

Instructed Second Language Acquisition Research and Its Relevance for L2 Teacher Education

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Abstract

Two areas of second language acquisition (SLA) research are distinguished as ‘naturalistic’ and ‘instructed’ SLA. The former refers to learning a second language (L2) through exposure to and interaction with native speakers of the language in much the same way that children acquire their first language. The latter refers to learners whose experience with the L2 is through learning it in a classroom setting. This article focuses on instructed SLA and addresses two specific questions: 1) Does type of instruction make a difference in L2 learning? 2) Are particular types of corrective feedback more effective for L2 learning than others? Theoretical and empirical work relevant to both questions is reviewed and implications for L2 teaching are discussed.

Second language acquisition (SLA) is a field of study that investigates how a language (other than a first language) is learned during late childhood¹, adolescence and adulthood. It is a relatively new discipline, having emerged in the late 60’s, and is influenced by such fields as linguistics, second language teaching, psychology and first language (L1) acquisition. SLA focuses on the processes involved in learning a second/foreign language (L2)² and the cognitive, linguistic, affective, and social factors that contribute to its success or failure. Most of the early SLA research was done with learners who picked up a second language through exposure to and interaction with native speakers of the language in much the same way that children acquire their first language. Later, as the field of SLA continued to grow, more research was done with learners who were learning their L2 in classroom settings. These two areas of SLA research are distinguished as *naturalistic* and *instructed* SLA. Although both are important for an understanding of how second languages are learned, SLA theory and research that is specific to learning in classroom settings has greater relevance and applicability for second/foreign

¹ Learning an additional language shortly after learning a first language (i.e. before the age of 4) or learning two languages simultaneously in early childhood is considered to be bilingual acquisition not second language acquisition.

² In this article L2 is used to refer to second and foreign language learning.

language pedagogy. Therefore, the focus of this article is on instructed SLA and it addresses two specific questions: 1) Does type of instruction make a difference in L2 learning? 2) Are particular types of corrective feedback more effective for L2 learning than others? In discussing these questions I will describe both theoretical and empirical work relevant to each and draw attention to their implications for L2 instruction.

Does Type of Instruction Lead to Differences in L2 Learning?

When describing research relevant to this question I will focus on studies that have been conducted since the arrival of the communicative approach to L2 teaching.³ Communicative language teaching (CLT) arrived on the scene in reaction to traditional structure-based methods that preceded it (e.g. grammar translation, audiolingual); methods that focused exclusively on grammatical forms. Influenced by theories of communicative competence (Hymes, 1972) the communicative approach was intended to emphasize functions over forms, meaningful communication over mechanical repetition and memorization, and to reflect the view that knowledge of language includes more than knowledge of grammar but also knowledge of the rules of language use.

As CLT became more popular and was increasingly adopted as the approach to instruction in second/foreign language teaching programs throughout the world, it became evident that there were two different versions. One of them, the strong version of CLT, represents an exclusive focus on meaning without any attention to form or corrective feedback. The other, the weak version of CLT, includes attention to both form and meaning (Howatt, 1984). The strong version of CLT was influenced by the ideas of Krashen (1982, 1984) who argued that if we could create conditions for L2 learning that are similar to the conditions for L1 learning it should result in more successful L2 learning. He proposed the *Comprehensible Input Hypothesis* claiming that if L2 learners are exposed to meaningful and motivating input that is just slightly beyond their current level of linguistic competence, but sufficiently comprehensible for them to understand, they should be able to integrate the new input into their developing language systems and create an L2 grammar. Krashen's proposals have had a major impact on the field of L2 teaching and language teachers find his ideas both appealing and inspiring (Lightbown & Spada, 2013).

³ For a review of the method comparison studies that were completed in the 60's and 70's to determine the effects of grammar translation, audiolingual and cognitive code approaches on L2 learning see R. Ellis, 2011.

Below we examine what research has revealed about the effects of comprehensible input on L2 learning, but first I would like to briefly introduce another theoretical framework, the *Interaction Hypothesis*, which has also influenced the development of the strong version of CLT. The claim of this hypothesis is that L2 learners do not need to learn grammar in order to participate in conversations. Instead, L2 learners like L1 learners only need to participate in conversations to learn grammar (Hatch, 1978). Advocates of the interaction hypothesis claim that when learners interact with each other they are required to *negotiate meaning*. That is, to clarify their intentions and meanings so that they understand each other. It is argued that through the process of negotiating meaning learners acquire the forms to express their meanings (Long, 1981). The claims associated with the interaction hypothesis led to a substantial increase in pair and group work activity in L2 instruction as well as the development of communicative tasks in which learners were asked to share information, solve problems and engage in role plays (Pica & Doughty, 1985; Crookes & Gass, 1993)

