Corrective feedback in second language writing: From theory and research to practice

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Abstract

The aim of this paper is to discuss choices available to language practitioners in connection to corrective feedback in second language (L2) writing. Using the results of some empirical studies and prominent second language acquisition (SLA) theories on corrective feedback (CF), we will address the benefits and limitations of implicit and explicit feedback types, peer feedback and self-correction, reactive and proactive feedback, and finally focused and unfocused feedback. In each section, some practical recommendations are made to help L2 teachers better deal with CF in language learning classrooms.

SLA theories underpinning CF

Two theories that are widely used in L2 research on CF are Cognitive Approach and Sociocultural Theory (SCT). Cognitive psychology is a branch of psychology whose theories have ushered SLA practitioners in how they view L2 learning. Unlike behaviorism that viewed learning as a chain of stimulus-response habit-formation, it focuses on rule learning through deduction and using conscious cognitive processes, and views errors as an important learning device (Bitchener & Ferris, 2012). There are two main SLA theories regarding CF which have roots in cognitive psychology.

The first theory is the Noticing Hypothesis (Schmidt, 1990), which posits that feedback, particularly in the form of negative evidence (indicating an error), is likely to cause learners to notice a gap in their interlanguage (L2 knowledge) by analyzing the mismatch between the corrected form and their output (which contains

an error), thereby developing their interlanguage. In other words, CF assists students in two ways: First, it helps them become aware of shortcomings in their L2 knowledge, and then, it draws their conscious attention to the target form, which, according to this hypothesis, are the essential requirements for learning to occur.

The other cognitive approach theory is Skill Acquisition Theory (DeKeyser, 2015) which suggests that language learning occurs in three stages. It commences with (1) declarative knowledge, which is the knowledge of rules, then develops to (2) procedural knowledge, which is the knowledge of how the rules are used, and through persistent practice, it gradually becomes (3) automatic. Moving from the first to the second stage tends to be fast and easy; once learners are given the rule and formula for a specific form, they can mostly do the grammar exercises, such as filling the gaps, quickly and rather accurately. But when given a communicative task to do, they tend to make many mistakes. This is because, in order to use language accurately in communication, they need to have automatized their knowledge (stage 3), which takes a long time and demands an overwhelming amount of practice. If they only possess procedural knowledge (stage 2), they are accurate only when they have plenty of time to consciously think about the structure. This is an important theory in CF since it accounts for how correction contributes to the development of knowledge (DeKeyser, 2015).

The overwhelming majority of empirical studies on CF have been conducted within cognitive approach. but after the seminal work of Aljaafreh and Lantolf, (1994), which looked at corrective feedback from a sociocultural perspective, more studies use Sociocultural Theory (SCT) as their underlying theory. The core idea of the sociocultural perspective is that knowledge is social in origin and is mainly gained through interaction (Vygotsky, 1978). Specifically, all cognitive processing starts between individuals and is internalized through interaction, which is within the recipient's Zone of Proximal Development (ZPD). ZPD is defined as the psychological domain in which learners with a little support are capable of doing something, which otherwise they cannot do independently (Swain & Nassaji, 2000). In terms of feedback, the advocates of SCT believe that learning occurs when instructors (knowledgeable others) interact with the learners through mediation and scaffolding and ensure they understand the feedback, and it is within their ZPD. To make sure that feedback is within their ZPD, or in other words, within their grasp, it must be tailored to best fit the individuals' needs. According to SCT, a feedback type that works for one might be ineffective for another learner. Even for the same learner, for different grammatical structures, they might need different feedback types. But a general rule of thumb is that feedback needs to be very implicit at first, and if the learner fails to self-correct, it should become gradually more explicit. This way, knowledge is coconstructed through interaction and scaffolding. Several studies adhering to this theory have shown how such graduated CF helps students move from other-regulated to self-regulated (Swain & Nassaji, 2000).

In the following sections, we will use these three widely accepted theories (namely Noticing Hypothesis, Skill Acquisition Theory, and Sociocultural Theory) to answer some pedagogical questions regarding CF in an L2 context.

How should WCF be given?

