10 Corrective feedback

Introduction

Corrective feedback (CF) takes the form of responses to learner utterances that contain (or are perceived as containing) an error. It occurs in reactive form-focused episodes consisting of a trigger, the feedback move and (optionally) uptake. In this example, taken from Yang and Lyster (2010: 243) the teacher's utterance signals an error has been committed and provides metalinguistic feedback which results in the student's uptake:

Student: I went to the train station and pick up my aunt. (= trigger)

Teacher: Use past tense consistently. (= feedback move)

Student: I went to the train station and picked up my aunt. (= uptake)

CF can be overt as in this example or more covert (e.g. if the teacher had said 'Oh, you picked up your aunt'). It can occur in both task-based language teaching and in more formal teaching involving explicit language instruction. It can also occur in both oral and written form. In the case of writing, 'uptake' takes the form of a revision of the original text that was corrected.

Corrective feedback supplies learners with negative evidence. That is, it signals that something that the learner has said or written does not conform to target language norms. In this respect, it contrasts with other forms of input that provide the learner with positive evidence (i.e. models that conform to target language norms). However, as we will see, CF can provide both negative and positive evidence. In the example above, the teacher's feedback merely signals that something is incorrect and needs modifying. However, if the teacher had said, 'Use the past tense – you must say "picked up"', the feedback would contain both negative and positive evidence. As we will see later, this distinction between negative and positive evidence is an important one when considering the role that CF plays in L2 acquisition.

We will adopt the same approach as in a number of other chapters. First, we will examine how CF is handled in the pedagogic literature and then switch attention to SLA. In both cases, we will consider oral and written CF.

Corrective feedback in language pedagogy

All the teacher guides we have inspected affirm the importance of providing both positive feedback and negative feedback (i.e. CF). Nunan (1991), in fact, devotes more attention to positive feedback than CF. He noted that it serves two functions – 'to let students know they have performed correctly' and 'to increase motivation through praise' (p. 195). Praising students is seen as an important way of fostering positive attitudes to learning. Correcting students may be deemed necessary but it is also seen as potentially dangerous because it can damage learners' receptivity to learning. Therefore it needs to be given 'in an atmosphere of support and warm solidarity' (Ur, 1996: 255). There is a clear recognition in the language of teacher guides of the affective and cognitive dimensions of CF (Vigil and Oller, 1976). Teachers, however, are likely to pay greater attention to the affective dimension.

In a seminal article, Hendrickson (1978) addressed five central questions about corrective feedback:

- Should learners' errors be corrected?
- When should learners' errors be corrected?
- Which errors should be corrected?
- How should errors be corrected?
- Who should do the correcting?

These questions continue to be the central questions addressed in the pedagogic literature so we will base our review on them.

Should learners' errors be corrected?

The value attributed to oral CF in language pedagogy varies in different methods. For example, in audiolingualism 'negative assessment is to be avoided as far as possible since it functions as "punishment" and may inhibit or discourage learning', in humanistic methods 'assessment should be positive or non-judgemental' in order to 'promote a positive self-image of the learner as a person and language learner', while in skill-learning theory 'the learner needs feedback on how well he or she is doing' (Ur, 1996: 243). However, in the post-method era (see Chapter 2), methodologists are less inclined to be prescriptive about CF, acknowledging the cognitive contribution it can make while also issuing warnings about the potential affective damage it can do. Ur, for example, recognized that 'there is certainly a place for correction' but 'we should not overestimate this contribution' because it often fails to eliminate errors. She concluded that she would rather invest time in avoiding errors than in correcting them. Other methodologists, however, distinguish between 'accuracy' and 'fluency' work and argue that CF has a place in the former but not in the latter. Harmer (1983), for example, argued that when students are engaged in a communicative activity, the teacher should not

intervene by 'telling students that they are making mistakes, insisting on accuracy and asking for repetition etc.' (p. 44). Hedge (2000) observed that teachers' notes accompanying course books frequently instruct teachers to leave correction until the end of fluency activities. Scrivener (2005) supported a similar position:

> If the objective is accuracy, then immediate correction is likely to be useful; if the aim is fluency, then lengthy, immediate correction that diverts from the flow of speaking is less appropriate.
>
> (p. 299)

However, he did allow for 'brief, unobtrusive, immediate correction' in fluency work. He also suggested that teachers should make a list of the errors their students make in a fluency activity and address them when the activity is over. Ur also considered that it is sometimes appropriate to correct during fluency work ('gentle, supportive intervention' can help the 'floundering' student). She also noted that it was not always desirable to correct during accuracy work (e.g. if a student has contributed an interesting, personal comment that contains an error).

Similar differences in opinion exist where written CF is concerned. Truscott (1996), reflecting the views of teachers who adhere to process theories of writing, acknowledged that correcting learners' errors in a written composition can help them to eliminate the errors in a subsequent draft. However, he argued that written correction has no effect on grammatical accuracy in a new piece of writing (i.e. it does not result in acquisition). Ferris (1999) disputed this claim, arguing that it was not possible to dismiss correction in general as it depended on the quality of the correction – in other words, if the correction was clear and consistent, it would work for acquisition. This debate has run on over several years and, as we will see later in this chapter, has led to a number of studies investigating whether written CF can improve linguistic accuracy in subsequent writing.

Uncertainty about the value of written CF is also evident in the pedagogic literature. Scrivener (2005), for example, pointed out that 'red pen' corrections can discourage students but also noted that most learners expect to have their writing corrected by the teacher. Ur (1996) saw correcting students' written work as a normal part of a teacher's job. Hedge (2000) deemed it 'an expected role for the teacher' in foreign language situations. In general, then, teacher educators recognize the need for written CF and are more concerned with how it should be done. However, all commentators acknowledge that 'corrective feedback' is just one type of 'feedback' on writing. They distinguish feedback aimed at providing formative suggestions to help learners revise the content or organization from corrective feedback intended to address the errors learners have made. An issue of some importance is whether these two types of feedback should be combined or handled separately as proposed by Hall (2011) and advocated in the process writing approach.

When should learner errors be corrected?

We will see later that the timing of CF is an issue that SLA theory has addressed. In the case of oral CF, as we have just seen, teachers have the option of either correcting immediately an error occurs or making a note of the errors and delaying correction until later. Gattegno (1972) came out strongly in favour of not rushing in to correct learner errors even in accuracy-oriented work. He commented:

> Against a common teachers' demand for immediate correctness through so-called imitation, I take upon myself the burden of controlling myself so as not to interfere. By doing so, I give time to a student to make sense of 'mistakes'.
> (p. 31)

Gattegno was reacting to one of the requirements of the Audiolingual Method, namely that errors (if they do occur) should be corrected immediately and students asked to imitate the correct form. However, other methods – especially those associated with humanistic language teaching – view immediate correction in particular as potentially damaging.

Written CF is always delayed as teachers need to collect in written work to correct errors. The issue of timing, however, arises in the process approach to teaching writing. Johns (1990) described this as an approach where 'ESL teachers...encourage several drafts of a paper, require paper revision at the macro levels, generally through group work...and delay the student fixation with and correction of sentence-level errors until the final editing' (p. 26). Correction of linguistic errors (i.e. corrective feedback), therefore, occurs only in the draft prior to submission of a piece of writing. Here teachers can provide more substantive error correction or encourage students to self-edit.

Computer-mediated communication offers somewhat different opportunities for the timing of CF. Both immediate and delayed communication are possible. In synchronous chat, opportunity arises to correct written errors as they occur but corrections can also be provided later, asynchronously (e.g. by email) after the teacher has had a chance to view a transcript of the interaction. Bower and Kawaguchi (2011) argued that delayed, asynchronous correction is preferable because it gives time to identify and explain errors and also because learners have plenty of time to consider the corrections to their output.

Which errors should be corrected?

The teacher guides warn against over-correction and propose that teachers should be selective in the errors they correct. As Ur (1996) noted 'learners can only use just so much feedback information: to give too much may simply distract, discourage and actually detract from the value of learning' (p. 255). It should be noted, however, that learners want to be corrected (Cathcart and Olsen, 1976). However, they do not necessarily want all their errors corrected.

Katayama (2007) surveyed Japanese university students' views about corrective feedback and found that only a minority thought the teacher should correct every error they made. Katayama argued that selective correction was both practical and more supportive of students' feelings.

If teachers are to correct some errors and ignore others, ideally, they need to do so in a principled manner. Various proposals have been advanced regarding which errors to address. Corder (1967) distinguished 'errors' and 'mistakes'. An error takes place as a result of lack of knowledge (i.e. it represents a gap in competence). A mistake is performance phenomenon, reflecting processing failures that arise as a result of competing plans, memory limitations and lack of automaticity. One possibility then is for the teacher to correct 'errors' but leave it to the learner to self-correct 'mistakes'. Burt (1975) suggested that teachers should focus on 'global' rather than 'local errors'. Global errors are errors that affect overall sentence organization. Examples are wrong word order, missing or wrongly placed sentence connectors, and syntactic overgeneralizations. Local errors are errors that affect single elements in a sentence (e.g. errors in morphology or grammatical functors). Krashen (1982) argued that CF should be limited to features that are simple and portable (i.e. 'rules of thumb' such as, in English, plural-*s* or past tense-*ed*). Ferris (1999) similarly suggested that written CF should be directed at 'treatable errors' (i.e. errors relating to features that occur in 'a patterned, rule-governed way' (p. 6)). Others, including myself (Ellis 1993), have suggested that CF be directed at marked grammatical features or features that learners have shown that they have persistent problems with. In fact, none of these proposals are easy to implement in practice. The distinction between an 'error' and a 'mistake' is nothing like as clear-cut as Corder made out, while the gravity of an error is largely a matter of personal opinion. Vann et al. (1984), for example, found that some teachers were inclined to view all errors as equally serious – 'an error is an error'.

