DESIGNING COMPUTER-GENERATED PEDAGOGICAL FEEDBACK FOR SPANISH STUDENTS OF EFL

Inmaculada Senra Silva[*]
UNED

ABSTRACT. *Pedagogical feedback is considered to be important in language learning since it can help students to process the input they get and modify their output. Needing to be clear and unobstrusive, pedagogical feedback will often make use of resources such as the learners' L1, typographical devices, and examples in the L2. Since in some cases (for example, in the use of false friends) it may be impossible for a teacher to determine with certainty exactly what meaning was intended by a student, pedagogical feedback which facilitates self-evaluation (and if necessary, self-correction) is often especially significant at the lexical level. Although such feedback is very important in language learning, its use in grammar checkers in a distance learning context remains unexplored since computer-assisted language learning of English as a foreign language very rarely incorporates features that are able to analyze and provide appropiate feedback on learners' free written production. Nevertheless, the capacity of computers to detect errors and 'problem words' (that is, words associated with errors), and to provide relevant pedagogical feedback can be of very considerable help to second language learners.*

E-gramm is a grammar checker developed at the UNED. It provides EFL students with pedagogical feedback, enabling them to detect and correct mistakes in their own compositions. E-gramm *allows students to check both 'incorrect sequences' and 'problem words'. The purpose of this article is to discuss theoretical considerations related to the provision of pedagogical feedback in* e-gramm*, and more specifically in the 'problem words' function, and to suggest how written feedback in* e-gramm *can be effective.*

KEY WORDS. *pedagogical feedback, grammar checkers, computer-assisted language learning.*

RESUMEN. *La retroalimentación pedagógica se considera importante en la ense-ñanza de lenguas, ya que puede ayudar a los alumnos a procesar el input que obtienen y modificar su output. La retroalimentación pedagógica debe ser clara y sencilla y debe-ría hacer uso de medios tales como: la L1 del aprendiz, recursos tipográficos, y ejem-plos en la L2. Dado que en algunos casos (como en los falsos amigos) al profesor le puede resultar imposible determinar con exactitud qué quiere decir el alumno, la retro-*

alimentación pedagógica que facilita la autevaluación (y si es necesario, también la autocorrección) es a menudo especialmente decisiva en el nivel léxico. A pesar de que dicha retroalimentación es muy importante en la enseñanza de lenguas, su uso en correctores gramaticales en un contexto de enseñanza a distancia sigue estando sin explorar debido a que la enseñanza de inglés como lengua extranjera asistida por ordenador raramente incorpora características que puedan analizar y aportar retroalimentación apropiada sobre la producción escrita libre de los aprendices. Sin embargo, la posibilidad de usar programas informáticos para detectar errores y 'palabras problemáticas' (es decir, palabras que suelen inducir a error), y proporcionar retroalimentación pedagógica puede ser de gran ayuda para los aprendices de segundas lenguas.

E-gramm *es un corrector gramatical desarrollado en la UNED que proporciona retroalimentación pedagógica a los aprendices de inglés como lengua extranjera (EFL), con el fin de detectar y corregir errores en sus propias composiciones.* E-gramm *permite a los aprendices comprobar tanto 'secuencias incorrectas' como 'palabras problemáticas'. El objetivo de este artículo es discutir algunas consideraciones relacionadas con la provisión de retroalimentación pedagógica en* e-gramm*, y más específicamente en la función de 'palabras problemáticas' y , además, sugerir formas en las que* e-gramm *puede ser efectivo.*

PALABRAS CLAVE. *Retroalimentación pedagógica, correctores gramaticales, enseñanza de lenguas asistida por ordenador.*