Written Corrective Feedback (WCF) strategies can fall on a continuum, ranging from the most implicit to the most explicit, with the former entailing only an indication of an error occurrence (e.g., by only writing the number of mistakes in the margin) without correction, and the latter providing the correct form along with a metalinguistic explanation of why it is incorrect (see Figure 1). Basically, following the typology for WCF (Ellis, 2009), there are three main strategies: indirect, direct, and metalinguistics. Each one of these can be modified slightly to be more or less explicit (see Table 1 for all types with examples). Here, we will resort to empirical research findings and SLA theories to explore the affordances and constraints of all these feedback types.

Figure 1. Feedback Types on a Continuum

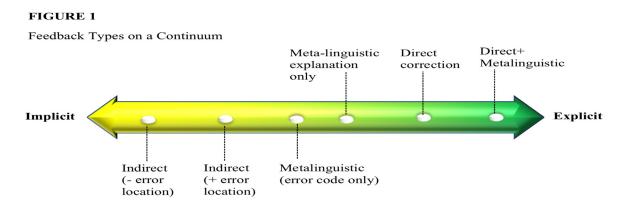


Figure 2. Types of Written Corrective Feedback

TABLE 1 Types of Written Corrective Feedback

The learner's original sentence:	When I was child I enjoy from play soccer.
Indirect (- error location)	When I was child I enjoy from play soccer. (5)
Indirect (+ error location) ^ = missing word/punctuation	When I was child I enjoy from play soccer.
Metalinguistic (error code only) ^ = missing word/punctuation	When I was (article) child (punctuation) I enjoy (verb form) from (preposition) play (verb form) soccer.
Meta-linguistic explanation only	When I was child I enjoy from plays soccer. (1) use an indefinite article when referring to one item (2) after an introductory phrase, use a comma (3) use past simple when talking about past events (4) the verb "enjoy" is not followed by a preposition (5) use the gerund form after prepositions
Direct	When I was a child, I enjoyed from playing soccer.
Direct+ Metalinguistic	When I was a child, I enjoyed from playing soccer. (1) use an indefinite article when referring to a countable noun (2) after an introductory phrase, use a comma (3) use past simple when talking about past events (4) the verb "enjoy" is not followed by a preposition (5) use the gerund form after prepositions

Direct

Direct feedback, which is the most popular strategy among teachers and students (Sheen, 2011), can take three forms: (1) crossing out the erroneous form and providing the correct form, (2) inserting a necessary word or phrase, and (3) crossing out a redundant word or phrase. Bitchener and Ferris (2012) discuss the main affordances of this strategy. First, given its explicitness, it does not leave students in a state of perplexity and doubt (which might be the case when self-correcting). L2 learners have a tendency to use a trial and error approach when using a structure or word they are uncertain about, and therefore, they need feedback that either confirms or rejects their hypothesis. This, in turn, either can consolidate their learning or may teach them about an unacceptable form. Second, compared to self-correction, direct method is immediate in the sense that learners do not need to make self-corrections and wait for the teacher to confirm or reject them. Third, it stands to reason that more complex mistakes are more amenable to this feedback type. As mentioned, according to the Skill Acquisition Theory, for learning to occur, the individual needs to possess declarative knowledge. As so, if the form is totally new to the student and has not been instructed before, the only feedback type which might be effective is the provision of explicit feedback rather than implicit. This is especially true for low-proficiency levels (elementary and low intermediate) due to the fact that they do not have the required declarative or explicit knowledge for most structures.

Despite these benefits, Ellis (2009) draws practitioners' attention to a potential drawback of this feedback type. He argues that since learners are already provided with the correction, "it requires minimal processing" which is less likely to result in long-term development (p. 99). This should prompt teachers to use direct feedback along with other types, like indirect and metalinguistic.

Indirect

As indicated in Figure 1 and Table 1, indirect feedback can be given in two ways, either by locating the non-target structure or by indicating the number of errors in each line in the margin (Bitchener & Ferris, 2012). The rationale for this type of feedback, which invites students to reflect on their mistakes and self-correct them, is that it encourages self-discovery and provides learners with a problem-solving activity through reflection, which may lead to deep cognitive processing (Ferris & Roberts, 2001) and from there to internalization (Pawlak, 2014). For these reasons, it can be effective for mistakes or slips of the pen, defined as deviations which occur even though the learners know the rules. Indirect feedback is also backed by the Noticing Hypothesis because it draws learners' attention to notice the gap in their knowledge and try to fill it; a mental process which can be conducive to development (Schmidt, 1990). The other advantage of implicit feedback is that it is output-inducing (Pawlak, 2014), which means it pushes learners to, if they