Research Findings - Strong Version of CLT

The combined impact of the comprehensible input hypothesis and the interaction hypothesis on the evolution of the strong version of CLT was significant. It led to a type of CLT that focused exclusively on meaning with little or no attention given to teaching language forms and/or providing corrective feedback. This was observed in a variety of L2 programs, including content-based language teaching, task-based language teaching and comprehension-based programs. What has research revealed about the effects of the strong version of CLT on L2 learning? First, learners develop good comprehension skills; indeed some learners in content-based language programs (e.g. French immersion) have been observed to develop comprehension abilities that are comparable to native-speaking peers (Genesee, 2004). Second, learners develop fairly high levels of vocabulary knowledge particularly in comprehension-based programs and greater levels of communicative ability (and communicative confidence) in programs where they have greater opportunities for output-based practice (Lightbown, Halter, White & Horst, 2002). However, it has also been observed that learners in communicative and content-based programs continue to experience difficulties with grammatical accuracy in their oral and written production (Lightbown & Spada, 2013; Lyster, 2007). Observations like these led to the call for greater attention to form which is consistent with the weak version of CLT as well as with other conceptual frameworks that emphasized the necessity for a focus on meaning

and communication in L2 teaching but not the exclusion of a focus on language forms. For example, in the late 90's I introduced the term form-focused instruction (FFI), defining it as any effort to draw learners' attention to form within communicative and meaning-based contexts (Spada, 1997). I further explained that FFI could be provided explicitly or implicitly through direct instruction or corrective feedback.⁴

Research Findings on FFI

Over the past 25 years or so, considerable research has been done to investigate the effects of FFI on L2 learning, that is, the effects of different ways of drawing learners' attention to form in communicative classrooms. This research has been done with children (e.g. Harley, 1998), adolescents (e.g. Lyster, 1994) and adults (e.g. Samuda, 2001). The overall findings indicate that meaning-based instruction that includes attention to form is more effective than instruction focused exclusively on either form or meaning (Lightbown & Spada, 2013; Spada, 2010). The findings from this research have also led to other questions about instructed L2 learning including: 1) Are there better ways to draw learners' attention to form? 2) What type of L2 knowledge results from instruction? Research to investigate the first question has compared explicit versus implicit types of instruction on L2 development. Explicit instruction typically includes metalinguistic information (e.g. grammar rules) but it can also provide guidance and direction about how particular language forms work without any grammar rules (e.g. through drawings or illustrations). Implicit instruction contains no metalinguistic information and no overt signals to form. Instead attention to language form is contextualized and embedded within a meaningful context. Some examples of implicit attention to form include exposing learners to high frequency input of a particular language form through short reading passages. This is referred to as *input flood* (see Trahey, 1993 and Trahey & White, 1996 for examples).

Research that has been done to investigate the effects of explicit versus implicit attention to form has revealed that explicit FFI is more effective than implicit FFI (Norris & Ortega, 2000; Spada & Tomita, 2010), but there are important qualifications with respect to these findings. For example, some researchers have argued that explicit instruction has been found more effective than implicit instruction because in most of the research learners' progress has been evaluated with tests that measure only explicit L2 knowledge. This refers to learners' conscious, analyzed

⁴ Later R. Ellis defined FFI to include more traditional structure-based approaches to L2 teaching (e.g. grammar translation). This contrasts with my conceptualization of FFI that is restricted to communicative and meaning-based approaches to L2 instruction.

knowledge – the type that is measured on discrete-point grammar tests for example. Few studies have compared the effects of explicit and implicit instruction on the development of learners' implicit L2 knowledge, that is, one's intuitive and unanalyzed ability to use language accurately, quickly, and spontaneously in typical everyday communicative interactions. One of the primary reasons for a lack of research attention is because few valid measures of implicit knowledge exist. Thus, until more tests of implicit L2 knowledge are developed for use in comparative studies of explicit and implicit L2 instruction, conclusions about the benefits of either type of instruction are premature (Doughty, 2003).

Timing of FFI: Recently, in my own research I have investigated questions about the timing of FFI and whether this makes any difference in terms of the type of L2 knowledge that learners develop. Specifically, I have investigated whether there may be better times in the instructional sequence to draw learners' attention to form by comparing the effects of *isolated* and *integrated* FFI (Spada & Lightbown, 2008) on different types of L2 ability. In isolated FFI, information about form is provided separately from communicative practice; whereas in integrated FFI, learners' attention to form is embedded within communicative practice. Based on a cognitive theory of learning known as *Transfer Appropriate Processing* (Blaxton, 1989), it was hypothesized that a different type of L2 knowledge might result from each type of instruction. Transfer appropriate processing claims that when we learn something, our memories record not only the item learned but the cognitive and perceptual processes that were engaged while learning the item. Subsequently, when we try to remember the item learned, we also recall aspects of the learning process. Therefore, the greater the similarity between how we learned something and our later efforts to retrieve that knowledge, the greater the chances are for success. If we extend this view to L2 learning we might hypothesize that L2 knowledge learned in isolated FFI activities will be more easily retrieved in isolated FFI activities and that L2 knowledge learned in integrated FFI activities will be more easily retrieved in integrated FFI activities. This hypothesis is consistent with the observation of many L2 instructors – that students who perform well on grammar tests are not necessarily fluent users of the test items in spontaneous speech and students who are fluent speakers and perform well in communicative tasks often perform poorly on tests requiring metalinguistic knowledge or the retrieval of individual language features that are isolated from a communicative context.

