different types of material, such as magazines and textbooks), along with 10 novel questions asking participants to rate time spent reading various online materials.

Exploratory factor analysis (EFA) on item responses revealed that these scales do not reflect a uni-dimensional underlying construct; a single-factor solution exhibited extremely poor model fit. Instead, six distinct factors emerged in the EFA, each separately associated with greater reported exposure to *specific* printed materials. These included four theoretically intriguing factors: an "enjoys reading" factor, related to relative reading enjoyment and amount of time spent reading fiction and non-fiction books; an "entertainment reader" factor, positively related to relative time spent reading, and amount of time spent reading entertainment news, online shopping sites, blogs and magazines, but *not* novels or nonfiction; a "reading difficulty" factor, negatively related to self-reported comparative reading speed and positively related to perceived relative reading material complexity and hours spent reading (required) class material such as textbooks; and a "reads for information" factor, related to hours spent reading magazine, newspaper, and nonfiction content, both in print and online. A confirmatory factor analysis positing these factors, individually indicated by items with loadings of more than .20 in the EFA, was a good fit to the data,  $RMSEA = .04$ ,  $TLI = .95$ .

In Study 2, a separate sample of 85 undergraduates completed the same print exposure questionnaires, along with self-paced reading of complex grammatical constructions, the revised Author Recognition Test (1), and pronunciation of uncommon English words in North American Adult Reading Test (2). We computed item cluster scores corresponding to the factors suggested by the analysis in Study 1 by summing the items that loaded significantly on each factor.

Results suggest differential relationships between these distinct facets of reading habits and language-related outcomes. For example, "reading enjoyment" was significantly related to ART (1) performance ( $r = .40$ ), scores on the NAART (2) scores ( $r = .21$ ), and comprehension of complex syntactic constructions ( $r = .24$ ), while "entertainment reading" was not significantly related to either author recognition or pronunciation, and had a trending negative relationship to complex sentence comprehension ( $r = -.12$ ).

Taken together, these results suggest that language-related experience is multi-faceted, with different components relating differentially to aspects of language understanding, and have important methodological implications for using self-report measures of linguistic experience.

#### References

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