The authors are fully cognizant of the differences between these two in the literature, but for the purposes of this paper, they are used interchangeably.

can, produce the correct form. This is in line with the Output Hypothesis (Swain, 1995), which asserts that for learning to occur pure exposure to input does not suffice, and it needs to be complemented with output. This hypothesis was informed by the result of a study which was conducted in an immersion program where learners despite being exposed to a lot of input lacked accuracy, which was attributed, among others, to insufficient out-put inducing activities and interaction. Finally, indirect CF promotes a learner-center approach in which students have a more active role, while teachers become more of a "learning counsellor" or facilitator (Tudor, 1993) than the sole source of knowledge.

It is worth mentioning that these benefits are not exclusive to indirect feedback; any implicit feedback which requires learners to self-correct (metalinguistic with error code and grammar rule explanation) can also be argued to have the same benefits.

In spite of enjoying rigorous theoretical support, indirect feedback is not nearly as popular as direct feedback with teachers and students (Pawlak, 2014). This could be because indirect feedback, due to its implicitness, may not provide sufficient information regarding what needs changing and how, resulting in confusion and frustration. This could be even more so for low proficiency learners who lack the declarative knowledge. To mitigate this, Pawlak (2014) suggests dedicating some class time to feedback reflection activities where students can interact with the teacher or peers to clarify any confusion and confirm their correction hypothesis and assumptions. For frequent errors, the teacher can put the ill-formed structures on the board and draw all students' attention to them. This way, students would get the best of both worlds, i.e., the benefits of both indirect and direct methods. The other recommendation is viewing the feedback as a process whereby indirect feedback is supplemented with one or both of the other two explicit types, particularly for errors that learners fail to self-correct. This movement of feedback from implicit to explicit is also in line with SCT which posits that teachers should offer support as needed and then step back (scaffolding).

Metalinguistic

In response to errors, the other strategy that teachers have at their disposal is to provide "some form of explicit comment about the nature of error" without correcting it, which is known as metalinguistic CF (Ellis, 2009, p. 100). It could take two forms which differ in terms of explicitness. A more explicit approach is to explain deductively why the output is ill-formed, or how it could be fixed or a combination of both (without the provision of correct forms in either case). A less explicit form is to pinpoint the error type through the use of error category labels.² For instance, the teacher might, in the margin or above the non-target like form, write "prep", indicating that the preposition needs to be either changed or removed. To help students understand the labels, a list of all categories along with examples for each has to be provided.

² Many researchers consider this type to be indirect given that learners would need to sort out the solution on their own, but according to Ellis's (2009) typology, it is metalinguistic since learners would need to resort to their linguistic knowledge to make corrections.

Both of these forms can be claimed to share the benefits of indirect feedback mentioned above because they involve output production, guided learning, and promote learner-centeredness. In addition to these, metalinguistic feedback in the form of error codes can prompt students to resort to their previously learnt metalinguistic knowledge and try to reflect upon it, which can ultimately improve their self-editing skills (Sheen, 2011).

However, the downside is that teachers would need to come up with error labels and train learners how to use them. One way to address this issue is to use the ones that have been designed by experts and tweak them to best fit their teaching context and students' proficiency level. Appendix A shows an error labeling scheme which is based on the labelling system that Nicolas-Conesa, Manchon, and Cerezo (2019) used in their study. The other challenge is that providing metalinguistic comments requires technical knowledge on the part of both teachers and learners, making it less practical for some contexts.

A variation of metalinguistic feedback is when it is complemented with correction, or even with some more examples of the target language which the learner seems to be struggling with. Obviously, it would be a time-consuming method. However, if teachers are using electronic feedback (via Microsoft Word or Google Docs), they can, either alone or with colleagues, prepare feedback templates for the most common errors. This way, they would simple copy the feedback and share it with their learners. It is an arduous task, but in the long run, it saves teachers a lot of time.