1. FEEDBACK ON WRITING

Writing is considered to be a difficult skill to learn and to teach (Hyland and Hyland 2006). In many cases, learning to write entails considerable work for the student and for the teacher. It is the most difficult skill for L2 learners to master, since the skills involved in writing are very complex even in L1 writing. L2 learners have to pay attention not only to organizing ideas and grammatical structures, but also to spelling, punctuation, word choice, etc. Besides, there is often a paucity of activities to develop students' writing skills in textbooks. The teachers' task of correcting and marking the compositions is also arduous and above all, time-consuming. There is always limited classroom teaching time and teachers have to spend hours correcting students' compositions after class. Most teachers feel that they must provide feedback on the linguistic forms, but the amount of feedback that teachers can provide is often limited (Lawley 2004). Students may not read the teachers' feedback and correct the errors and self-edit the drafts. In the case of portfolio assessment, it has become one of the most popular forms of writing assessment and it clearly offers advantages for the learning of writing skills. However, for portfolios to be successful, teachers need to provide feedback during the whole writing process. In this sense, Hamp-Lyons (2006: 157-158) states: "[…] giving –and receiving and using– feedback is a skilled activity, and teachers and students need help in acquiring these skills".

Feedback plays an important role in language learning since it offers support to the student's learning process. However, there is little consensus on how to structure written feedback, and as a consequence, teachers often choose their own ways of offering

feedback. Furthermore, some questions about the nature of feedback are still debated: should teachers mark all student errors?; should they indicate the type of error made by the student?; should teachers simply underline or circle the error?; should teachers provide large amounts of feedback or, on the contrary, should feedback be short?; how frequent should feedback be?; should feedback correct errors implicity or explicitly?; should feedback be direct, immediate or indirect? (Ferris and Barrie 2001).

In a distance learning context, feedback is also crucial, since students do not have many opportunities to obtain information on how they are performing/have performed (Hyland 2001). Furthermore, students lack the presence of a teacher to guide them. In spite of the fact that feedback can play an important role in distance learning, it is to a great extent unexplored. No studies have looked into the feedback offered to distance language students, or to the way students use that feedback.

The question of error correction and error feedback is highly controversial. There is disagreement among researchers about whether feedback or language correction should be provided to students and whether error feedback has any impact on writing. Higgs and Clifford (1982) and Lalande (1982), for example, claim that all errors should be corrected, while Truscott (1992, 1996) holds that error correction should be eliminated since it is ineffective. According to this author, research findings demonstrate that language correction is often ineffective and unproductive and that the time spent on grammar correction could be employed in other writing matters. Ferris (1999, 2006), however, maintains that the research carried out so far is not as decisive as Truscott claims and that more research on the question of feedback is advisable.

Studies on the nature of error feedback have been carried out to see if the student reacts differently depending on the type of feedback. In one study, Ferris (2006) found that students addressed the majority of their teachers' error markings, and that students who received error feedback showed progress in written accuracy over time.

Traditionally, a distinction has been made between direct and indirect feedback. Feedback is defined as direct when the teacher provides the correct form. One of the main drawbacks of this type of feedback is that it may lead to little motivation on the part of the student for various reasons. First, this type of feedback is often delayed, and it usually focuses on grammar errors rather than on problem words, i.e., words that can lead to an error, so the student does not improve his or her lexical competence. Second, the teacher does not provide students with additional examples. And, more importantly, there is no mental processing on the part of the student, so this feedback lacks a pedagogical function.

Indirect, corrective or pedagogical feedback occurs when the teacher points out that there is an error but does not provide the correction leaving it to the student to solve the problem. Research suggests that this type of feedback is considered to be more desirable (Ferris and Barrie 2001; Ferris 2006). Pedagogical feedback can help students to be self-sufficient, autonomous learners, since students often become more involved in and make decisions about their own learning. This practice can result in a better performance. Overall, indirect feedback is relevant in language learning for it can help students to process the input they obtain and modify their output. The question now is how explicit

that indirect feedback needs to be or how it should be presented to the student. Few studies have analysed the effects of direct and indirect feedback (Lalande 1982; Ferris 2006), and fewer studies have concentrated on how that indirect, pedagogical feedback should be structured and presented to students (e.g. use of typographical devices, the L1, etc.).

