Abstract

Title: Characteristics and varieties of poor readers.
Language: English
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This thesis is based on four empirical studies. The overall aim was to identify and examine different profiles of reading. In Study I, two latent profile analyses were conducted with the aim to identify subgroups, or profiles, of reading performance among 9-year old Swedish students. The latent profile analyses focused on four aspects of reading performance: reading of continuous texts, reading of document texts (maps, charts etc.), word reading and reading speed. Eight performance profiles were obtained in the first study (N=5099), and were replicated with highly similar profiles in the second study (N=4184). The largest profiles, good and average readers, exhibited even reading performance across measures, implying that reading is a skill with high transfer and generality, whereas poor readers exhibited more heterogeneous performance patterns. The most stable profiles across studies were high performing students, poor comprehenders and dyslexic students. The phonological deficit hypothesis of dyslexia was assumed, which states that a phonological impairment is supposed to be the underlying cause of the manifest reading and writing problems. In Study II, a battery for group screening of dyslexia among adults was designed. The battery consisted of a self-report questionnaire, four tasks tapping phonology and one task tapping orthography. Administration time was 40 minutes. All tasks discriminated highly between a group of adults with dyslexia (N=50) and a control group (N=67). Thus, it was possible to meet the challenge of implementing a nonvocal, phonologically-based group screening of dyslexia problems. Study III attempted to investigate the often observed association between visual creativity and dyslexia, evidence for which is mainly anecdotal. Suggested causes of this observed association include different brain structures or functions, or compensation for deficiency in the area of reading and writing. In two studies, the prevalence of dyslexia among art university students as compared to non-art university students was examined. A total of 268 art students and 282 non-art students participated. The screening was based on word reading, a phonological choice test (in the second study) and a self-report questionnaire. In both studies the art students showed, as well as reported, significantly more dyslexia signs than the non-art students. In Study IV the incidence of phonological and surface dyslexia among Swedish dyslexic university students was examined. Participants were 40 university students with dyslexia, 40 academic-level matched students and 40 younger reading-level matched students. Two different methodologies were used. Firstly, a regression method was applied, where performance scores on a phonological choice task were plotted against performance scores on an orthographic choice task and vice versa. Confidence intervals (90%) were derived from the regressions of the control groups separately and superimposed on corresponding plots for the dyslexic group. When the academic-level control group was used as reference group, a substantial number of both phonological and surface dyslexia was found. However, when the reading-level group was used as reference the phonological dyslexia subgroup remained, but the surface dyslexia subgroup virtually disappeared. Secondly, a latent profile analysis was conducted on the dyslexia group based on five phonological and four orthographic measures. Seven profiles were obtained, of which none clearly exhibited poor performance on the orthographic tasks but not on the phonological tasks or vice versa. These results suggest a deviant development in phonological dyslexics and a delayed development in surface dyslexics. It thus supports the phonological deficit hypothesis. Educational consequences for varying reading problems are discussed and instructional intervention is suggested.