Remediation of fluency: Word specific or generalised training effects?

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Abstract. The present study examines whether reading fluency benefits more from repeated reading of a limited set of words or from practicing reading with many different words. A group of 37 reading delayed Dutch children repeatedly read the same 20 words with limited exposure duration, whereas another group of 37 poor readers received the same reading exercises with 400 different words. Results demonstrated that improvements in accuracy and speed of trained words were larger for the repeated reading group than for the children who had only practiced with these words once. No difference in generalisation of effects to untrained neighbour and control words was found between the two conditions. Furthermore, rapid naming skill was unrelated to improvements in reading fluency and transfer effects in both training conditions. Results demonstrate that the practical value of repeated reading lies in its word specific training effects.

Key words: Reading fluency, Generalisation, Repeated reading, Decoding, Rapid naming

Introduction

Although the success of a remediation program is often measured by looking at the gain in reading fluency of trained words, the efficacy can in fact be judged by two characteristics: the word specific training effects and transfer to untrained material (Kraemer, 2003). It can be questioned whether current training programs that focus on improving reading fluency fulfil both criteria. Although it is common practice to examine the transfer of phonological awareness training to general word reading skill (Castles & Coltheart, 2004), for training programs that focus specifically on improving reading fluency it is often neglected to study generalisation effects to untrained material. Even if transfer is examined, this is often done only by studying whether the training effects remain stable when trained words are presented in a different context (e.g., such as a story, Bourassa, Levy, Dowin, & Casey, 1998). A recent review by Chard, Vaughn, and Tyler (2002) illustrates that the main purpose of many experiments is to show that a certain fluency training program leads to
higher word specific training effects than another type of remediation. However, one might argue that it is the level of generalisation to untrained material that demonstrates the efficiency and practical value of a remediation technique. First of all, generalisation leads to an increase in reading skill of untrained words without additional effort. Furthermore, higher general word reading skills leave more cognitive resources available for the ultimate purpose of reading: gathering meaning from text. The present experiment addresses the issue of transfer by examining both training effects and generalisation to untrained material after training reading skill with a limited set of words versus training decoding skill with many different words. The subjects will either receive exercises in which 20 words are repeatedly read or training focussed on decoding 400 different words. Generalisation may occur as a result of improved skills in phonological recoding. Additionally, the ability to draw orthographic analogies to untrained words might independently promote transfer (Savage & Stuart, 2001; Wood, 2002). In the latter case, when the orthographic patterns of the trained words are well established in lexical memory, transfer will only occur to words that are orthographic neighbours of the trained words. To investigate the possibility of both mechanisms, transfer to words that are either orthographically similar or dissimilar to the target words will be examined in the present study.

Training programs for reading disabled children that are focussed on gaining fluency are often based on the idea that repetition of words will improve the word specific orthographic representation in the mental lexicon (Chard et al., 2002; Kuhn & Stahl, 2003). The more specified this representation is, the easier it is to read the word fluently (Perfetti & Hart, 2002). Indeed, it has been demonstrated on numerous occasions that repeated reading training increases reading fluency of specific words (Levy, Nicholls, & Kohen, 1993; Meyer & Felton, 1999). However, the practical value of this type of treatment can be higher if transfer of training effects are found. The few experiments that have studied transfer have failed to find substantial generalisation of repeated reading training effects to untrained material (Lemoine, Levy, & Hutchinson, 1993; Young, Bowers, & MacKinnon, 1996; for an overview of repeated reading training studies, see Wolf & Katzir-Cohen, 2001). It appears that repeated reading leads to high levels of fluency for trained words, but has little benefits for general reading skill. Recent research has provided a theoretical framework for the word specific training effect of repeated exposure (Chard et al., 2002; Kuhn & Stahl, 2003). The self-teaching hypothesis put forth by Share (1995; 2004) indicates that every successful decoding event will improve future reading of a particular word. That this effect is the result of decoding instead of pure visual exposure is