The effectiveness of comprehensive corrective feedback in second language writing
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Summary

This dissertation investigates the effects of corrective feedback on second language learners’ written accuracy in Dutch secondary education.

Chapter 1: Introduction

Chapter 1 draws up the context in which the studies presented in this thesis were carried out, and introduces the central concepts in this book.

For many pupils in Dutch secondary education the language of instruction (i.e. Dutch) is not their mother tongue. Research has shown that these second language (L2) learners lag behind their native peers in school success (e.g. Gijsberts & Herweijer, 2009). One of the explanations for this overall arrears in school performance might be that these L2 learners lack the Dutch repertoire that is necessary to meet the high linguistic demands they are faced with in school. This makes that attention to language is of the utmost importance, not only in language-oriented classes but also in classes whose overriding focus is on content (e.g. biology, geography). Many multilingual schools therefore adopt a language-sensitive approach to their content teaching (e.g. Hajer & Meestringa, 2004). Among the spearheads of this approach are the necessity to provide learners with ample opportunity to engage in productive language use, and the need for (oral and written) language-related feedback.

One of the crucial questions then is what this language-related feedback should look like. A commonly used feedback type targeting linguistic problems is error correction or corrective feedback (CF). CF can be defined as “any indication to the learner that his or her use of the target language is incorrect” (Lightbown & Spada, 2006, p. 197). Even though CF is widely used in language classrooms, its usefulness has been the topic of considerable debate in the field of second language acquisition (SLA). Some researchers even expect CF to harm language development rather than promoting it (e.g. Truscott, 1996). The central questions in this thesis are if, how, and when written CF positively affects the accuracy development of L2 learners.
Written CF can take many different forms (cf. table 1.1, p. 4). The CF methodologies examined in this book, are a direct and an indirect type of unfocused or comprehensive CF. An unfocused or comprehensive CF approach involves correction of all errors in a learner’s text, irrespective of their error category. This methodology contrasts with focused or selective CF approaches, in which a teacher chooses to target a (limited number of) specific linguistic feature(s) only (e.g. errors in article usage). The distinction between direct and indirect CF relates to the level of learner involvement in the correction process. When providing direct CF, the teacher identifies both the error and the corresponding target form (cf. example 1). Indirect CF, on the other hand, only indicates that an error has been made, and leaves it to the learner to derive the target form. There are different ways of supplying indirect CF; errors could be underlined or tallied, for example. In the present research, errors were coded (cf. example 2, and Appendix C).

<table>
<thead>
<tr>
<th>Example 1: directe correctieve feedback</th>
<th>Example 2: indirecte correctieve feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Je moet het trui niet chemisch reinigen. de chemisch</td>
<td>Je moet het trui niet chemisch\text{S} reinigen. (__ = wrong word, S = spelling error)</td>
</tr>
<tr>
<td>[You should not dry clean the sweater.]</td>
<td>[You should not dry clean the sweater.]</td>
</tr>
</tbody>
</table>

The studies that are reported in Chapters 3, 4, and 5 investigate the effectiveness of direct and indirect comprehensive CF by assessing the effects of written CF on the linguistic accuracy of learners’ output. Accuracy was defined as the target-like use of language forms (i.e. grammar, lexis, and orthography). In more concrete words, this dissertation aims at answering the following six questions:

7. Does comprehensive CF lead to improved accuracy in revised texts?
8. Does comprehensive CF lead to improved accuracy in new texts?
9. What CF methodology is most effective: direct or indirect CF?
10. What factors mediate the effectiveness of comprehensive CF?
11. Does written CF come with any negative side-effects that harm accuracy development?
12. How and when do individual learners (fail to) benefit from comprehensive CF?
Chapter 2: Theoretical and empirical background

Taking a cognitive perspective on SLA, Chapter 2 presents the theoretical and empirical background of the research reported in this thesis. The first part of the chapter explains why, from a theoretical point of view, it is to be expected that CF promotes L2 development. Then it reviews some of the objections against the use of CF, raised by CF opponents. Next, the chapter discusses several controversies with respect to the relative efficacy of different CF methodologies, and the CF amenability of different types of errors. Finally, a review of earlier research on CF effectiveness leads up to an overview of the issues investigated in this book.