Providing feedback is a difficult undertaking. Research on teacher written feedback and student revision has revealed that students often find teacher commentary ambiguous and misleading. It also shows that sometimes they think they have understood what the teacher meant when in fact they have not, or have but do not know how to apply it to their composition (Goldstein and Kohls 2002). Conrad and Goldstein (1999) contend that the shape of written commentary can influence students when using the teachers' commentaries for revision. According to Goldstein (2006), other factors that can influence revision are the feeling that the teachers' feedback is not valid or incorrect; a lack of content knowledge; a lack of motivation on the part of the student; a receptivity to or resistance to revision; a distrust of the teachers' content knowledge; a mismatch between how the teacher responds and the students' expectations for response. As stated by Milton (2006: 124-125), instructors very often intervene to make decisions for the learner, instead of allowing the student to decide. In this sense, he points out: "What seems to be missing is a mechanism to help students self-edit and to enable teachers to facilitate rather than to dictate". Milton suggests that it would be desirable for students to have reliable software that could automatically detect and correct errors. However, he goes on to say that this is a very complicated computational goal because of the difficulties in parsing natural language, and also because computer correction does not seem to be better than teacher correction.

2. Computer-Assisted Language Learning (CALL) and Instruction (CALI)

Language technology is a potential tool for the learning of a foreign language and has been integrated into classroom instruction for some time. One important area of exploration for computer use is in the field of foreign language writing. Computer-assisted language instruction (CALI) or computer-assisted language learning (CALL) began in the 60s but it did not become fully established until the 80s. It was then that some professional associations such as CALICO and EUROCALL appeared. CALI and CALL are approaches to language teaching and learning in which computer technology is employed in the presentation and assessment of the material to be learned. CALL/CALI programs present a multi-media design with many interactive elements, such as videos, audio and graphics which represent a stimulus for the learner. They often include true/false exercises, gap-filling, multiple choice, etc. The learner often responds by typing at the keyboard, or clicking the mouse.

Computers have become an important means of delivering feedback. However, this feedback is often automated and of low quality. Most studies centre on feedback provided through computer-mediated communication (CMC), such as chats, emails, etc., or on software programmes which provide scores on the drafts but do not provide pedagogical

feedback. The feedback provided has a testing rather than a teaching purpose. Many studies have demonstrated the inefficacy of CALL instruction because computer programs show limited capability for providing appropriate feedback on the written production of students of English as a second language (Nagata 1996). Programs usually offer feedback by simply indicating whether the learner's response is right or wrong, and fail to explain why the learner's response is wrong. In this sense, Nagata (1993: 330) states:

> If the potential of computer-assisted language instruction as individualized supervised learning is to be realized, we must develop programs that support detailed error analysis and feedback targeted to specific deficiencies in the students' performance.

One disadvantage of the existing CALI programs is that they are inadequate for analyzing learners' responses, identifying their errors, and providing feedback.

One of the possible utilities of language technology are the software programs known as grammar checkers (programmes designed to check the grammar in students' compositions) which have been developed since the 1980s, mainly for English, but also for other European languages (cf. *Virkku* for Finnish, *Granska* for Swedish, *SCARRIE* for Norwegian, Swedish and Danish and *Grammatifix* for Swedish). Nonetheless, these grammar checkers have been designed for native speakers and not for FL students whose typical errors differ to a large extent from those made by native speakers/L1 students. Grammar checkers for non-native writers are rarer. Moreover, commonly used grammar checkers (e.g. Microsoft Grammar Checker), which are based on parsers, fail to detect some errors, suggest mistakes where in fact there are not any, and often provide ambiguous advice for the students (Lawley 2003), thus confusing and demotivating students[1].