How should errors be corrected?

Oral and written CF are treated separately in the teacher guides. Various strategies for correcting oral errors are proposed. Scrivener (2005), for example, lists thirteen strategies. Interestingly, though, there is a high degree of agreement in the guides about what the basic strategies are. They include:

- Questioning the learner – for example, 'the teacher may say "Is that correct?"' (Harmer, 1983: 63).
- Direct indication – for example, 'Tell the students that there is an error' (Scrivener, 2005: 300).
- Requesting clarification – for example, 'the teacher looks puzzled and requests clarification' (Hedge, 2000: 291).
- Requesting repetition – for example, 'the teacher simply asks the student to repeat what he has just said' (Harmer, 1983: 62).
- Echoing – for example, 'the teacher may echo what the student has just said with a questioning intonation' (Harmer, 1983: 62).

- Using gesture – for example, 'the teacher moves his or her hand to indicate an error' (Hedge, 2000: 291).
- Modelling – for example, the teacher 'provides a model of the acceptable version' (Ur, 1996: 249).
- Discuss the error – for example, 'Write the problem sentence on the board for discussion' (Scrivener, 2005: 301).

Hendrickson (1978) identified a similar set of strategies in his seminal article many years ago and these seem to have been handed down over time.

Two points stand out about this treatment of CF strategies. First, all the guides simply provide lists. There is no attempt to classify the strategies into general types (e.g. strategies that provide learners with the correct form vs those that prompt them to produce it themselves). Second, there are no examples of these strategies taken from actual classroom interaction: the guides are content to provide simple descriptions of them (but see Omaggio, 1986 for an exception). Ur, however, proposed that teachers use her list of strategies to carry out an observation of how CF is carried out in an actual lesson.

The guides are wary of recommending the use of any particular strategy. Hedge (2000), for example, simply concluded that teachers need to use a variety of strategies. It is, however, possible to see a general preference for those strategies that require learners to correct their own errors. As Harmer (1983) put it, the 'object of using correction techniques is to give the students(s) a chance to get the new language right' (p. 63). Thus, even when using those strategies that involve providing learners with the correct form, the guides recommend that students should be asked to repeat the sentence correctly. This preference for guiding learners to self-correct reflects a general principle that underlies thinking about CF – as Scrivener (2005) put it, 'people learn more by doing things themselves rather than being told about them' (p. 3). Nevertheless, in his specific comments on error correction, Scrivener (2005) noted that simply giving the correct form 'may be the quickest, most appropriate, most useful way of helping' (p. 301).

Of concern to all the guides is the importance of 'encouraging, tactful correction' (Ur, 1996: 249). Ur emphasized that students vary in how they respond to the different strategies and thus there is a need for sensitivity on the part of the teacher. As a follow-up to observing the strategies employed in a lesson, she suggested that teachers consider trying to describe the manner in which the CF was given using adjectives such as 'gentle', 'hesitant' and 'supportive'. Once again, then, we see the emphasis on the affective aspect of CF rather than the cognitive aspect.

The guides also propose a fairly standard set of written CF strategies. Three basic strategies can be distinguished:

- Direct correction. As Ferris (2006) noted, this can take a number of different forms – crossing out an unnecessary word, phrase or morpheme, inserting a missing word or morpheme, and writing the correct form above or near to the erroneous form.

- Indirect correction where the teacher indicates that the student has made an error without actually correcting it. This can be done by underlining the errors or using cursors to show omissions in the students' text or by placing a cross in the margin next to the line containing the error.
- Using an error coding system consisting of abbreviated labels for different kinds of errors (e.g. VT = verb tense error). This constitutes a form of metalinguistic feedback.

Many of the guides are keen on the use of an error coding system and provide examples. This again reflects the importance attached to students working out the corrections for themselves rather than direct correction. Brumfit (1977), for example, proposed a model for correcting written errors that involved both indirect correction and the use of an error coding system. This model consisted of five main stages, starting from underlining a mistake and diagnosing it in the margin and concluding with putting a cross in each line with a mistake but not show where. The underlying idea was to gradually remove the amount of assistance the teacher provided so as to foster self-dependence on the part of the student. Brumfit's model did not include direct teacher correction. In general, the guides also assume that correction will be unfocused (i.e. all or most of the errors will be corrected). However, Scrivener (2005) recommended that the teacher tell the students what aspect of grammar (e.g. verb tenses) will be focused on and correction limited to that aspect.

The key question, of course, is how effective these strategies are. Ferris (2002) suggested that direct CF may be needed if learners do not know what the correct form is (i.e. are not capable of self-correcting the error themselves). In contrast, indirect feedback caters to 'guided learning and problem solving' (Lalande, 1982) and thus may be more likely to lead to long-term learning. In general, however, the guides avoid evaluating the different strategies, preferring simply to describe them. An exception is Ur, who came out firmly in favour of direct CF. She was dismissive of indirect CF, commenting 'I do not see much value in demanding that students focus again on the wrong form and try to work out what is wrong' (pp. 256–57).

One point the guides emphasize is the importance of asking students to revise their writing following CF. As Hedge (2000) commented, the aim is to encourage students 'to see writing as something that can be improved' (p. 316). The guides also stress the need for teachers to comment on the content and organization of the students' writing and not just focus on the errors.

Who should do the correcting?

There are three possible answers to this question – the teacher, the student who made the error, or another student. Nunan (1988) found that the students he surveyed tended to value correction when it was provided by the teacher and gave self-discovery of errors a low rating. Leki (1991) also reported that students wanted and expected the teacher to correct all the errors in their writing. However, students differ in their stated preference. Katayama (2007),

for example, reported that the Japanese university students he investigated preferred to have the opportunity to self-correct with the help of a hint from the teacher. Such a view accords more closely with the view expressed by teachers who generally favour making the student responsible for the correction.

This is clearly reflected in the advice given to teachers. Hedge (2000) and Scrivener (2005), for example, advised giving students the opportunity to self-correct and, if that fails, inviting another student to perform the correction. Chaudron (1977) also recommended eliciting the correction from either the student who committed it or another student. He viewed this approach as a viable form of 'successful correction'. However, there is also recognition of the potential dangers of students correcting each other. Ur noted that it can be very time-consuming and also that it can have a negative impact on the student being corrected. The least favoured option in the guides is teacher correction – a reflection of the same general educational principle referred to above. Omaggio (1986), however, approved of teacher correction: (1) if there is no time for other methods, (2) when the frequency of errors within a particular utterance impedes communication and (3) in drills. Irrespective of who does the correction, there is wide agreement that the teacher needs to ensure that the student who initially made the error produces the correct form.

In the case of writing, student correction can again be conducted by the teacher, by the individual student (i.e. each student is asked to edit his own work) or by another student (i.e. in peer correction). The guides all acknowledge that the teacher should take responsibility for correcting learners' written errors. However, they also clearly favour other alternatives. Ferris (2002) emphasized the importance of training learners to self-edit their own work. She commented 'our goal should be to have our students become skilful independent editors who can function beyond the ESL writing class' (p. 334) and proposed a procedure for helping writers to achieve this. This consisted of three basic stages: (1) teaching students to pay attention to errors, (2) training them to recognize different types of errors and (3) providing self-editing practice. Peer correction is also frequently mentioned in the guides. Edge (1989) recommended it on four grounds: (1) it encourages learners to think about what is correct, (2) the teacher can observe the students and thus form an idea of the extent to which students have a clear understanding of specific features, (3) it encourages students to be less dependent on teachers and (4) it helps learners to recognize that they can learn from each other. Brumfit (1977) suggested another reason – detecting errors in another student's work can help a learner to spot errors in his/her own work. Ur noted that peer correction is time-saving as it removes the need for the teacher to correct individual students' writing. She recognized, however, that peer correction has its problems. Students may feel that corrections proposed by another student are not trustworthy and may resist what they see as criticism when correction comes from another student rather than the teacher.

Some concluding comments

There is a large pedagogical literature dealing with corrective feedback and this section has only touched on a small section of it, focusing mainly on the advice

provided in some of the major teacher guides. In addition, there are complete books devoted to it – such as Edge's (1989) *Mistakes and Correction* and Mishra's (2005) *Error Correction in English*. A wide range of pedagogical practice is reflected in this literature but it is also clear that there is a broad consensus about what constitutes effective practice. From the preceding review, the following emerge as the main conclusions:

1 Learners' oral errors should be corrected but care needs to be taken to ensure that correction does not arouse a negative emotional response in learners. Thus it needs to be accomplished sensitively.
2 However, in oral fluency work, where the focus is on communicating, correction should be postponed until the activity is completed.
3 The effectiveness of written CF is the subject of debate but, in general, it is seen as desirable especially in the final draft of a composition. Learners should always be asked to revise their written work following correction.
4 There is a danger of over-correcting so teachers need to be selective in the errors they correct. Various proposals for deciding which errors to correct have been put forward but none are easy to implement in practice.
5 A wide variety of strategies for correcting both oral and written errors have been proposed. While teacher educators have shown reluctance in recommending which strategies teachers should use, there is an overall preference for fostering learners' ability to correct their own errors.
6 As far as possible, it is the students who should do the correction not the teacher, although the teacher can provide clues to help students locate their errors.