Now that you have read about all feedback strategies, you might wonder which type is more effective in honing learners' writing skills, especially with respect to accuracy and L2 development. Comparing a large number of empirical studies measuring the effects of different CF types on accuracy, Bitchener and Ferris (2012) and Bitchener and Storch (2016) conclude that no firm conclusion can be reached regarding the superiority of one over the others. This can be attributed to a wide range of factors that make such generalization difficult, if not impossible. Depending on many factors such as the context, error nature, proficiency level, age, course aims, etc., teachers should use one or a combination of all, based on their benefits and limitations discussed above, to best guide learners to achieve their goals.

Who should give feedback?

Correction can take three main forms: self-correction, peer feedback, and the most common, teacher feedback. Since teacher feedback is the most familiar, we will only examine how to implement the other two.

Maybe not very popular, but self-correction has been shown to be effective (Ferris, 2006), and the reason is attributed to the idea that it pushes students to "stretch their interlanguage and notice the gap" (Sheen, 2011, p. 48). One reason why its effectiveness can be compromised is related to learners' beliefs. Some learners see

self-correction as a waste of time, believing that only teachers, given their superior language knowledge and training, should give feedback (Pawlak, 2014). As a result, they do not take it seriously. Teachers should take some time to persuade and motivate learners to make a conscious effort when self-correcting.

Peer-feedback can be used to compensate for the shortcoming of indirect feedback and self-correction, which, as mentioned before, can offer insufficient support. Here, they can rely on a peer for help if they cannot self-correct (Sheen, 2011). Ellis (2009) recommends using peer feedback as a follow-up activity for self-correction. He argues that engaging students with activities in which they play an active role is important because teachers cannot do the learning for them; instead, they should be given a chance to discover and learn on their own. Edges (1989) notes that peer feedback involves deeper engagement with learning, makes students more autonomous, and encourages collaboration. If nothing, it engages students in an authentic communicative task while discussing forms, which according to SCT, is the most essential element of learning.

As with self-correction, peer feedback also requires training, otherwise it can be "the blind leading the blind" (Sheen, 2011, p. 48). Another problem it poses is that some students may be mocked by their peers, which can negatively affect their confidence (Pawlak, 2014). One way to prevent this problem can be teaching them how to show disagreement and give constructive feedback. For instance, the teacher can ask them to start by saying something like: "...I could be wrong, but I guess here we need to use..., what do you think?" Teaching them hedging techniques to soften their language might be necessary.

What errors should be corrected?

Teachers can choose to give feedback on only a few error types (focused) or a wide range of errors (unfocused). The rationale for the former is that humans have limited attentional resources (Skehan, 1998) and can attend to a few structures at a time. But the results regarding this claim are far from conclusive since only a handful of studies have addressed this issue. Except for controlled practices, focused feedback might not be an ideal choice due to the following reasons. First, uncorrected errors may reinforce the non-targeted patterns. Second, given that many errors go uncorrected, students might get the impression that they write accurately, and therefore not put more effort into improving. Finally, when all errors are not corrected, students may feel they are being deprived of learning opportunities arising from the correction of their mistakes.

Even though students have been shown to prefer unfocused feedback (Ferris & Roberts, 2001), it must be born in mind that a "haphazard" and "one-shot" feedback, which is not connected to the pedagogical agenda or the curriculum, is unlikely to lead to automatization (Pawlak, 2014, p. 110). Pawlak recommends a number of factors which should be considered to prevent cognitive overload and to make feedback more

systematic and therefore less haphazard. Here are some questions teachers should consider before deciding what to give feedback on and what to skip:

- 1. Is this feedback in line with the course aims and reflective of the course material?
- 2. What is the purpose of this activity; is it to improve accuracy or fluency?
- 3. Does this error hinder communication? In other words, is it global or local?
- 4. Is it an error (happening due to insufficient language knowledge), or is it a mistake (a slip for which the student might have the declarative knowledge)?
- 5. Would the students understand the feedback, or is it way over their head? Is it within their ZPD?

Answering these questions can help teachers provide feedback that best fits their context.

Some practical suggestions

Some errors are more responsive than others to feedback. These errors are usually in grammatical structures which are more rule-governed (e.g., regular past simple) and therefore easier to learn and more treatable to feedback (Ferris, 1999). Here, however, we wish to focus on errors that, despite being corrected, persist in students' writing. To better treat these errors, teachers are recommended to resort to form-focused instruction (Ellis, 2001) and dynamic written corrective feedback (DWCF) (Evans et al., 2010).