Having access to plenty L2 input (e.g. Krashen, 1982) and being granted ample opportunity to engage in language production (e.g. Swain, 1985) are necessary conditions for successful SLA. However, research has shown that even when these conditions are met, L2 learners fail to acquire a native-like level of accuracy in their production (e.g. Swain, 1991). To be able to progress towards well-formedness in their L2, learners not only need language input and production, but also specific attention to linguistic form (focus-on-form). One way of directing learners' attention to form-related aspects of their L2 output, is by providing them with CF (e.g. Ellis, 2005). Feedback can make learners realize where their own output is not yet target-like (noticing the gap) (e.g. Han, 2002).

Those opposing the use of CF in L2 classrooms, state that CF is unable to positively affect the SLA process. One of the arguments they put forward is that CF could at best result in explicit knowledge about the language system, but that correction will never lead to the acquisition of the type of implicit knowledge that enables learners to communicate in their L2 (e.g. Krashen, 1982; Truscott, 1996). Moreover, CF contestants claim that CF might harm L2 development. First of all, because correcting and revising takes up valuable time which could be spent more effectively on productive aspects of L2 instruction. Secondly, CF might lead learners to simplify their writing by avoiding errors that were corrected before.

Apart from the question if CF promotes SLA, issues such as which CF methodology is most effective, or if all error types are equally responsive to CF, are also debated. Various predictions have been made, for instance, with respect to the relative effectiveness of comprehensive vs. selective CF, and direct vs. indirect correction, and Truscott (1996) has claimed that CF could only be beneficial for non-grammatical errors (e.g. spelling errors), but never for errors within the grammatical domain (e.g. errors in sentence structure).

Earlier research has already revealed that CF, irrespective of its methodology, is effective in promoting accuracy improvement during revision. The more important and interesting question, however, is if CF yields a learning effect: does the feedback one
receives on a particular piece of writing positively affect the accuracy of newly written texts? Recent studies showed that this is indeed the case, when a selective approach to CF was adopted. Research on the potential long-term effects of comprehensive CF, on the other hand, suffered from methodological problems, and produced conflicting findings. The same holds for studies comparing the efficacy of direct and indirect CF. Moreover, issues such as the potential harmful side-effects of error correction, or factors possibly mediating CF effectiveness (e.g. the type of error targeted, learners’ educational level, task topic), have not yet been investigated (systematically) enough. The three empirical studies presented in this thesis set out to contribute to the settlement of these open questions.

Chapter 3: Small-scale study
Chapter 3 describes a small-scale study (N = 66) investigating the effects of direct and indirect comprehensive feedback.

The research reported in this chapter was conducted at two Dutch multilingual secondary schools that adopted a language-sensitive approach to content instruction. The participants were 66 pupils in their second year of secondary pre-vocational education. Pupils were randomly assigned to four different treatment groups: two experimental treatments and two control treatments. Pupils in the experimental groups received either direct or indirect CF on all errors in their texts. The errors committed by learners in the control groups were not corrected. These pupils revised their own writing without having access to any feedback (self-correction), or wrote two new texts when the other groups revised their initial writing products (practice). Including two control treatments served, among other things, the following two goals: (i) Comparing the effectiveness of CF to that of self-correction, made it possible to set apart effects of error correction from effects of the revision process as such. (ii) Contrasting the effects of CF to the effects of extra writing practice, allowed for testing Truscott’s (1996) hypothesis that the opportunity for additional production is more beneficial than correcting and revising.

