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# Measuring Extramural English Engagement and its Relationship with Verbal Performance in a College Admissions Test

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## Academic dissertation

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## Abstract

English is increasingly present in everyday life in Sweden through media, gaming, social media, and other leisure activities. At the same time, performance patterns on the Swedish Scholastic Aptitude Test (SweSAT) show differences between English and Swedish verbal subtests and between males and females. These patterns raise questions about whether and how engagement with English outside formal settings relates to performance on high-stakes tests and how such engagement can be conceptualized and measured. Against this background, the overarching aim of this thesis was to investigate how extramural English engagement relates to performance on the verbal subtests of the SweSAT, with emphasis on English reading comprehension (ERC) and sex differences. The thesis also aimed to examine and further develop the measurement of extramural English engagement.

The thesis consists of four cross-sectional studies based on SweSAT performance and self-report measures of extramural English engagement. Study I examined associations between extramural English engagement, measured using a newly developed questionnaire, and ERC scores. Males and females differed in their patterns of engagement, which in turn predicted ERC performance. Study II extended the investigation of sex differences to verbal items measuring English and Swedish proficiency. Differential item functioning analyses showed that males tended to be favored on ERC items, whereas females were favored on Swedish-language items, regardless of extramural English engagement. Study III evaluated and cross-validated a proposed multidimensional extramural English (EE) Scale and examined how its factors related to ERC performance. Analyses supported a revised seven-factor solution after the Niche Activities factor was excluded because of estimation instability. The factors showed different relationships with ERC scores, including positive, negative, and non-significant associations. Study IV examined extramural English engagement as a mediator of the relationship between sex and SweSAT verbal performance. Sex differences in ERC, Swedish vocabulary (WORD), and Swedish sentence completion (SEC) were partially explained by differences in extramural English engagement.

Taken together, the four studies make five contributions. First, they contribute to a shift from descriptive measures of extramural English engagement toward a revised EE Scale suited for high-stakes, large-scale assessments such as the SweSAT. The revised scale conceptualizes extramural English engagement as a multidimensional construct and is applicable beyond school-age populations. Second, they demonstrate that extramural English engagement partially mediates the relationship between sex and verbal test performance, suggesting that sex differences in engagement correspond to differences in test outcomes. Third, the findings indicate that SweSAT verbal performance may, in part, reflect how test-takers engage with English during their leisure time and that such engagement may advantage some groups more than others, with implications for the interpretation and use of test scores. Fourth, the studies show that the observed relationships between extramural English engagement and test performance depend on how the construct is operationalized and analyzed, highlighting the need for a conceptual and methodological understanding of extramural English engagement. Fifth, the studies show that extramural English engagement is an important factor in understanding verbal test performance and its relationship to sex. Across diverse methodologies, samples, and measurement approaches, consistent patterns indicate that sex differences in engagement are associated with differences in test performance.

**Keywords:** Extramural English engagement, Swedish Scholastic Aptitude Test, scale evaluation, sex differences.

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