3. *E-GRAMM* (THE UNED GRAMMAR CHECKER)

E-gramm is a prototype of a computerised grammar checker for pre-intermediate and intermediate-level Spanish mother tongue students of English as a foreign language designed at the UNED (Universidad Nacional de Educación a Distancia) in Madrid, Spain[2]. It detects the mistakes made by Spanish mother tongue speaking students of English as a FL (Lawley 2004; Chacón-Beltrán 2007). *E-gramm* was conceived as a tool by means of which students could become autonomous learners less dependent on teachers' support with the help of computer-generated feedback. Novice writers should be provided with the necessary tools to improve their writing performance and become autonomous, confident writers. Preliminary research with compositions written by Polish, Turkish and Japanese students suggests that *e-gramm* is flexible enough to be adjusted to other languages. Some of the mistakes these students make are in the existing database and others could be incorporated without difficulty (Lawley 2004).

There are important differences between *e-gramm* and the grammar checkers currently available. First, *e-gramm* does not use the so-called "parsing" technique. Instead it is based on an analysis of the students' incorrect responses. Second, *e-gramm* detects mistakes in the students' compositions and allows them to correct those mistakes using *pedagogical*

feedback. The student is alerted to a possible problem, reads the feedback, and decides whether what he wrote was correct or not and then reformulates the text for him or herself. In this way, *e-gramm* can help students become independent writers and allows teachers to save a great amount of time that can be used for other types of writing instruction.

The current version of *e-gramm* has over 500 entries obtained from a corpus of 24,000 words written by lower intermediate level students aged 16 and 17, although we are currently working on a new version[3]. All the mistakes are analysed by means of contrasting them with a native-English-speaker on-line corpus (Collins Cobuild Corpus[4]). Later each sequence is codified and designated as either 'Incorrect Sequences' or 'Problem Words'. 'Incorrect Sequences' includes phrases which contain language errors (e.g. *another things, *because has, *by foot). 'Problem Words' deals with words associated with errors, words that are potentially difficult for students (e.g. false friends (Engl. *library* Sp. *librería* vs. *bookshop*), irregular plurals (*children*), polysemic words in the L1 (Sp. *banco* Engl. *bank* vs. *bench*) and words such as *after* which cause problems of phrase structure (*I went home and after I watched TV*)). At this point some three hundred and fifty words have been compiled for each database. Finally, feedback is provided for each sequence and stored in the program. (See Lawley 2003, 2004, 2009 and Chacón-Beltrán 2007, 2009 for a fully discussion of the analysis, categorization and design of the databases).

In the prototype version *e-gramm*'s interface looks like this:

Figure 1. E-gramm*'s interface*.

Figure 2. *An example of feedback provided by* e-gramm.

3.1. *Structured feedback for the 'problem words' function*

In order to use *e-gramm*, the student needs to paste his or her composition in the program and then can ask to highlight problem words and incorrect sequences by clicking on the bottom for one of the two options. For example, a student that has employed the word *actual* in his composition clicks on 'Problem Words'. The program checks whether this word is in the database and, if so, it will be flagged with a colour. The program does not know if the word has been used correctly or not, but it provides pedagogical feedback since *actual* has been analysed as one of the most common problem words associated with errors in compositions written by Spanish secondary school students. The feedback provided for this word is:

Actual

a) Si quieres decir 'real', 'verdadero', tu opción es correcta:
   Es fácil ilustrar el problema con un ejemplo real.
   It is easy to illustrate the problem with an actual example.

b) Si quieres decir 'actual', tu opción no es correcta. Cambia actual por *present/current*:
   ¿Qué piensas de la situación actual? ✔ *What do you think of the present/current situation?*

   X *What do you think of the actual situation?*

Once the student has read the feedback and checked whether he meant 'real' or 'current', he decides to edit the text or not. In this way, *e-gramm* provides students with immediate feedback, so that students can work on a draft until they get a final version.