We have noted that there is a general underlying principle that informs the advice given to teachers, namely that students will benefit most if they assume the role of corrector rather than depend on the teacher to correct them. We also noted, however, that learners themselves often prefer to be corrected. Missing from all the literature we have considered is any consideration of the research that has investigated whether corrective feedback assists learning.

Corrective feedback in SLA

Theories of L2 acquisition differ in the importance they attach to corrective feedback, so we will begin by considering these. We will then move on to look at some studies that have shown both oral and written CF to be effective in promoting acquisition.

Theoretical positions

Universal Grammar-based accounts of corrective feedback

Universal Grammar (UG) consists of a highly abstract set of linguistic principles that do not constitute the actual rules found in any single language but rather

act as constraints on the form that these rules can take. UG-based theories of L2 acquisition assume that: (1) human beings possess a highly specific capacity for language learning (as opposed to a more general cognitive apparatus responsible for all types of learning) and (2) this capacity is innate and biologically determined. UG-oriented SLA researchers seek to show how these principles enable learners to acquire grammatical competence (i.e. implicit knowledge of a language). The claim that learners must draw on UG is based on the poverty of stimulus argument. This states that the input that learners are exposed to is insufficient to ensure full acquisition of a target language grammar and thus UG is required to provide an 'explanation of how it is that learners come to know properties of grammar that go far beyond the input' (White, 2003: 20).

Input provides learners with positive evidence (i.e. it demonstrates what is grammatically possible). It is this sense of input that UG-based theories draw on when arguing input is insufficient for acquisition. However, input can also provide negative evidence through corrective feedback. Can this enable learners to overcome the limitations of positive evidence? Here we find a number of different positions in the literature. One position is that negative evidence can play a role in triggering UG principles and, indeed, may be necessary to enable L2 learners to eliminate incorrect grammatical rules from their interlanguage (White, 1991). In contrast, Schwartz (1986) has argued that negative evidence only results in explicit knowledge and thus plays no role in UG-based acquisition which is a theory of how learners acquire implicit knowledge. She claimed that there is no mechanism that can 'translate' this explicit knowledge into input of the type required by UG. A third position is that negative evidence can play a role in certain stages of L2 development but not others. Carroll (2001) proposed that negative evidence is not interpretable at the beginning stages of L2 learning because learners lack the metalinguistic awareness needed to process corrective feedback and that it also plays no role at an advanced stage because learners are not typically corrected then. However, it might be usable by learners in the intermediate stages of development. Overall, however, Carroll concluded that corrective feedback is unlikely to play a central role in a general theory of L2 acquisition.

The view that corrective feedback has no or only a minor role to play in L2 acquisition has been most fully argued by Krashen and Truscott. Krashen (1982) called error correction 'a serious mistake' (p. 74). He argued that error correction only assists the development of 'learned knowledge' (i.e. explicit knowledge) and plays no role in 'acquired knowledge' (i.e. implicit knowledge), although he did accept that correction directed at simple and portable rules (e.g. third person-s) was of some value, because it enabled learners to monitor their production when they were focused on form and had sufficient time to access their 'learned' knowledge.

Where Krashen considered the role of oral CF, Truscott critiqued written CF. In an initial article (Truscott, 1996), he claimed that there was neither any empirical or theoretical justification for correcting students' written errors. In a series of further articles (Truscott 1999, 2004, 2007, 2010), he continued to

reject any role for CF where grammar is concerned, although he acknowledged that it might be helpful for vocabulary or the mechanics of writing. His main arguments against written CF are as follows:

1 Those CF studies that have been well designed (i.e. included a control group) have failed to show that CF is effective and, in some cases, have even shown that it is damaging.
2 Even studies that have investigated absolute gains (i.e. gains over time) as a result of CF have in general failed to demonstrate that it is effective.
3 Learners' affective response to CF together with the fact that they are often confused by the corrections they receive is likely to result in avoidance (i.e. students will try to avoid using those grammatical features that have been corrected).
4 CF will not have any effect on the development of the type of knowledge (implicit knowledge) needed to engage in writing or speaking for communicative purposes. One reason for this is the impossibility of knowing which grammatical features learners are developmentally ready to acquire. Writing practice without any correction has a better chance of assisting the natural processes of L2 acquisition.
5 However, CF may have an impact on the kind of knowledge (explicit knowledge) needed for monitoring when completing grammar tests or revising a written text that has been corrected.

Truscott's position is clearly based on the view that written CF (and also explicit instruction) only benefits metalinguistic knowledge but does not contribute to what he called 'genuine knowledge of a language' (1998: 120). Like Schwartz and Krashen, he saw 'true' acquisition as dependent on positive evidence only. As we will shortly see, his position has been challenged both theoretically and on the grounds that the empirical evidence does not support it.

To sum up, in general UG-based accounts either dismiss CF on the grounds that there is no role for negative evidence or view it as of minor importance in fostering acquisition. Both oral and written CF are seen as contributing only to learners' explicit L2 knowledge.

Cognitive–interactionist accounts of CF

Cognitive–interactionist theories emphasize that CF is most likely to assist acquisition when the participants are focused primarily on meaning in the context of producing and understanding messages in communication, commit errors and then receive feedback that they recognize as corrective. That is, CF contributes to 'acquisition', not just to 'learning'. Correcting learners while they are trying to communicate activates the cognitive mechanisms involved in intake, rehearsal and restructuring and thereby fosters interlanguage development. Such feedback helps learners to see how a particular linguistic form realizes a particular meaning in context. It is for this reason that the

majority of the studies that have investigated CF, which we consider in a later section, have involved task-based language instruction.

CF can facilitate the processes responsible for acquisition in two ways – by providing learners with positive evidence of target language forms or by pushing learners to self-correct their errors (i.e. through output). In Extract 1 below, the learner fails to use the past tense to refer to a completed action in the past and the teacher responds with a recast (i.e. she reformulates the learner's utterance correcting the error). Recasts such as this provide learners with input. Learning occurs when the learner notices the correction and carries out a cognitive comparison (i.e. attends to the difference between his/her own erroneous production and the target-like input provided by the feedback). This view of the role played by CF emphasizes the importance of noticing and noticing-the-gap in L2 acquisition (Schmidt 1994, 2001; see Chapter 8).

Extract 1

T: When were you in school?

L: Yes. I *stand* in the first row? (trigger)

T: Oh, you *stood* in the first row. (corrective move)

L: Yes, in the first row.

In Extract 2, however, the teacher's response to the error does not provide the learner with positive evidence concerning the target form. Instead, it prompts the learner to self-correct. This learner also makes an error in the use of the past tense. The teacher corrects by requesting clarification ('Pardon?') and this causes the learner to repair his error in the uptake move that concludes the sequence.

Extract 2

S: Why does he fly to Korea last year? (trigger)

T: Pardon? (corrective move)

S: Why did he fly to Korea last year? (uptake)

(Yang and Lyster, 2010: 235)

The relative effectiveness of these two types of feedback has become an issue of controversy. Long (2006) and Goo and Mackey (2013) have argued that recasts are more effective because they provide learners with both negative and positive evidence. They point out that unless learners receive positive evidence it will be impossible for them to acquire 'new' linguistic forms. However, Lyster (2004) evoked skill-learning theory (see Chapter 5) to argue that prompting learners to self-correct is more effective because it helps learners to gain greater control over those linguistic features that they have partially acquired. Lyster drew on earlier research (Lyster and Ranta, 1997), which showed that immersion learners often fail to repair their errors following teacher recasts but were much more likely to do so following prompts such as

clarification requests. Lyster suggested that recasts may be ineffective because learners often fail to recognize that they are corrective and thus do not notice the target form.

In some respects, however, the argument over whether recasts or prompts are more effective is pointless. For one thing, as we pointed out in Chapter 4 when we discussed explicit language instruction, 'acquisition' involves both internalizing new forms and gaining control over existing forms, so the two types of CF can both be seen as facilitative but in different ways. Also, it is possible to combine prompts and recasts as in the 'corrective recasts' proposed by Doughty and Varela (1998). These are illustrated in Extract 3. They consist of an initial prompt (in this case a repetition of the learner's erroneous utterance), which is then followed by a recast if the learner fails to self-correct.

Extract 3

L: I think that the worm will go under the soil.

T: I *think* that the worm *will* go under the soil?

L: (no response)

T: I *thought* that the worm *would* go under the soil.

L: I *thought* that the worm *would* go under the soil.

Another controversial issue concerns the relative effectiveness of implicit as opposed to explicit corrective feedback. Extracts 1 and 2 illustrate implicit types of feedback. However, for feedback to have any effect, it must be perceived as corrective (i.e. seen as constituting negative evidence). Learners may interpret implicit feedback as simply indicating that there is some kind of communication problem that needs solving rather than showing them they have made a linguistic error. In other words, they may see it as signalling the need for the negotiation of meaning (see Chapter 8), which may lead to noticing the linguistic error but does not always do so (Hawkins, 1985). Extract 4 illustrates explicit feedback. The teacher responds to the past tense error by directly signalling an error has been committed and by also supplying a metalinguistic clue ('past tense'). This makes the corrective force of the feedback very clear to the learner, who responds by repairing the error.

Extract 4

L: He kiss her

T: No, kissed past tense.

L: He kissed her.