The experiment included three sessions. In the first session (week 1 – pre-test), all pupils were asked to write two texts, on two different topics (cf. Appendix A). In the second session (week 2 – treatment session), pupils revised their initial texts based on the CF they received, revised their texts without any available feedback, or practiced their writing skills by writing two new texts. In the third session (week 3 – post-test), all learners – irrespective of the treatment group they were assigned to – again wrote two texts. To be able to measure the efficacy of the different treatments, the accuracy level of each text was
calculated by means of error ratio’s (i.e. (number of linguistic errors/total number of words) x 10).

The results of this first study revealed that comprehensive CF leads to accuracy improvement in L2 writing. Both pupils whose errors were corrected directly, and learners who received indirect CF, made fewer errors during the treatment session than pupils in the two control groups. Moreover, direct CF yielded a learning effect: the post-test texts of learners in the direct group contained significantly fewer errors than the post-test writing of pupils in the practice and self-correction groups. Hence, these findings do not support Truscott’s (1996) supposition that writing practice is more beneficial to accuracy development than correction and revision. To conclude, task topic proved not to influence the extent to which learners profit from written CF.

Chapter 4: Large-scale study
Chapter 4 presents the findings of a large-scale study (N = 268) into the effectiveness of comprehensive written CF.

Four Dutch secondary schools with multilingual student populations participated in the research project. The design of this study was largely similar to the methodology of the small-scale study as described in Chapter 3. However, the following five methodological changes were implemented: (i) Since the first study demonstrated that a task’s topic does not mediate the efficacy of CF, this variable was not included in the large-scale study. (ii) To be able to explore the influence of educational level on CF effectiveness, pupils from two strands of secondary education participated in this study: pupils in their second year of secondary pre-vocational education (i.e. vmbo-tl), and learners in their second year of higher general secondary education (i.e. havo). (iii) The large-scale study included four experimental sessions instead of three. A delayed post-test was administered four weeks after the treatment session to gain insights into the durability of CF effects. (iv) The study reported in Chapter 4 not only explored the effect of comprehensive CF on overall accuracy. To test Truscott’s (2001; 2007) claim that non-grammatical errors might be more correctable than errors in grammar, the overall accuracy measure was broken down into a measure of grammatical accuracy and a measure of non-grammatical accuracy. (v) Finally, the lexical diversity and structural complexity of pupils’ writing were also measured, to be able to determine if CF results in avoidance and simplification of language production.

Results from the large-scale study once again showed that comprehensive CF positively affects the accuracy of both revised and new texts. Moreover, the effect of CF
proved to be durable; even a month after learners received feedback, pupils in the CF groups still outperformed pupils in the control groups. Another important finding relates to the correctability of grammatical and non-grammatical errors. Whereas both error types proved to be amenable to CF, they were shown to differ in their responsiveness to direct and indirect correction. Only direct CF promoted pupils’ grammatical accuracy development. The effect of CF on learners’ non-grammatical accuracy, on the other hand, proved to be more durable when errors were corrected indirectly. Pupils’ educational level turned out not to influence CF efficacy. Lastly, no evidence was found of any detrimental side-effects of CF. The results reported in Chapter 4 proved that CF did not lead learners to avoid more complex language use. Moreover, pupils who received CF outperformed learners who were allowed an extra opportunity to practice their writing skills in all sessions. Hence, it is not the case that the time and energy invested in CF would have been better spent on additional writing practice.

Chapter 5: Qualitative study
Chapter 5 reports a multiple case-study (N = 4) into the effects of direct and indirect comprehensive CF.