Although feedback may be a key factor to facilitate writing, it is effective only if it is conceived in such a way that is clear for the students. With this aim in mind, feedback in *e-gramm* has been designed according to the following premises:

1. Feedback needs to be clear and meaningful to the L2 student, but at the same time it must make students think. After reading the feedback, the student must make the final decision on whether his option was correct or not. In this context feedback can be effective. As mentioned above, traditional feedback often fails on this count.
2. Feedback should not be very complex, because the students' level may not be too high. The effectiveness of feedback depends, among others (cf. motivation, language level, etc.), on its clarity.
3. In this sense, metalanguage should be avoided when possible, since it may overwhelm the student and discourage revision.
4. Feedback should be in the L1, in this case, Spanish. Providing feedback in Spanish facilitates comprehension, and saves time.
5. Feedback should provide students with meaningful and concise examples.
6. Feedback should encourage students by guiding them through the writing process.
7. Feedback should use typographical devices so that students can distinguish explanation from examples.
8. Entries should be short and designed to enable the student to decide quickly if the word is correct or not, and if so, to choose the right structure. (Although sometimes this is a difficult undertaking, since some problem words have complex profiles (cf. *that*)).

9. We should provide feedback that is useful for all types of learners. The individual writer's needs, ability, personality, etc. should be taken into consideration.

There follow some examples of templates for the various types of 'problem words' included in *e-gramm*. Given the space limitations, the most representative examples have been chosen:

Bored

a) Si quieres decir 'estar aburrido', tu opción es correcta:
   Estaba muy aburrido.   ✔ *I was very bored.*

b) Si quieres decir 'ser aburrido', tu opción **no** es correcta. Cambia *bored* por *boring*:
   La película fue aburrida.   ✔ *The film was boring.*
                                             X *The film was bored.*

   Peter es aburrido.   ✔ *Peter is boring.*
                                             X *Peter is bored.*

The pair *bored/boring* (as *tired/tiring*, etc.) causes problems to Spanish students of English as a foreign language (in Spanish there is a difference between the verbs *ser* and *estar*). The feedback on all the errors is provided in Spanish. The student is faced with two possible options. First appears the correct option (a) and an example in Spanish with the translation into English. It is followed by the wrong option (b) and what the student should write instead. Then two examples are added, both with the right and wrong translations into English to illustrate appropriate and inappropriate usage of the word. Typographical devices such as a tick (•) and a cross mark (**X**), italics and bold are employed in order to facilitate reading.

Pacific

a) Si quieres decir 'el Océano Pacífico', tu opción es correcta:
   El Océano Pacífico.   *The Pacific Ocean.*

b) Si quieres decir 'pacífico' con el sentido de 'tranquilo', tu opción **no** es correcta. Cambia *pacific* por *peaceful*:
   Un lugar tranquilo.   ✔ *A peaceful place.*

                                             X *A pacific place.*

The word *pacific* is a false friend in Spanish. Spanish *pacífico* is a common noun which can mean both 'peaceful' and 'Pacific (Ocean)'. In this case, the feedback points out

that there are two possible meanings and also explains when *Pacific* can be appropriate. The feedback rendered for this entry is similar to the one provided for *bored*.

After

    a) Si quieres decir 'después de', tu opción es correcta:
       Llamó después de medianoche.   ✔ *He phoned after midnight.*

    Ten en cuenta las diferentes estructuras con *after*:

    1. *AFTER* + VERBO + *-ING*.
       Después de leer su libro, John se acostó. ✔ *After reading his book, John went to bed.*

                                        X After read his book, John went to bed.

    2. *AFTER* + SUJETO + VERBO.
  Después de leer su libro, John se acostó. ✔ *After he read his book, John went to bed.*

                                          X After read his book, John went to bed.

    b) Si quieres decir 'después', tu opción **no** es correcta. Cambia *after* por *afterwards, then, after that* o *later*:
       Jugamos a las cartas y después vimos la televisión.
       ✔ *We played cards and afterwards/then/after that/later we watched TV.*
       X We played cards and after we watched TV.