The case for implicit types of CF is based on the claim that they do not interrupt the communicative flow of an interaction to the same degree as explicit types. Explicit CF, however, has the advantage of being more likely to be attended to by the learner.

In the main, cognitive–interactionist theories have addressed the role of oral CF. However, they are also relevant to written CF. As we have already seen, written CF can be direct (i.e. provide the learner with positive evidence) or indirect (i.e. only provide negative evidence). Also written CF may or may not lead to 'repair' of the errors, depending on whether the learners are required to revise their original piece of writing. Written CF differs from oral CF in two important ways. First, it is typically delayed (i.e. learners' errors are not corrected immediately after they have made them). This is of potential significance as some researchers (e.g. Doughty, 2001) have argued that for feedback to be effective it needs to occur in a 'window of opportunity' (i.e. at that moment when the learner is struggling to express him/herself). Second, written CF is necessarily explicit in nature as irrespective of whether the feedback is direct or indirect it will be clear to learners that they are being corrected.

Sociocultural Theory and corrective feedback

Like interactionist–cognitive theories, Sociocultural Theory (SCT) views language learning as interactionally driven. However, whereas cognitive–interactionist theories see CF as triggering the mental processes responsible for acquisition, Sociocultural Theory claims that CF mediates learning not by providing learners with 'data' which they then process internally, but by affording them opportunities to collaboratively produce new linguistic forms. In other words, learning occurs *in* rather than *as a result of* interaction (Lantolf, 2000b). Thus, correction is not something done to learners but rather something carried out with learners. It enables the joint construction of a zone of proximal development – a sociocognitive state manifest in interaction, where learners are helped to use linguistic features that they are not yet able to employ independently. It constitutes a form of other-regulation directed at helping learners to self-regulate (i.e. access and use the L2 independently). See Chapter 8 for a fuller account of Sociocultural Theory.

The key claim of SCT is that corrective feedback needs to be 'graduated' – that is, it must provide the learner with the minimal level of assistance needed to achieve self-correction. In a key article, Aljaafreh and Lantolf (1994) developed a 'regulatory scale' to reflect the nature of the graduated assistance when a tutor helped learners to identify and self-correct their written errors in an oral conference. This scale was based on a continuum of corrective strategies employed by a tutor, reflecting how explicit or implicit the strategies were. Extract 5 provides an example of how a teacher tailored his feedback by systematically employing more explicit corrective strategies. He began by drawing attention to a sentence containing an error. When the learner initially failed to identify the error, the teacher again prompted him. The learner was now able to identify the error but when he still failed to self-correct, the teacher finally provided the correction, which the learner then successfully uptakes.

Extract 5

T: um 'the man wish to change the boy opinion'...do you see anything wrong with that sentence?

S: 'the man wish to change the boy...er is it maybe the boy to changed changed?

T: nnno

S: the boy is opinion

T: yy say again?

S: the boy apostrophe s opinion

T: so how do you say that wi when it's apostrophe s

S: er the boy was

T: no you say the *boy's* opinion

S: boy's opinion

T: hmm

S: yes

From the perspective of Sociocultural Theory, development is evidenced if the learner is successful in self-correcting, as occurred in Extract 5. Further evidence of learning can be obtained by showing that the assistance needed for self-correction to take place diminishes over time. In other words, development is evident when a learner can be shown to self-correct in response to implicit CF where previously more explicit CF was needed, even though this learner may still not be able to demonstrate independent use of the target feature.

These different theoretical perspectives are summarized in Table 10.1. In the next section we will examine some of the research that has investigated these different claims. First though we will take a closer look at the different types of oral and written corrective feedback.

Types of corrective feedback

In this section we will examine the different types of oral and written CF. Common to both, the strategies can be applied in either an unfocused or a focused way. In the case of the former, the teacher corrects all (or most) of the errors the learner makes. In the case of the latter, the teacher elects to correct just one (or perhaps a few) of the errors, focusing on errors that relate to a specific linguistic feature.

Oral CF

Much of the early work on corrective feedback (Allwright, 1975; Chaudron, 1977) was descriptive in nature, directed at identifying the various strategies that teachers use when correcting learners' errors in classroom interaction. The typologies of feedback strategies that resulted from these studies were very

Table 10.1 Corrective feedback in UG-based theories, cognitive–interactionist theories and Sociocultural Theory

	UG-based theories	*Cognitive–interactionist theories*	*Sociocultural Theory*
Conceptualization	Corrective feedback is viewed as providing learners with negative evidence. In this respect it contrasts with other forms of input that provide only positive evidence.	Corrective feedback is viewed as an activity that arises when a learner makes an error and another person (usually the teacher) performs a corrective act, which may or may not lead to self-correction by the learner.	Repair is viewed as a joint activity that is negotiated by the participants with a view to helping a learner to identify a linguistic error and to remedy it him/herself.
Theoretical stance	Acquisition depends on innate principles that govern the acquisition of specific grammatical rules. The role of input is to provide learners with data that activates these principles.	CF prompts internal linguistic processing by drawing learners' attention to form-meaning mappings in the context of interaction and enabling them to 'practise' them through uptake.	CF enables the construction of a Zone of Proximal Development through assisting learners to produce a linguistic form that they do not yet have independent control over.
Acquisition	CF may result in explicit knowledge but does not contribute to 'acquisition' (i.e. implicit knowledge.	Acquisition is evident if it can be shown that learners are subsequently able to demonstrate greater accuracy in the use of linguistic features following CF.	Acquisition is demonstrated if learners succeed in self-correcting as a result of CF and if they need less assistance to self-correct over time.

complex. However, later research distinguished a smaller set of more general strategies which served as the basis for experimental studies designed to investigate the relative effectiveness of the different strategies (see next section). Lyster and Ranta (1997) identified six basic strategies based on their analysis of the different ways teachers corrected students in an immersion classroom:

1 Explicit correction (i.e. the teacher clearly indicates that what the student said was incorrect and also provides the correct form).
2 Recasts (i.e. the teacher reformulates all or part of the student's utterance replacing the erroneous part with the correct target language form).
3 Clarification requests (i.e. the teacher indicates that a learner utterance has been misunderstood or is ill-formed in some way).
4 Metalinguistic comments (i.e. the teacher comments on or questions the well formedness of the learner's utterance without explicitly providing the correct form).

5 Elicitation (i.e. the teacher (1) elicits completion of his/her own utterance, (2) uses a question to elicit the correct form, (3) asks a student to reformulate his/her utterance).
6 Repetition (i.e. the teacher repeats the student's erroneous utterance with or without emphasis on the erroneous part).

These six strategies differ in the two key ways we discussed above: (1) they can be input-providing (i.e. they provide the learners with the correct target form) or output-prompting (i.e. they 'push' learners to self-correct their own errors) and (2) they can be implicit (i.e. the corrective force remains covert) or explicit (i.e. the corrective force is made clear to the learners). Based on these two dimensions, Ellis (2012) proposed the classification of CF strategies shown in Table 10.2. These strategies are not always used in isolation. Teachers often employ multiple strategies to correct an error.

As we have seen, the distinction between implicit and explicit strategies is important in sociocultural accounts of CF. Aljaafreh and Lantolf (1994) developed a 'regulatory scale' to reflect the extent to which the oral feedback provided by a writing tutor was implicit or explicit. This contained a number of fine gradations of implicitness/explicitness. For example, 'prompted or focused reading of the sentence that contains the error by the learner or the tutor' constitutes a high level of implicitness, whereas 'tutor provides examples of the correct pattern when other forms of help fail to produce an appropriate responsive action' (p. 471) is very explicit . An example of an intermediate strategy in the scale is 'tutor indicates the nature of the error, but does not identify the error'.

Table 10.2 A classification of CF strategies

	Implicit	Explicit
Input-providing	Recasts	Explicit correction
Output-prompting	Repetitions	Metalinguistic comments
	Clarification requests	Elicitation

Written CF

Three basic strategies for providing written corrective feedback have been distinguished by researchers, corresponding quite closely to those discussed in the teacher guides – direct CF, indirect CF and metalinguistic CF. There are also other possibilities for correcting written errors. Reformulation involves a native-speaker rewriting the student's text in such a way as 'to preserve as many of the writer's ideas as possible, while expressing them in his/her own words so as to make the piece sound native-like' (Cohen, 1989: 4). This differs from the three main strategies as it involves reconstructing the *whole* of the student's text rather than focusing only on the erroneous parts. It lays the burden on the learner to identify and accept or reject the *specific* changes that

have been made. Another possibility (see Shintani and Ellis, 2014) involves providing learners with a detailed metalinguistic explanation of a specific type of error (e.g. errors in the use of articles) without correcting the actual errors that occur in the learners' text. This differs from other forms of CF because the feedback is not individualized (i.e. all the students can receive the same metalinguistic explanation) and thus is less time-consuming and also because it requires the learners to locate the actual errors in their text.

As we have seen, these different types of oral and written corrective feedback are potentially effective in different ways depending on the theoretical perspective adopted. In the case of both oral and written CF, a key distinction is whether learners are given the correction or whether they are prompted to correct their own errors. Written CF is invariably explicit but oral CF can be implicit or explicit. Oral CF can occur online (immediate correction) or offline (delayed correction, as when a teacher postpones correction until the learners have completed a task); in contrast, written CF typically occurs only offline. We will now examine what the research has shown about the efficacy of CF and the relative effectiveness of the different strategies.