The studies in Chapters 3 and 4 make an important contribution to the error correction debate by showing that comprehensive CF can promote L2 development. However, quantitative studies like these ones leave some interesting issues unanswered. First of all, quantitative CF research fails to provide insights into how and when individual learners benefit from error correction (Storch & Wigglesworth, 2010). Secondly, whereas the study in Chapter 4 revealed that both non-grammatical and grammatical errors are amenable to correction, it still remains unclear how separate error types within these two broad domains react to CF. Finally, Bruton (2009a, 2010) suggests that global accuracy measures (such as the error ratio’s in Chapters 3 and 4) might not provide an accurate and complete picture of the accuracy gains brought about by CF. One of the arguments he puts forward is that, in adopting all-or-nothing criteria (i.e. accurate/inaccurate), global measures will inevitably fail to quantify partial learning.

Taking the above mentioned reservations towards global accuracy measurement at heart, the study presented in Chapter 5 adopted qualitative, in-depth analyses to explore the effectiveness of direct and indirect comprehensive CF. For the multiple case-study, four pupils were selected from among the participants of the large-scale study described in Chapter 4: two learners from the direct CF group, and two pupils whose errors had been
corrected indirectly. To gain a better understanding of how and when learners (fail to) benefit from correction, pupils were selected who seemingly reacted very differently to the CF they received: for each feedback type, one participant’s error rate decreased after he had received CF, whereas the other pupil’s error rate increased between pre-test and post-tests.

The four writing products (i.e. pre-test text, revised version of pre-test text, post-test text, and delayed post-test text) of each learner were subjected to a detailed comparison. When a feedback instance led to a correct revision or a target-like reformulation, this was taken as evidence of successful feedback uptake. The target-like usage of a corrected feature in a new piece of writing was seen as proof of CF retention or accuracy development. Errors in learners’ post-test texts that did not bear any relation to the errors pupils committed during the pre-test, were classified new errors. To be able to explore the amenability of separate error types to CF, errors in pupils’ writing were classified into four broad domains (morphosyntax, lexicon, orthography, and pragmatics), each of which was subsequently subdivided into a number of separate error types (cf. table 5.1, p. 98).

The qualitative approach adopted in Chapter 5 provided both different and additional insights as compared to the quantitative studies reported in Chapters 3 and 4. To begin with, the effectiveness of CF proved to be underestimated by global accuracy measurement. Learners’ progress was partially masked by the new errors pupils committed during the post-tests. Moreover, in some cases, CF led to partial acquisition of a corrected feature. As Bruton (2010) suggested, this type of improvement is not represented in global accuracy scores. Additionally, global accuracy measures seemed to indicate that, for two of the four learners in the study, CF harmed their accuracy development rather than promoting it. However, in-depth analyses revealed that – under the right circumstances – these learners also benefited from CF.

Moreover, the multiple case-study yielded a number of new insights concerning the efficacy of comprehensive CF. For instance, in line with suggestions in the literature (e.g. Ferris, 2004; Loewen, 2004), a learner’s level of successful CF uptake showed to be predictive of a pupil’s success in acquiring a target form. Two other interesting findings pertain to the correctability of different types of errors. Firstly, all error types proved to be amenable to CF, as long as errors were not fossilized. Secondly, learners only benefited from indirect correction when the feedback was targeting errors which could be solved by applying a clear-cut rule (i.e. the omission of an article in front of a Dutch noun in a definite context). Direct CF proved to be more effective in tackling learners’ idiosyncratic errors (e.g. the use of a wrong article in Dutch).
Chapter 6: Conclusion
The final chapter synthesizes the results of the three empirical studies (Chapters 3, 4 and 5), sketches out their theoretical and pedagogical implications, and discusses some directions for further research. The most important findings of the present studies can be summarized as follows: (i) Unfocused CF enables L2 learners to improve the accuracy of their written output; the research presented in this thesis showed that learners were not only able to make effective use of CF during revision, but that comprehensive CF also resulted in L2 learning. (ii) All types of errors are amenable to CF. (iii) The relative efficacy of direct and indirect CF is dependent on the type of error that is targeted. (iv) CF does not come with any side-effects that harm L2 learners’ accuracy development. (v) In-depth analyses of CF effectiveness can be considered a valuable addition to the more common global measures of accuracy development.