This is an example of a complex entry. The preposition *after* usually causes problems of clause structure for Spanish learners of English who usually treat it as an adverb. The feedback is divided into two. As in the other examples, the correct option appears first (a) followed by an example. But in this case, the student is asked to pay attention to the various phrase structures for *after*. It is a common mistake for students to use a verb without its *-ing* form after the preposition.

Bank

    a) Si quieres decir 'institución financiera', tu opción es correcta:
       Trabaja en un banco.   ✔ *He works in a bank.*

b) Si quieres decir 'asiento en el que se pueden sentar varias personas', tu opción **no** es correcta. Cambia *bank* por *bench*:

Sentémonos en ese banco.   ✔ *Let's sit on that bench.*

                                              ✗ *Let's sit on that bank.*

This is an example of a polysemic word in the L1. Spanish *banco* can mean both *bench* and *bank*. The feedback points to the double meaning of the word.

People

Recuerda que *people* 'gente' es plural en inglés:

La gente está llegando.   ✔ *People are arriving.*

                                              ✗ *People is arriving.*

La gente en mi clase es agradable.   ✔ *The people in my class are nice.*

                                              ✗ *The people in my class is nice.*

Esta gente dice que son de Madrid.   ✔ *These people say that they are from Madrid.*

                                              ✗ *This people says that they are from Madrid.*

The word *people* is often problematic for Spanish students due to the fact that the Spanish term *gente* is singular whereas *people* is plural. In this case, the feedback provided points to the verbal form that should accompany this noun instead of to its meaning which in itself does not cause any problem. Several examples of good and bad use of *people* are provided.

Hope

a) Si quieres decir 'esperar' en el sentido de 'desear/querer que algo pase', tu opción es correcta. Ten en cuenta las diferentes estructuras con *hope:*

1. *HOPE + THAT* + SUJETO + VERBO
Espero que venga.   ✔ *I hope that she comes.*

2. *HOPE* + INFINITIVO CON *TO*
Espero ir.   ✔ *I hope to go.*

3. *HOPE + THAT* + SUJETO + VERBO
Espero que estés contenta.   ✔ *I hope that you will be happy.*

b) Si quieres decir 'esperar cuando estás segura de que va a ocurrir', o 'esperar un bebé', tu opción **no** es correcta. Cambia *hope* por *expect*:

Espero volver en un mes.	✔ *I expect to come back in a month.*
	X *I hope to come back in a month.*
Mi hermana está esperando un bebé	✔ *My sister is expecting a baby.*
	X *My sister is hoping a baby.*

c) Si quieres decir 'esperar (el autobús, un taxi, una persona), tu opción **no** es correcta. Cambia *hope* por *wait for*:

Estoy esperando el autobús.	✔ *I am waiting for the bus.*
	X *I am expecting/hoping the bus.*
Estoy esperando a Pedro.	✔ *I am waiting for Pedro.*
	X *I am expecting/hoping Pedro.*

This is another example of a complex entry for several reasons. First, the Spanish word *esperar* can have various realizations in English: *to hope*, *to expect*, *to wait for*. Second, at least in the case of *to hope*, the student has to pay attention to the phrase structure that follows this verb. Thus, once the student has read the feedback and decided whether or not his or her option was correct, he or she should go through it again and check the phrase structure.

4. CONCLUSIONS

We have seen above that CALI programs lack the capability of providing pedagogical feedback and that there is a need for a grammar checker at least for Spanish students of English as a Foreign Language. The use of *e-gramm* can be an efficient approach in learning writing skills to both traditional and distance learning contexts as it makes immediate feedback available and lets students improve their overall writing performance. Students can benefit from individual instruction. The aim of *e-gramm* is for the student to learn in an autonomous way and assume responsibility for his or her own learning. Furthermore, it allows students to progress at their own speed.

