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Learner responses to corrective feedback for spelling errors in CALL

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Abstract

This article describes a study that investigates learner responses to three distinct types of corrective feedback for misspellings produced by English learners of German. Twenty-eight beginner and intermediate students used an online parser-based system for German that recorded student interaction with the software over 15 weeks. The study considered a corpus of 1268 misspellings and, for the two more explicit feedback types, the system provided correction suggestions for the misspellings. Study results indicate that, while the number of correct responses was significantly higher when the system provided a correction list, there was also significantly less learner uptake for the feedback type that did not provide any correction suggestions. Moreover, learners were far more successful in submitting the target word if it appeared in the suggestion list. Finally, the order in which the words appear in the suggestion list seems to be an influencing factor for students favoring one word over another.

Keywords: Corrective feedback; Error correction; SLA; Spelling; German as a foreign language; Student–computer interaction; Spelling errors; CALL

1. Introduction

A number of researchers have studied the effectiveness of word processing and proofing tools with respect to their usefulness for non-native writers (e.g., Biesenbach-Lucas and

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Weasenforth, 2001; Collins, 1989; Hawisher, 1989; Iwai, 1997; Pennington, 1991a,b, 1992, 1993a,b; Phinney, 1996). More specifically, previous research in Computer-Assisted Language Learning (CALL) has concentrated on the quality of computer-assisted writing, the effects of word processing on non-native writers, and their revision behaviour and attitudes (e.g., Burston, 1998; Holmes and de Moras, 1997; Johannessen et al., 2002; Tschichold, 1999). Much less attention, however, has been paid to the spell checker (Gupta, 1998). Yet, spell checkers have become highly desirable tools in the foreign language writing classroom due to their apparent success in correcting misspellings. For instance, Kukich (1992) notes that "most researchers report accuracy levels above 90% when the first three guesses [in a spell checker's list of suggested spelling corrections] are considered" (p. 412)[1] indicating that generic spell checkers – spell checkers that are aimed at native speakers such as the one in the *Microsoft® Word®* word processing software – successfully handle the majority of misspellings made by typical native speakers. However, generic spell checkers are much less successful when it comes to misspellings of atypical users such as non-native writers (see Allerton et al., 2004; Burston, 1998; Holmes and de Moras, 1997; Kese et al., 1992). For example, Rimrott and Heift (2005, 2008) found that a generic spell checker fails to detect or provide a correction for 48% of the spelling mistakes made by their learners of German. The reason for the limited success is that generic spell checkers are not geared towards non-native writers who, compared to native speakers, tend to produce errors that deviate from the correct spellings in more substantial ways.[2] Native speakers generally make performance errors, namely mistypings that usually result in a single letter addition, omission, substitution, or transposition, that is, there is a one-letter difference between the misspelling and its target word (e.g., *<sppll>/<spell>). In contrast, non-native writers also make competence errors that are due to their insufficient command of the foreign language. Rimrott and Heift (2005) found that 80% of the misspellings produced by non-native writers were competence-based. The authors cite the following competence errors from their misspelling corpus of learners of German: *<Zeitelesung> for <Zeitung> *newspaper*, *<Metz> for <Fleisch> *meat* (from <Metzger> *butcher*), *<Poskeutzah>/<Postleitzahl> *postal code*, *<tanzed> for <tanzte> *danced.* Note, however, that the 2004 *Microsoft® Word®* spell checker[3] does not detect **Metz* as a misspelled word, possibly due to the fact that it is capitalized, thus assuming that it is a proper noun. In contrast, the remaining three misspellings are successfully identified as misspellings. However, no correction suggestions are provided for *<*Zeitelesung*> and *<*Poskeutzah*>. For *<*tanzed*> the suggestion list contains five words, however, the target word *tanzte* is absent from the list. These research results call for a closer attention to non-native spelling.

[1] When all guesses are taken into account, the correction success is naturally even higher.

[2] Note that the success rate of a generic spell checker in treating non-native misspellings is in part language-dependent given that languages differ quite significantly in their orthographic difficulty for learners. For instance, phonetic languages with a near perfect sound–symbol correspondence and consistency ('spell as you speak') such as Croatian, Bosnian, Serbian or White Russian (Belarusian) cause less difficulty for the learner and thus the spell checker than morphemic languages such as English and French. This is because for morphemic languages, the misspelling is more likely to differ significantly from the target word due to more varied sound–symbol correspondences (e.g., the English phoneme/aj/ is represented by several different graphemes as illustrated in <high, my, rye, hi, guy, tie>). For a description of problems of language and writing systems, see http://home.vicnet.net.au/~ozideas/wrintprob.htm, accessed on July 3, 2007.

[3] The MAC version of the spell checker was set to standard German and the default settings were used.