

Chapter 11

Intelligent CALL Systems for Writing Development: Investigating the Use of Write & Improve for Developing Written Language and Writing Skills

Niall Curry

Coventry University, UK

Elaine Riordan

University of Limerick, Ireland

ABSTRACT

Technological innovation in supporting feedback on writing is well established in computer-assisted language learning (CALL) literature. Regarding writing development, research has found that intelligent CALL systems that respond instantly to learners' language can support their production of better-written texts. To investigate this claim further, this chapter presents a study on learner use of Write & Improve (W&I). The study, based on learner engagement with W&I and learner and teacher surveys and focus groups, demonstrates that learners find W&I to be engaging and motivating. Moreover, there is evidence of improvements in learner writing practices and written language proficiency. For teachers, W&I can render feedback more efficient, allowing them to focus on more complex aspects of learner texts, while spelling and syntactic accuracy are addressed by W&I. Issues also emerge in the use of W&I, which present problem areas for teachers and learners and which signal important future considerations for CALL research.

INTRODUCTION

Giving feedback to learners to help them to develop both written language (i.e., the language they produce) and writing skills (i.e., the strategies they use to produce writing) is a core facet of language

DOI: 10.4018/978-1-7998-6609-1.ch011

teachers' professional lives (Hyland & Hyland, 2006; Nassaji, 2020). Technological innovation in supporting this practice is well-established in the literature on computer-assisted language learning (CALL) (cf. Frankenberg-Garcia, 2020), and in the context of writing development, research has found that intelligent CALL systems that can respond instantly to learner language can support the production of better writing output by learners (Tschichold & Schulze, 2016). Such writing technologies that involve learners practicing their writing online and in their own time are particularly pertinent for supporting learner autonomy and self-led online writing development (Ghufron & Nurdianingsih, 2019).

Building on the relevance of such feedback and accuracy development technologies to language production, the field of CALL has seen an increase in the use of data-driven learning technologies that combine language data, language models, and pedagogical theories on feedback and language learning to inform their development. Collocaid, for example, takes a feed forward approach to developing learner knowledge of collocational patterns in academic language by using corpus data to suggest collocations and sentence patterns that learners might not have considered in their writing (Frankenberg-Garcia, 2020). A similar corpus-informed project, designed to give feedback on academic writing, is the BAWE QuickLinks project. This project uses Sketch Engine links to sanitize concordance searches of the British Academic Written English corpus (2008) that direct learners to language models for addressing language errors identified in their written work (Vincent & Nesi, 2018). SKELL (Sketch Engine for Language Learning; Lexical Computing, 2019) is another technology of note that allows for word searches, synonym checks, and collocation analysis. Lexical Computing (2019) reports that SKELL is "a state-of-the-art cloud tool for building, managing and exploring large text collections in dozens of languages. It is used all over the world by many individuals, as well as companies such as Cambridge University Press, Oxford University Press and Macmillan." Each of these technologies offers different means of engagement and insights to their users. Collocaid feeds forward and avoids corrective feedback, BAWE QuickLinks offers corpus-based feedback with example sentences based on errors, and SKELL is a reference technology used to check how language items are used. This study is based on Write & Improve (2020), which, unlike these other technologies, offers corpus-informed automated and corrective feedback.

Write & Improve uses machine-learning technology and data from the 30-million word error-annotated Cambridge Learner Corpus (Cambridge University Press & Cambridge Assessment, 2020) to identify errors in learner written language. The technology identifies errors for which it is 90% certain and, owing to its design, uses input data from learners on an ongoing basis to further inform its identification of error patterns (Write & Improve, 2020). This technology can determine the level of learners' language, benchmarked against the Common European Framework of Reference (CEFR), and it delivers summative feedback, indirect and formative feedback, and progression feedback on learners' writing. The technology seeks to guide learners to notice and address language errors, while facilitating learner autonomy and engagement. Typically, students can respond to writing tasks that reflect Cambridge English language examinations or tasks set by their teacher, who can create virtual classrooms and workbooks for their students. Students work in their own time and receive automated feedback from the technology. A major benefit of this is that students can gain feedback in a non face-threatening (Brown & Levinson, 1987) environment, which can lessen the anxiety they feel during feedback, and in turn, lower the Affective Filter (Krashen, 1985) in order to enhance the learning experience. There is also space for teachers to manually add feedback, and, as a result of this type of feedback mechanism, motivation is also heightened (Golonka et al., 2014).

This study of Write & Improve centers on its use by learners as an online writing development technology. Learners used it in their own time to develop their own writing, and the study aimed to determine

20 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/intelligent-call-systems-for-writing-development/271101

Related Content

Augmented Reality Mobile Games in Japanese Language Classrooms: Integration Into Practices and Curricula

Kayo Shintaku (2024). *Technology-Mediated Language Learning and Teaching* (pp. 311-342).

www.irma-international.org/chapter/augmented-reality-mobile-games-in-japanese-language-classrooms/351924

Untangling Multimedia Effects on EFL Incidental Vocabulary Learning via Playing an Online Hidden-Object Game

Emad A. Alghamdi (2016). *International Journal of Computer-Assisted Language Learning and Teaching* (pp. 24-39).

www.irma-international.org/article/untangling-multimedia-effects-on-efl-incidental-vocabulary-learning-via-playing-an-online-hidden-object-game/143685

How Best to Use Audio/Subtitle Combinations in the Use of Films for Nonnative Learners of English

Bura Zengin (2021). *Design Solutions for Adaptive Hypermedia Listening Software* (pp. 45-61).

www.irma-international.org/chapter/how-best-to-use-audiosubtitle-combinations-in-the-use-of-films-for-nonnative-learners-of-english/282885

A Pedagogical Corpus to Support a Language Teaching Curriculum to Revitalize an Endangered Language: The Case of Labrador Inuttitut

Elizabeth Gatbonton, Ildiko Pelczer, Conor Cook, Vivek Venkatesh, Christine Nochasakand Harriet Andersen (2015). *International Journal of Computer-Assisted Language Learning and Teaching* (pp. 16-36).

www.irma-international.org/article/a-pedagogical-corpus-to-support-a-language-teaching-curriculum-to-revitalize-an-endangered-language/135592

Malaysian Language Teachers' ICT Competencies

Soon Seng Thah (2022). *International Journal of Computer-Assisted Language Learning and Teaching* (pp. 1-15).

www.irma-international.org/article/malaysian-language-teachers-ict-competencies/310081