It is customary to make a distinction between 'formal aspects' (specifically language mistakes) on the one hand, and content and organisation of ideas on the other. It seems likely however that the need to take decisions about what to say and in

what order, and how to say often make simultaneous demands on student authors. The result may be cognitive overload which affects adversely their ability to produce and sequence and to express ideas. By giving them confidence that their mistakes can be subsequently detected and corrected, *e-gramm* encourages students to concentrate first on producing and sequencing ideas without worrying too much about whether they have been expressed in correct English.

Pedagogical feedback needs to be designed carefully. In this paper, I have suggested how pedagogical feedback in *e-gramm* can be effective. Above all, it should be clear and pertinent and written in the students' mother tongue. Pedagogical feedback should also include typographical devices so that it is easier for students to identify both the right and wrong examples. Even though this feedback is written in Spanish, it can be easily transferred to other languages, providing that the same sort of error is made. Immediate feedback presents many more advantages to the students that delayed feedback. Such 'just-in-time' feedback is more effective since it is provided when the text is being created and not afterwards. Until now, very little research has been carried out on feedback on creative writing, and CALI has normally paid attention to exercises with fixed answers.

Lawley (2003, 2004, 2009) and Chacón-Beltrán (2007, 2009) concentrated on linguistic and computational aspects of *e-gramm*; the construction of the database and the programming. This article is the first attempt to analyse users' interaction with the grammar checker. Understanding better how users respond to feedback will not only enable us to make that feedback more helpful and user-friendly in general, it will also help us to decide what kinds of feedback are sufficient to enable students to detect and correct their own mistakes, and, therefore, what kinds of mistakes *e-gramm* can be programmed to deal with.

Our research now centres on how that feedback could be improved. To this end, we are currently carrying out a pilot study to test *e-gramm* feedback with distance learning students.

NOTES

* Correspondence to: UNED. Departamento de Filologías Extranjeras y sus Lingüísticas. Facultad de Filología. Paseo Senda del Rey, 7. 28040 Madrid. E-mail: isenra@flog.uned.es

1. Bolt (1992: 91) analysed some grammar checkers (*Correct Grammar, Right Writer, Grammatik, CorrectText, Reader and PowerEdit*) and concluded that those commercial programs do not perform especially well.

2. This project began in 2001 and has been partially financed by the Spanish Ministry of Education and Science (MEC- HUM2006-08469/FILO) and is currently been financed by the Spanish Ministry of Science and Innovation (FFI2008-03251/FILO).

3. A new corpus of about 125,000 words has been compiled, and we are now in the process of analysing it for new entries.

4. http://www.collins.co.uk/Corpus/.

REFERENCES

Bolt, P. 1992. "An evaluation of grammar-checking programs as self-help learning aids for learners of English as a foreign language." *CALL* 5 (1-2): 49-91.

Chacón-Beltrán, R. 2007. "Learner Autonomy in CALL: A Grammar-Checker for Spanish EFL Students". *English Language and Literature Studies: Interfaces and Integrations*. Eds. K. Rasulic and I. Trbojevic. Belgrade: University of Belgrade. 267-273.

Chacón-Beltrán, R. 2009. "Life-Long Learning and Learner Autonomy in English as a Foreign Language Instruction: Technological solutions in the European Space for Higher Education". *English Language Teaching in the European Credit Transfer System: Facing the Challenge*. Ed. M. L. Pérez-Cañado. Bern: Peter Lang. 187-195.

Conrad, S. and L. Goldstein. 1999. "ESL student revision after teacher written comments: Texts, contexts and individuals". *Journal of Second Language Learning* 8: 147-180.

Ferris, D. 1999. "The case for grammar correction in L2 writing classes: A response to Truscott (1996)". *Journal of Second Language Writing* 8: 1-10.