Corrective feedback research

Research on corrective feedback has proliferated in recent years. It has investigated a number of different issues. The key ones are as follows:

1 Does CF assist L2 acquisition?
2 Which type of CF is most effective in assisting L2 acquisition?
3 Does learner self-correction following CF (i.e. uptake or, in the case of written CF, text-revision) contribute to L2 acquisition?

These questions have been addressed in research conducted within both a cognitive–interactionist and a sociocultural framework. We will consider research based on both theoretical frameworks pointing out where the conclusions reached differ. We will also draw on research that has investigated both oral and written CF.

Does CF assist L2 acquisition?

Meta-analyses of studies that have investigated the effect of CF on acquisition (e.g. Russell and Spada, 2006; Mackey and Goo, 2007; Li, 2010; Lyster and Saito, 2010) show that CF is indeed effective in assisting acquisition. Li (2010), for example, meta-analysed a total of thirty-three oral CF studies involving 1,773 learners. He reported that 'corrective feedback had a medium effect on acquisition' (p. 335). This effect was evident in tests that immediately followed the treatment involving CF and over time. However, he also reported that the effect was much stronger in studies carried out in a laboratory than in a classroom. An obvious explanation for this is that learners are more likely to

pay attention to the feedback they receive in the one-on-one interactions in a laboratory context than in the teacher–class interactions typical of the classroom studies. Li also found that the effect of CF was greater in foreign language than in second language settings and suggested that this might be because learners in the former are more predisposed to pay attention to the corrections they receive. Further evidence of the importance of the salience of the feedback as a factor influencing its effectiveness can be found in another variable Li investigated: CF proved more effective in treatments that involved discrete-item practice of grammatical structures (e.g. in drills), where the feedback is intensive and more likely to be noticed, than in communicative activities. A key issue in determining whether CF has any effect is the nature of the tests used to measure learning. Li also investigated this, reporting that the effects of CF were evident in both tests that measured controlled language use and free production. Two general conclusions can be drawn from Li's meta-analysis: (1) oral CF does assist L2 acquisition and (2) it is more likely to be effective in macro- and micro-contexts where it is salient to learners.

The studies that Li investigated were all experimental and conducted within a cognitive–interactionist framework. However, studies that draw on Sociocultural Theory also provide support for CF. Aljaafreh and Lantolf (1994), in the study referred to above, showed how the degree of scaffolding provided by the tutor for a particular learner diminished over time (i.e. whereas at one time the instructor needed to correct quite explicitly to enable a learner to self-correct, at a later time more implicit correction sufficed). In accordance with how learning is conceptualized in Sociocultural Theory, they argued that this demonstrated that learning was taking place. A later study (Erlam et al., 2013), however, failed to find evidence of any systematic reduction in the graduated assistance provided by a writing tutor over time, although it did result in gains in accuracy for articles and past tense in new pieces of writing, indicating that the CF had had an effect.

To date there has been no well-designed meta-analysis of written corrective feedback studies. However, a number of individual studies suggest that it too is effective in eliminating errors from learners' written work. Many of the early studies of written CF (e.g. Fathman and Whalley, 1990; Ferris and Roberts, 2001) showed that it was effective in helping learners correct their errors in a revised version of their initial text. However, as Truscott pointed out, this does not provide evidence that written CF assists acquisition. To show this it is necessary to demonstrate that the feedback leads to improved accuracy in new pieces of writing. Truscott and Hsu (2008) reported a study that suggested that written CF did not have such an effect. A limitation of this study, however, was that there was little room for improvement in accuracy as the learners were already using the target structure with a high level of accuracy at the beginning of the study. Also, this did not investigate whether corrections directed at specific grammatical features led to gains in accuracy in those features (i.e. it only investigated the effect on overall accuracy). Bitchener and Ferris (2011) undertook a narrative review of a range of studies. This provided clear evidence

of the effectiveness of written CF when this is examined in terms of accuracy in new pieces of writing. They noted that the evidence is much stronger when the feedback is directed at a single feature that is rule-based than when it is directed at correcting multiple features. However, in one of the best studies carried out to date, Van Beuningen et al. (2012), reported that unfocused written CF had an effect on the general accuracy of a range of grammatical structures.

The answer to the question that informed this section is now quite clear. Both oral and written CF can assist L2 acquisition whether this is measured in terms of a reduction in graduated assistance or in tests that measure gains in accuracy. In other words, the results of the research do not support the claims of UG-based theorists but do lend support to those of cognitive–interactionist and sociocultural theories.

Which type of CF is most effective in assisting L2 acquisition?

The two theoretical frameworks that support a role for CF have taken very different positions regarding this issue. Research conducted within a cognitive–interactionist framework has investigated the two dimensions of CF shown in Table 10.2 (i.e. input-providing vs output-prompting and implicit vs explicit CF). The underlying assumption is that not all types of CF are equally effective and, therefore, the primary goal of CF research should be to establish which type works best. In contrast, research conducted within a sociocultural framework is based on the assumption that for CF to be effective it needs to be systematically tailored to the individual learner's developmental level, in order to jointly construct a zone of proximal development. From this perspective there is no one type of CF that will work best. We will consider a number of key studies conducted in both frameworks.

Lyster (2004) investigated 148 (grade 5) 10–11 year olds in a French immersion programme focusing on grammatical gender (i.e. choice of article with nouns). One experimental group received recasts and another prompts. There was also a control group that received no CF. All three groups also received explicit instruction in the target feature. A battery of oral and written tests was used to measure the effect of CF on acquisition, which was operationalized as gains in accuracy. The results favoured the group receiving prompts. Only this group outperformed the control in all the post-tests. However, the recasts group outperformed the control group in most of the tests. Also, there were no statistical differences between the recast and the prompt groups. One reason for this might be because both the experimental groups had received explicit instruction prior to CF. Lyster's study led to a number of other studies (e.g. Ammar and Spada, 2006; Yang and Lyster, 2010), comparing recasts and prompts which produced similar results. That is, both types of feedback benefited acquisition with prompts generally proving more effective than recasts (see also Lyster and Saito's (2010) meta-analysis of the classroom-based studies).

However, a number of caveats are in order. First, recasts constitute a single corrective strategy whereas prompts include four different strategies (i.e.

clarification requests, repetition of error, elicitation and metalinguistic clues). It is possible that the greater effect found for prompts is simply because many strategies are more effective than one strategy – a view compatible with Sociocultural Theory. Also, prompts include a mixture of implicit and explicit strategies, so it is possible that they are more effective not because they elicit self-correction but because they are more salient. Third, the effects of the two types of CF are likely to be mediated by a number of factors such as the instructional tenor of the classroom (i.e. whether it is primarily meaning or form-focused), the proficiency level of the learners, and the nature of the target feature (i.e. whether it is rule-based or item-based). For example, Lyster and Mori (2006) reported that recasts were more effective in an instructional context, where the learners were more inclined to pay attention to form and prompts more effective in a meaning-focused immersion context. Also, Yang and Lyster (2010) found that while prompts were more beneficial for regular past tense, both types of CF were equally effective for irregular past tense.

To investigate whether the advantage reported for prompts was because they included explicit types of CF, Mifka-Profozic (2012) carried out a study that compared the effects of recasts and just one implicit prompt (requests for clarification) on the acquisition of two French verb forms (*passé composé* and *imparfait*) by fifty high school students in New Zealand. She found that the learners who received recasts demonstrated significantly greater levels of post-treatment accuracy than the learners in a control group. Also, in some of the comparisons, the recasts group demonstrated significantly higher levels of acquisition than the prompts group. This study suggests that the reason for the apparent superiority of prompts in previous studies may lie in their explicitness rather than because they push learners to self-correct. Implicit prompts may be less effective than implicit recasts.

Studies that have investigated the relative effects of implicit and explicit CF have typically compared recasts (as an implicit strategy) with one or more types of explicit feedback (e.g. metalinguistic comments). A good example of such a study is Ellis et al. (2006). This investigated these two types of CF with thirty-four low-intermediate adult ESL students. The CF groups performed two 30-minute communicative tasks and received feedback on the errors they made in the use of regular past tense-*ed*. A feature of this study is that it attempted to measure acquisition in terms of both implicit knowledge (measured by means of an oral imitation test) and explicit knowledge (measured by means of an untimed grammaticality judgement test and a metalinguistic knowledge test). Ellis et al. first established that the frequency of the feedback provided to the learners in the two experimental groups was roughly equivalent. The results showed that the group receiving a repetition of an incorrect verb form followed by a metalinguistic comment outperformed both the control group and the recasts group in both the oral imitation test and the untimed grammaticality judgement test, although the differences only reached statistical significance in the delayed post-tests. Li's (2010) meta-analysis also found that explicit CF worked better than implicit CF. However, he also reported that implicit CF

proved to be more effective in post-tests completed a long time after the instruction. This was because its effects increased over time whereas those of explicit CF did not change. Ellis et al.'s study did not investigate this possibility as their post-test was administered only two weeks after the treatment.

It should be noted, however, that recasts (the implicit CF strategy most commonly investigated) do not really constitute a single type of CF but vary considerably in how implicit or explicit they are and that the more explicit types of recasts have been shown more likely to promote learning (Loewen and Philp, 2006). Arguably, the recasts investigated by Mifka-Profozic (2012) were of the more explicit kind.

