CASE STUDY: Differences in spelling ability between deaf and hearing students: syllables, letter frequency and speech

Studies of how deaf individuals process written language can tell us a lot about the underlying linguistic processes of deaf people, but it can also be useful for understanding general human linguistic capabilities. In terms of orthography and phonology (the written and spoken aspects of language), theorists differ as to their relative importance. The aim of the present study (Olson & Caramazza, 2004) was to provide a comparison of the spelling abilities of deaf and hearing individuals in order to shed more light on the issue.

The spelling abilities of 23 deaf students and 100 hearing students on 341 words were analysed in this experiment. Deaf students are more likely to have learned English orthography with an attenuated experience of speech (although lip reading can give some clues as to phonology), so it was predicted that their spelling errors would be less phonologically plausible than those of hearing students.

The results were that the deaf students made slightly more spelling errors than hearing students (15% vs. 10%). A classification of the types of errors made reveals that deaf students made many more errors that are phonologically implausible than did hearing students (73% vs. 20%). Examples of these phonologically implausible errors are: responsible–responsible, secret–secret, scissors–scissors and medicine–medicne. Examples of spelling errors made by hearing students include: responsible–responsible, secret–secret, scissors–scissors and medicine–medicne. The implication is that deaf students’ spelling is less influenced by phonology than is the spelling of hearing students. There are then many gaps in deaf students’ knowledge of English phonology.

Reference