Ferris, D. 2006. "Does error feedback help student writers? New evidence on the short- and long-term effects of written error correction". *Feedback in Second Language Writing*. *Contents and* Issues. Eds. K. Hyland and F. Hyland. Cambridge: Cambridge University Press. 81-122.

Ferris, D. and R. Barrie. 2001. "Error feedback in L2 writing classes. How explicit does it need to be?". *Journal of Second Language Writing* 10: 161-184.

Goldstein, L. 2006. "Feedback and revision in second language writing". *Feedback in second language writing*. (Cambridge Applied Linguistics). Eds. K. Hyland and F. Hyland. Cambridge: Cambridge University Press. 185-205.

Goldstein, L. and R. Kohls. 2002. "Writing, commenting and revising: The relationship between teacher feedback and student revision online. Paper presented at the American Association of Applied Linguistics Conference. Salt Lake City, UT. April 6-9.

Hamp-Lyons, L. 2006. "Feedback in portfolio-based writing courses". *Feedback in second language writing*. (Cambridge Applied Linguistics). Eds. K. Hyland and F. Hyland. Cambridge: Cambridge University Press. 140-161.

Higgs, T. and R. Clifford. 1982. "The push toward communication". *Curriculum, Competence, and the Foreign Language Teacher*. Ed. T. Higgs. Skokie, IL: National Textbook Company. 57-79.

Hyland, F. 2001. "Providing effective support: investigating feedback to distance language learners". *Open Learning* 16 (3): 233-245.

Hyland, F. 2003. "Focusing on form: student engagement with teacher feedback". *System* 31: 217-230

Hyland, K. and F. Hyland. 2006. "Contexts and issues in feedback on L2 writing: An introduction". *Feedback in second language writing*. (Cambridge Applied

Linguistics). Eds. K. Hyland and F. Hyland. Cambridge: Cambridge University Press. 1-19.

Lalande, J. F. 1982. "Reducing composition errors: An experiment". *The Modern Language Journal* 66: 140-149.

Lawley, J. 1999. "A new computer-mediated writing aid for Spanish students of English as a foreign language". *English Language Teacher Education in Europe*. Eds. P. Faber *et al*. Frankfurt: Peter Lang. 31-43.

Lawley, J. 2003. "The development of a grammar checker for Spanish secondary students of English as a foreign language". *RESLA* 16: 127-138.

Lawley, J. 2004. "A preliminary report on a new grammar checker to help students of English as a foreign language". *Arts and Humanities in Higher Education* 3 (3): 331-342.

Lawley, J. 2009. "An EFL Grammar Checker that really works: making Bologna come true". *English Language Teaching in the European Credit Transfer System: Facing the Challenge*. Ed. M. L. Pérez-Cañado. Bern: Peter Lang. 197-204.

Milton, J. 2006. "Resource-rich Web-based feedback". *Feedback in second language writing*. (Cambridge Applied Linguistics). Eds. K. Hyland and F. Hyland. Cambridge: Cambridge University Press. 123-139.

Nagata, N. 1993. "Intelligent computer feedback for Second Language instruction". *The Modern Language Journal* 77 (3): 331-339.

Nagata, N. 1996. "Computer vs. workbook instruction in Second Language Acquisition". *CALICO Journal* 14 (1): 53-75.

Truscott, J. 1992. "The case against grammar correction in L2 writing classes". *Language Learning* 46: 327-369.

Truscott, J. 1996. "The case for "the case for grammar correction in L2 writing classes: A response to Ferris". *Journal of Second Language Writing* 8: 111-122.

Ware, P. D. and M. Warscgauer. 2006. "Electronic feedback and second language writing". *Feedback in second language writing*. (Cambridge Applied Linguistics). Eds. K. Hyland and F. Hyland. Cambridge: Cambridge University Press. 105-122.

Ypsilandis, G. S. 2002. "Feedback in Distance Education". *Computer Assisted Language Learning* 15 (2): 167-181.