The debate about the relative efficacy of different types of CF is ongoing. Goo and Mackey (2013) critiqued the design of studies such as those by Lyster (2004) and Ellis et al. (2006) that have compared recasts and prompts and concluded that 'the case against recasts' is based on 'a shaky foundation'. They argued that recasts and prompts are 'apples' and 'oranges' and thus should not be compared. Lyster and Ranta (2013) responded to Goo and Mackey's article by pointing out that from a pedagogic perspective teachers do need to know 'when apples are a better choice than oranges'. They argued that CF research needs to be conducted with the needs of teachers (not just researchers) in mind and concluded that teachers' practice needs to be informed by empirical evidence from CF comparison studies. They also noted that in their own work with teachers they emphasize the need for the use of a variety of CF strategies rather than relying on recasts, which constitute the dominant type of CF strategy in most instructional contexts (Lyster and Ranta, 1997).

The case for applying multiple strategies to address errors has been made by sociocultural theorists, as in the study by Aljaafreh and Lantolf (1994) referred to above. From this perspective there is no one 'best' way of correcting errors. Aljaafreh and Lantolf proposed a number of general principles governing the effectiveness of feedback: (1) it must be graduated (i.e. no more help than is necessary is provided at any single time), (2) it must be contingent (i.e. it must reflect actual need and be removed when the learner demonstrates an ability to function independently) and (3) it is dialogic (i.e. it involves dynamic assessment of a learner's zone of proximal development). Clearly, conducting feedback in accordance with such principles requires considerable skill on the part of the teacher and, as Lantolf and Aljaafreh (1995) noted, the tutor they investigated was not always successful in fine-tuning his assistance to the learners' level of development.

A limitation of Aljaafreh and Lantolf's study is that it did not provide any evidence that the graduated assistance finally enabled learners to use those forms independently (i.e. that 'development' had taken place). However, Nassaji and Swain (2000) did attempt this. They investigated two Korean learners of English. One learner was provided with graduated assistance within her ZPD (i.e. the tutor systematically worked through Aljaafreh and Lantolf's scale to negotiate the feedback supplied) while the other learner was given only random help (i.e. the tutor was supplied with a random list of correcting

strategies drawn from Aljaafreh and Lantolf's regulatory scale). Nassaji and Swain reported that providing feedback within the learner's ZPD was more effective in: (1) helping the learner to arrive at the correct form during the feedback session, (2) enabling the learner to arrive at the correct form with much less explicit assistance in subsequent sessions, and (3) enabling the learner to use the correct form unassisted in a post-test. This study provides some support for graduated CF although it should be noted that providing 'random feedback' is highly unnatural (as the tutor involved in this study observed) and thus is very unlikely to occur in actual teaching.

A comparison study that teachers might view as more pedagogically relevant is one that examines the relative effects of graduated assistance (which is quite time-consuming) and direct explicit feedback (which can be provided quickly and simply). Erlam et al. (2013) reported such a study. The results showed that the graduated feedback was much more successful in eliciting self-correction from the learners than the explicit correction. However, this study found no evidence of any systematic reduction in the explicitness of the teacher's strategies over time in the graduated feedback and in this respect differed from Aljaafreh and Lantolf's findings. Erlam et al. also investigated whether there was any difference in the effect of the two CF approaches on the learners' use of two target features (past tense and articles) in a new piece of writing. They reported no difference for past tense but found that graduated feedback was more effective than explicit feedback for learning articles. This study, then, suggests that the relative effectiveness of the two types of instruction might depend on the nature of structure being corrected (i.e. whether there is a clear rule of thumb or not).

We will turn now to consider briefly the research on written CF. Many of the early studies suffered from a variety of methodological flaws (e.g. they did not include control groups or pre-treatment measures of learners' ability to use the features targeted by the CF). Truscott (1996) reviewed these studies and concluded, with justification, that they failed to demonstrate that any type of written CF had any effect on learning. Later studies, however, remedied these defects by using the same kinds of design used in oral CF research. The studies examined two issues – the relative effect of direct as opposed to indirect CF and of unfocused as opposed to focused CF. Bitchener and Ferris (2011) concluded from their review of written CF studies that direct CF is more effective than indirect CF. For example, Van Beuningen et al. (2012) reported that whereas direct and indirect CF in conjunction with the opportunity to revise were equally effective for non-grammatical errors, only the direct CF resulted in significant gains in grammatical accuracy in new pieces of writing. This study investigated unfocused CF. Other studies (e.g. Bitchener and Knoch, 2009) have shown that focused CF is effective even if it involves only a single treatment, especially if it is directed at 'treatable' grammatical features (i.e. those that involve a clear rule of thumb). Few studies have compared unfocused and focused CF to date. However, Farrokhi and Sattarpour (2012) reported that focused CF was more effective than unfocused CF for both high- and

low-proficiency adult Iranian EFL learners in improving accuracy in articles in narratives. As with oral CF, a variety of factors are likely to mediate the effects of these different types of written CF. One obvious variable is the extent to which learners attend to the feedback they have been given. As Guénette (2007) argued, students 'have to notice the feedback and be given ample opportunities to apply the corrections' (p. 52).

Does learner self-correction following CF (i.e. uptake) contribute to L2 acquisition?

Guénette's observation for written CF is equally applicable to oral CF. For either oral or written CF to be effective, learners need to pay attention to the corrections they have received. A number of studies have explored to what extent learners do notice oral corrections. Mackey (2006), for example, investigated the relationships between implicit corrective feedback (i.e. recasts and clarification requests), noticing and acquisition resulting from a task-based lesson. The target structures were questions, plurals and past-tense. Data on noticing were collected by means of learning journals filled out during class time, oral stimulated recall protocols, written responses in the learners' L1 to a focused question about the nature of the classroom activities, and written responses in English to a questionnaire. Measures of learners' use of the target structures were obtained from oral tasks administered as a pre-test and a post-test. The results indicated a higher level of noticing in a group that received CF than in a group that performed the task without CF. However, the level of noticing varied according to target structure, with higher levels evident for questions forms, much lower levels for past tense, and intermediate levels for plurals. Eighty-three per cent of the learners who reported noticing question forms also developed in their ability to form questions. However, the relationship between noticing and the other two target features was not established. This study showed that implicit corrective feedback is noticed by learners working on a task in a classroom context and that for some structures at least there is a relationship between noticing and acquisition. Arguably, however, learners are more likely to notice corrections when these are more explicit. This might be one reason why explicit CF has been found more effective than implicit CF for morphological features such as regular past tense, as in Ellis et al.'s study.

Mackey's study obtained evidence about noticing by eliciting self-reports from learners. Alternative evidence of noticing can be obtained by examining whether learners successfully self-correct an error following CF (i.e. whether 'uptake with repair' occurs). In Extract 1 on p. 260, the student does not respond to the recast by self-correcting, so it is impossible to tell whether noticing did or did not occur. In Extract 2, however, repair does occur in response to the clarification request, indicating that this learner did attend to the error. Some researchers have argued that successful uptake is important for acquisition. That is, they have suggested that when learners self-correct their errors, they are more likely to benefit from CF.

This is the position taken by Lyster. His research (e.g. Lyster and Ranta, 1997) showed that learner repair of lexical and grammatical errors was more likely after elicitations, requests for clarification, and metalinguistic clues (i.e. prompts) than other types of CF, in particular recasts. One reason why repair does not occur after recasts is because teachers often continue without giving students a chance to respond, as Oliver's (2000) study of recasts in an ESL classroom showed. However, there can also be marked differences in the level of uptake with repair in different classroom contexts. Lyster and Mori (2006) reported that the learners in a Japanese immersion programme in the US were more likely to repair their errors following recasts than learners in a French immersion programme in Canada and suggested that this was because there was a greater emphasis on accurate oral production and repetition in the former.

The importance of learners self-correcting their errors for acquisition, however, is a matter of controversy. Some researchers (e.g. Long, 2006) argued that recasts assist learning by inducing learners to notice the correction and that whether they subsequently uptake the correction is immaterial. Other researchers (e.g. Lyster, 2004) draw on skill-learning theory to argue that uptake of the correction is important for acquisition (see section above on cognitive–interactionist theories that have informed CF research). Lyster argued that the reason why prompts are more effective than recasts is precisely because they induce learners to self-correct. Sociocultural Theory also emphasizes the need for learner self-correction as the act of producing the correct form is viewed as evidence of learning. There is some evidence to show that uptake with repair assists learning. Loewen (2005) examined the relationship between corrective feedback episodes where uptake occurred in ESL lessons and their acquisition of those forms that had been corrected, in tailor-made tests administered one or two days after the lessons or two weeks later. He reported that successful uptake predicted the learners' test scores (i.e. learners who had corrected their errors during the lesson were more likely to demonstrate knowledge of the correct forms in the tests). A reasonable conclusion is that learners can benefit from oral CF even if they do not repair their errors but when they do, 'deeper processing' may occur and so also assist learning.

Immediate uptake is, of course, unlikely to occur in the case of written CF. However, there is an equivalent to uptake if learners are given the chance to revise an initial piece of writing following CF. In a carefully designed study, Chandler (2003) compared indirect CF plus the opportunity to revise with indirect CF where there was no opportunity to revise. Chandler reported that accuracy improved from the first to the fifth piece of writing significantly more in the group that was required to correct their errors, than in the group that just received indication of their errors. This study then suggests that asking learners to revise assists learning. In contrast, Van Beuningen et al.'s (2012) study found the indirect feedback plus revision did not result in improved accuracy in a new piece of writing although direct CF plus revision did. The crucial factor seems to be whether learners are able to use the feedback to correct their errors when revising and this is more likely to occur when the

feedback is direct (i.e. they are provided with the corrections). A further factor may be the extent to which learners make use of the corrections they receive to develop metalinguistic understanding of the nature of the error and why it was corrected. Shintani and Ellis (2013) found that the low-intermediate level learners they investigated were not able to work out the rule for the use of indefinite articles (the feature corrected) when they revised.