If certain errors persist, rather than waiting for them to occur again, take a proactive measure (Ellis, 2001; Nassaji, 2015). To do so, Nassaji suggests that teachers design tasks whose primary aim is to trigger communication but at the same time can elicit certain linguistic forms. For instance, the teacher preselects the use of modal verbs to express possibility as the target structure for students. Then a task is designed in which students are given a picture showing a house which has been robbed, and students take up detective roles to write a report on the possibilities regarding what might have happened. This is an example of proactive feedback because before learners make mistakes in a structure anticipated to be challenging for them, the teacher elicits it and then gives feedback in a more focused manner (Nassaji, 2015). This is usually done soon after teaching the target structure. Another proactive measure for challenging or frequent errors is the grammatically judgment test, which requires students to judge whether some preselected sentences are grammatically acceptable or not. This can be made completely learner-centered by pairing learners to first find the mistakes and then give metalinguistic explanation to correct them. After the pair work, the whole class can discuss the mistakes.

Another way to deal with hard-to-treat errors is to have a systematic and consistent feedback system, which provides more opportunities for practice. DWCF, which is based on the principles of Sociocultural and Skill Acquisition Theory, can help teachers to provide such feedback. Here are the steps for an adapted version of DWCF³: (1) Students are asked to write a short paragraph in 10 minutes on a given topic; (2) the teacher

The adopted version is given here because, unlike the original version, it involves peer feedback. For the original version see Evans et al. (2010). The authors of the original version encourage teachers to adapt DWCF for their context (p. 456).

gives feedback using error labeling metalinguistic feedback (Appendix A); (3) the teacher returns the drafts with the feedback, and students have to (a) write down the number of mistakes in each category on a tally sheet, (b) take some time to self-correct based on the feedback, (c) ask for help from the peer assigned by the teacher, (d) and make changes and return the draft to the teacher; (4) if some errors persist, this time, the teacher provides a more explicit feedback and gives more clues (e.g., metalinguistic explanation); (5) students self-correct and then check their changes with peers; (6) finally, the teacher provides direct feedback for the remaining errors.

This instructional methodology entails guided learning as well as interaction, which are, according to SCT, the crucial elements of learning. Also, it involves manageable, timely, meaningful and most importantly, constant feedback whereby learners practice repeatedly, which as Skill Acquisition Theory posits, can help proceduralization and automatization (Evans et al., 2010).

Conclusion

After over two decades of research, predominantly motivated by Truscott's (1996) opposition to written corrective feedback, researchers are still not able to pinpoint what CF type is more effective. It would be naïve to think that a single feedback type would be a panacea for all ill-formed structures since effective feedback, as discussed, depends on many factors. Teachers ought to resort to all types of feedback to better cater to learner's needs and support them to achieve their desired goals and to realize their potential. Experimenting with different feedback types (implicit, explicit, focused, unfocused, peer-correction, self-correction, and proactive), in connection with individual and contextual factors, seems to be a promising method in helping learners to develop their L2 accuracy.

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Appendix A. Error Coding Grammar Errors

Verb tense	I have seen this movie last night ("saw")
Verb form	She go to work ("goes"). I need go("to go") The car should fixed("have been fixed")
Word form	It is Unlogical("illogical") She is creativity("creative")
Determiner (including articles)	I live in the Canada("in Canada")
Plural	Furnitures are expensive("furniture"). I have three brother("brothers")
Preposition	I enjoy from soccer("enjoy soccer")
Word order	I go usually to work late("I usually go")
Pronoun	They should love themselfs("themselves")
Conjunction	Although it is cold, but they want to go out ("Although it is cold, they want")
Sentence structure	I did the better that (instead of. e.g., "I did my best")

In all categories, the target structure is either missing, unnecessary, or incorrect.

Nongrammar errors

Wrong word	The document (instead of the passage, or the text) we read discusses
Word choice (awkward use)	a big effort("great")
Tone inappropriate	Children should be humble and not cocky. instead of. e.g., ("arrogant")
Spelling	I beleive (believe)
Punctuation	It is hard, I need help(" It is hard. I need help")
Apostrophe	All Student's parents should be("students' parents)
Redundant	In my opinion, I think it is(" In my opinion, it is")

In all categories, the target structure is either missing, unnecessary, or incorrect.



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