Concluding comments

Ellis (2010a) proposed a framework for investigating CF. This involved considering:

1 The different types of CF.
2 The role played by individual learner factors in mediating the effects of CF.
3 The role played by contextual factors in mediating the effects of CF.
4 The extent to which learners engage with the CF (i.e. how they respond to it).
5 Learning outcomes (i.e. the effect CF has on learning).

By and large, the research has focused on the relationship between (1) and (5). It has shown that CF is effective in promoting learning. There is considerable controversy, however, regarding which type is most effective, with some researchers arguing that input-providing CF in the form of recasts (or in the case of writing, direct CF) is more effective than output-prompting CF, others claiming that what matters is how explicit the CF is, and still others drawing on Sociocultural Theory to claim that for CF to be effective it needs to be fine-tuned to the learner's level of development. We have seen that there is evidence to support all these positions. There has been much less attention to (2) and (3), although we have seen that individual factors such as the learners' level of proficiency do influence the effect that CF has on learning and that contextual factors such as whether the instruction is 'experiential' or 'analytic' (Stern, 1990) in nature also plays a role. In (4), investigation has been in terms of learners' uptake of corrections with the evidence suggesting that although it is not essential that learners repair their errors, it is helpful. A key issue regarding (5) is how the learning resulting from CF is measured. Here there is major difference between cognitive–interactionist research, which has used post-tests, and sociocultural research, which has sought for evidence of learning within corrective feedback episodes. In the case of the former, there is also the issue of whether the tests elicit constrained–constructed responses or free-constructed responses (Norris and Ortega, 2000). The results of the research suggest it benefits both.

Re-examining the role of corrective feedback in language pedagogy

A general concern of teachers, as reflected in the teacher guides, is that corrective feedback can have a negative effect on learners – for example, by increasing anxiety. We have seen that in SLA the affective aspect of CF has received little attention. The focus of the research we examined in the previous section was

on the cognitive aspects of CF. The negative impact of CF on learners may have been overestimated in the pedagogic literature as learners typically state that they want to be corrected. This is not really surprising. Learners are in a classroom to learn a language and believe that having their errors corrected will help them to achieve this. However, teachers do need to monitor the extent to which their corrective feedback causes individual learners anxiety and adjust their feedback accordingly. Research has shown that teachers are often inconsistent in their practice of correcting learners – for example correcting some learners but not others. As Allwright (1975) pointed out, such inconsistency may reflect teachers' natural inclination to take account of individual differences in learners and to try to balance their cognitive and affective needs.

We saw that the teacher guides have addressed five key questions. We will now reconsider the answers that they gave to these questions in the light of the SLA research.

Should learners' errors be corrected?

The guides all acknowledge the need for teachers to correct learners' oral errors. This receives clear support from the SLA research, which has shown that both oral and written CF are effective in improving learners' accuracy. Ur (1996), while agreeing that correction is helpful, felt that it would be better for teachers to focus on avoiding errors rather than correcting them. From an SLA perspective this is doubtful. Learners are bound to make errors no matter what approach teachers adopt and certain types of error (i.e. those where positive evidence alone is not sufficient to ensure acquisition of the target form) may only be eliminated with the help of negative evidence. An approach that combines input providing positive evidence with corrective feedback is most likely to promote acquisition.

In one respect, there is a clear difference in the pedagogic position adopted in many of the guides and the research evidence. Some of the guides recommend making a clear distinction between accuracy-oriented and fluency-oriented instruction and claim that CF is desirable in the former but not in the latter as it leads to learners focusing on form rather than on meaning. Cognitive–interactionist theories, however, claim that CF is likely to be more effective if it occurs in response to learners' attempts to communicate as this is more likely to ensure transfer-appropriate learning. That is, the corrections are more likely to result in the implicit knowledge needed to engage in fluent natural language use. A number of studies (e.g. Lyster, 2004; Ellis et al., 2006) have shown that correcting learners while they are performing communicative tasks is effective. Nor is there any basis in the research for Scrivener's (2005) suggestion that teachers should only deploy 'unobtrusive immediate correction' in fluency work. For the feedback to work it has to be seen as corrective by the learners.

The guides also acknowledge the need for written CF. In this respect, they contradict Truscott's claims that written CF cannot contribute to learners' 'genuine knowledge of language' and thus will have no influence on accuracy

in new pieces of writing. They are supported, however, by a number of recent studies that have shown that both focused and unfocused written CF can lead to significant improvements in accuracy in new pieces of writing. Thus, as with oral CF, there is a clear case for correcting learners' written errors.

When should learner errors be corrected?

There is much less consensus in language pedagogy about whether correction should be immediate or be delayed. Some teacher educators recommend delaying correction in fluency work until learners have completed an activity, while approving of immediate correction in accuracy work. But, as we have just seen, there is no basis for this in cognitive–interactionist theories. Sociocultural Theory also supports scaffolding learners' self-correction in communicative interactions.

However, there is to date no research that has compared the relative effects of the timing of CF. Just about all the studies to date have investigated online oral CF. Rolin-Ianziti (2010) reported a descriptive study of delayed oral CF carried out by teachers of L2 French following a role-play activity. The teachers took note of the learners' errors and then reviewed them later. This occurred in two ways. One teacher simply provided the corrections while another attempted to elicit correction from the students and only provided the correction if the students failed to self-correct. Rolin-Ianziti drew on Sociocultural Theory to argue that the second approach was likely to be more effective but offered no evidence to support this claim.

There are grounds for believing that delayed CF can assist learning, however. Written CF is invariably delayed and, as we have seen, it has been shown to contribute to improved accuracy in new pieces of writing. It is possible that immediate and delayed CF contribute to acquisition in different ways. Immediate CF may benefit the development of learners' procedural knowledge whereas delayed CF is perhaps more likely to foster metalinguistic understanding if learners reflect on the corrections they receive. Clearly, though, there is a need for more research investigating whether delayed CF is effective, what kind of knowledge it fosters, and, importantly, whether it is more effective than immediate CF.

Which errors should be corrected?

The various pedagogic proposals for deciding which errors to correct are hard to implement. It is unlikely that teachers will be able to distinguish between 'errors' and 'mistakes' in a consistent way, even in written CF. Burt's suggestion that teachers should focus on 'global' rather than 'local' errors receives some support from Long's Interaction Hypothesis (see Chapter 8). This views CF as arising in the negotiation of meaning when a genuine communicative problem arises. But there is plenty of evidence to suggest that CF is effective when it involves negotiation of form rather than meaning. In other words, correction

assists acquisition even if there is no 'global' problem. The research has also shown that CF directed at 'local' errors can work. For example, both Ellis et al. (2006) and Lyster and Saito (2010) reported that CF resulted in learners acquiring past tense-*ed*. These studies do lend some support to Krashen's (1982) contention that CF should only be directed at grammatical features that are 'simple' and 'portable'. Past tense-*ed* is just such a feature. Many of the studies that reported an effect for written CF have also investigated what Ferris called 'treatable' features (e.g. the use of the definite and indefinite article for first and anaphoric reference). However, precisely what constitutes a 'simple' and 'portable' rule is far from clear. As we noted in Chapter 4, there is no widely accepted theory of grammatical complexity to help teachers or researchers decide which errors are treatable, and even if careful selection of errors were possible in written correction, it would be well nigh impossible in online oral correction.

There is, however, another way in which selection of errors for correction might be approached. Teachers could elect to adopt a 'focused approach' (i.e. predetermine the errors they will correct). In the case of a lesson that is directed at a specific linguistic feature, teachers could correct errors in that feature but ignore others (as Ur recommended). Alternatively, teachers could identify a specific feature that is clearly causing problems to learners and focus correction on that. Focused correction is practical and has been shown to be effective for addressing errors in both oral and written production. The research that has investigated oral CF has almost invariably investigated its effect on a specific, predetermined linguistic feature. Much of the recent written CF research has also been of the focused kind.

A possible objection to a focused approach is that it does not accord with normal pedagogic practice. Van Beuningen et al. (2012), for example, argued against it on the grounds that 'a teacher's purpose in correcting his/her pupils written work is to improve accuracy in general, not just the use of one grammatical feature' (p. 6). A similar argument could be made against focused oral CF. However, Van Beuningen et al.'s criticism can be addressed if teachers vary the focus in different lessons, thus achieving a wide coverage over time. One possibility might be 'tiered feedback' (i.e. feedback that begins by focusing on one grammatical feature and then adds an additional feature each time feedback is given). Andersen (2010) investigated this but found that the effectiveness of the feedback decreased as the number of corrected features increased. Overall, focused CF constitutes the most practical and useful basis for selecting which errors to correct.

How should errors be corrected?

One of the clear differences between the pedagogic treatment of error and the SLA research is that the strategies that can be used to correct errors are simply listed in the former but they are classified in the latter. In the guides, no theoretical justification is given for the choice of strategy. In SLA, the

classification of strategies into two key dimensions (i.e. input-providing vs output-prompting and implicit vs explicit) is theoretically driven. Cognitive–interactionist theories differ in the importance they attach to input-providing CF (e.g. recasts) and output-prompting CF (e.g. elicitation or clarification requests). They also differ in the value they attach to implicit as opposed to explicit types of correction. The SLA research that has drawn on these theories has sought to identify which type of strategy is most likely to foster learning. Research based on Sociocultural Theory has also drawn on the implicit/explicit distinction to propose that feedback needs to be graduated to assure that the CF is tailored to the needs of individual learners.

The SLA research that has investigated oral CF has produced mixed results. It is clear that strategies relating to both of the two key dimensions can lead to acquisition when this is measured in terms of gains in accuracy. A general conclusion, therefore, might be that teachers should use a range of strategies – a view promulgated by the guides. However, it is also possible to identify a number of general principles that can guide the implementation of CF:

- Aim to provide intensive CF. A single correction directed at a linguistic feature cannot be expected to have much effect on learning. An advantage of focused CF is that it is intensive.
- For CF to be effective, learners need to recognize the corrective force of the CF. Explicitness is important.
- The extent to which learners are likely to identify CF as corrective varies according to context. In a fluency-oriented instructional context, learners may fail to recognize a recast as corrective as they are primarily focused on meaning. In an accuracy-oriented context, however, they are more likely to treat a teacher's recast as corrective. This suggests that teachers need to vary how they correct according to instructional context. In a communicative activity, brief explicit forms of correction may be needed. In a grammar exercise, recasts can be effective.
- Combine input-providing and output-prompting CF strategies. These two types of strategies cater to different senses of 'acquisition' (i.e. learning a 'new' form vs increasing control over an 'old' form). However, it is not practical to expect teachers to know whether the particular errors they are correcting involve a new or an old form and, in any case, what is 'old' for one student in the class may be 'new' for another. A possible solution to this problem might be to combine an output-prompting with an input-providing strategy. That is, first prompt learners to self-correct and then, if that fails, provide the correction. This can be achieved in various ways – for example, by means of 'corrective recasts'. Another way might be to begin with an elicitation and then move on to an explicit correction. This approach to combining strategies is *principled* and in this respect differs from the guides' recommendation that teachers should simply deploy a variety of strategies.
- Encourage uptake with repair. Learning can take place without uptake, providing learners notice the correction. But inducing learners to produce

the correct form may lead to deeper processing. In this respect, the SLA research lends support to the recommendation of the guides which emphasize the need to ensure learners successfully uptake the correction.

These principles are based on a cognitive–interactionist view of CF. Sociocultural Theory emphasizes the need for 'graduated assistance'. In the research based on this theory, this has been accomplished through one-on-one interactions between an expert (the teacher) and a novice (the learner). This may constitute a highly effective way of conducting CF in such a context – especially for those features such as articles that pose substantial learning problems for students – but it is not clear how 'graduated assistance' can be achieved in whole classes. In this respect, a more practical way is to combine strategies in the ways suggested above.

The guides demonstrate a clear preference for indirect written CF (see, e.g. Brumfit's 1977 model) in order to develop writers' autonomous ability to self-edit. The research, however, points to the advantage of direct CF where grammatical accuracy is concerned (e.g. Van Beuningen et al., 2012) and there would seem no reason why such a strategy cannot also help to foster learners' independent editing capacity over time. Combining CF with the opportunity for learners to revise their writing has also been found to promote learning. An important pedagogic issue is the laborious nature of written CF if the teacher corrects each student's writing. One way of addressing this problem might be to forego written CF in favour of explicit instruction directed at a specific type of error and conducted with the whole class as in Shintani and Ellis (2014).

Who should do the correcting?

Schegloff et al. (1977) distinguished different types of repair in conversations in terms of who initiates the repair (the speaker or the hearer) and who carries it out. The four basic types they found were: (1) self-initiated self-repair, (2) self-initiated other repair, (3) other-initiated self-repair and (4) other initiated-other repair. In the case of CF, as we have defined it in this chapter, repair is typically initiated by the teacher, so the choice lies between (3) and (4). The guides express a clear preference for (3) (i.e. eliciting a self-repair from the students). SLA researchers disagree about which type of repair is most effective. Prompts and indirect CF will result in type (3) repair work. However, recasts and direct CF involve type (4) repair work (i.e. the repair is both initiated and completed by the teacher). We have seen that research has shown both types of repair work to be effective, although in the case of writing, direct CF has been shown to be superior. The guides possibly overemphasize the merits of type (3) repair work. There is, perhaps, no need for teachers to be reluctant to 'other-correct'. However, as we noted, it is possible to conduct oral CF in a way that combines an opportunity for student self-correction with teacher-correction. Sociocultural Theory also proposes a combined approach by recommending

that teachers first try to elicit student self-correction and only resort to providing the correct form if necessary.

Another way of accomplishing type (4) repair is by the teacher nominating another student to 'other-repair'. This is also favoured in many of the guides, especially in peer-correction of writing errors. However, this is not an option that SLA researchers have investigated. One reason for this is that it has been found to occur only rarely in classroom interaction (Seedhouse, 2004).

Conclusion

CF is clearly an aspect of instruction where the concerns of teachers and interests of SLA researchers coincide and, as such, constitutes an ideal construct for examining the contribution that SLA can make to language pedagogy. Reflecting this common concern, Ellis (2009) proposed a set of general guidelines for conducting CF, basing these on his review of the SLA research. We conclude this chapter with a revised version of these guidelines:

1 CF serves as one the major ways in which teachers can focus on form and thus accords with Principle 3 (Chapter 1) – 'Instruction needs to ensure that learners focus on form'. Research has shown that CF (both oral and written) works and so teachers should not be afraid to correct students' errors. The cognitive advantages of CF outweigh the possible affective disadvantages.

2 Both 'errors' and 'mistakes' need correcting if the purpose is to promote interlanguage development. Also, both 'global' and 'local' errors should be corrected.

3 The effectiveness of CF depends on the learners' readiness to acquire the feature. Thus, like explicit instruction (see Chapter 4), it will not always work. CF that is intensive, as in focused CF, is more likely to prove effective than extensive CF, as in unfocused CF.

4 CF is beneficial in both accuracy-based work based on a structure-of-the-day approach and in fluency work based on the performance of communicative tasks.

5 Both immediate and delayed CF may be beneficial. To date there is no clear evidence that one is superior to the other, so teachers need to experiment with the timing of oral CF. Given that written CF is delayed and has been shown to be effective, delaying feedback is a worthwhile option.

6 Teachers should not attempt to hide the corrective force of their CF moves from the learners. Learners need to know they are being corrected. However, while the corrective force needs to be explicit, it is not always necessary to use direct, explicit correction. Even recasts can be explicit.

7 There is no 'best' way of conducting oral CF. An approach that combines opportunities for learners to self-correct their errors followed if necessary by teacher correction (e.g. a combination of output-prompting and input-providing CF) accords with both the 'best practice' views of teacher educators and the findings of cognitive–interactionist and sociocultural SLA research.

8 In the case of written CF, the weight of the available evidence suggests that direct correction is more effective than indirect correction. However, if the learners have explicit knowledge of the feature, indirect CF may assist them to establish greater control over it.

9 Teachers need not be wary of other-initiated/other repair (i.e. CF initiated and completed by the teacher). However, leaving time for learner uptake of the correction (or in the case of writing for revision) can assist learning.

These guidelines are unlikely to satisfy all SLA researchers or teacher educators. Therefore, as Ellis (2009) argued, they are best viewed as a set of propositions that teacher educators and teachers can reflect on and debate. This is an approach to the use of SLA research that we will consider further in the final chapter of this book.

DISCUSSION QUESTIONS

1. The teacher guides emphasize the importance of 'positive feedback'. Do you agree? Can positive feedback aid acquisition? How?

2. Ur (1996) argued that it is better to try to prevent errors rather than correcting them. Do you agree? To what extent is it possible to prevent learners making errors? (You might like to refer back to the section on learner errors in Chapter 3.)

3. The teacher guides all propose that errors should be corrected in accuracy work but not in fluency work. What arguments support this position? Do you agree with them?

4. To what extent do you think teachers should correct learner errors in written work?

5. Various proposals have been made for deciding *which* errors to correct. Review these proposals. To what extent are they practical? Can you think of any other basis for selecting which errors to correct?

6. The teacher guides recommend that learners should be encouraged to correct their own errors rather than the teacher correcting them. Do you agree? Can you see any problems with this strategy?

7. Which of the three general strategies for correcting errors in writing (direct, indirect, metalinguistic) do you favour? Why?

8. There is a mismatch between the approach to error correction generally favoured by teachers and by learners. What is this mismatch? Do you think teachers should take more account of how learners already wish to be corrected?

9. Describe the approach to corrective feedback you would take if you were to base it on each of these theories of L2 acquisition:
   a. UG-based theory
   b. Cognitive–interactionist theories
   c. Sociocultural Theory.

10. Explain the difference between:
   a. Implicit and explicit corrective feedback
   b. Input-providing and output-prompting corrective feedback.

11. Use the results of the research referred to in this chapter to consider the potential for acquisition of each type of the four main types of corrective feedback.
12. How important for acquisition is it that learners 'uptake' the corrective feedback they receive?
13. In what ways are oral and written CF different?
14. In what ways do the findings of the corrective feedback research conflict with the recommendations found in the teacher guides?
15. Finally, formulate your own corrective feedback policy by addressing the five key questions initially posed by Hendrickson (1978).