To investigate the potential contributions of integrated and isolated FFI on different types of L2 knowledge, we carried out a study with 4 classes of adult ESL learners - two that received integrated FFI and two that received isolated FFI (Spada et al. in press). The instruction was provided in 12 hours of class time delivered over 3 days, and the target feature was the *passive voice* in English. The isolated and integrated materials drew on the same content and provided the same amount of time for form and meaning-based practice. The only difference was that they were distributed differently. For the integrated instruction, all activities focused on content/meaning first and then learners' attention was briefly drawn to the *passive* (via instruction or corrective feedback) and always within meaning-based practice. In the isolated instruction separate form-based activities were completed first followed by content/meaning-based activities. In the form-based activities, attention was drawn to the *passive* via instruction and corrective feedback but there was no attention to form in the meaning-based activities. To test learners' knowledge of the *passive* and their progress over time, two tests were administered before instruction, immediately after instruction and 3 weeks later. The first language measure was an error correction task that required learners to correct ungrammatical sentences (i.e. sentences in which the *passive* construction is used incorrectly). The second language measure was an oral production task in which students were asked to describe a set of pictures that tell a story about a package that was lost in the mail.

The predictions were that learners who received the isolated FFI would be more accurate in their use of the *passive* on the error correction task than learners who received integrated FFI and that learners who received integrated FFI would be more accurate in their use of the *passive* on the oral production task when compared with learners who received isolated FFI. The results indicated that both groups significantly improved over time on both the error correction and oral production tasks. While there was some support for the prediction that the isolated FFI learners would do better on the error correction task and that the integrated FFI learners would do better on the oral production task, the differences were not statistically significant. Thus, until more research is done to investigate the timing of FFI an interpretation of these findings is that as long as learners receive a combination of form and meaning-based practice, differences in the timing of attention to form may be less important.

Summary

There is compelling evidence in the instructed SLA literature that FFI contributes in useful and necessary ways to successful L2 learning. While more work is needed to investigate whether explicit instruction only leads to explicit L2 knowledge, there is growing evidence that it also contributes to the development of implicit knowledge or to proceduralized knowledge⁵ (DeKeyser, 1997, 2003). With regard to whether there is a better time in the instructional sequence to draw learner's attention to form, more research is needed. In addition, there are many other questions that deserve our attention and need to be explored including whether some language forms are more amenable to instruction than others and whether particular learners benefit more from FFI than others. Next we turn our attention to what research has revealed about the role of corrective feedback in L2 learning.

Corrective Feedback and Its Role in L2 Learning

Corrective feedback (CF) is considered to be one of the main ingredients of teaching. Indeed in an article written in the 1970's, Krashen & Seliger (1975) identified the two fundamental characteristics of language teaching as discrete-point presentation and corrective feedback. Discrete-point presentation refers to the presentation of individual grammar points one at a time – a practice that was popular in L2 instruction at that time. Many changes have taken place in the field of L2 teaching since then. For example, CLT and content-based language teaching have led to a dramatic decrease in discrete-point presentation. Indeed in the strong version of CLT no discrete-point instruction is provided. CLT also led to changes in attitudes and practices with regard to corrective feedback. That is, when CF is provided it is less explicit, less direct and with little (or no) metalanguage; in the strong version of CLT no CF is provided. Hendrickson (1978) listed several questions about CF in need of investigation: 1) Should learners' errors be corrected? 2) When should learners' errors be corrected? 3) Which errors should be corrected? 4) How should errors be corrected? 5) Who should be doing the correcting? Despite the fact that this article was published over 35 years ago, we still have not found firm answers to most of these questions. Below I will address some of the research that is specifically relevant to questions one and four.

I have interpreted the question 'Should learners' errors be corrected?' to mean whether there is evidence to show that CF benefits L2 development. The short answer to this question is

⁵ Proceduralized knowledge is the ability to use knowledge fluently and automatically. For example, after extensive practice some L2 learners are able to access their explicit L2 knowledge quickly and this is sometimes referred to as proceduralized knowledge.

yes. Evidence can be found in several research syntheses of CF studies indicating strong support for the overall effectiveness of CF. These results have been reported in classroom studies as well as in laboratory studies (Li, 2010; Lyster & Saito, 2010; Mackey & Goo, 2007; Russell & Spada, 2006). Interestingly, the benefits of CF appear to be greater in the laboratory studies and this is probably due to the more focused, intensive nature of laboratory studies compared with classroom studies where there is more distraction, and CF is not always directed toward individual learners. While these findings are encouraging and suggest a positive role for CF in L2 learning, the question as to whether different types of CF may be more beneficial than others is one that has attracted greater attention from L2 researchers. This is discussed in more detail below in relation to question four above: how should errors be corrected?

Descriptions of different types of CF

A great deal of research has been done to describe and document the different types of CF provided in L2 classrooms. Much of this work has used a typology of CF types developed by Lyster & Ranta (1997) in which seven different types of CF are identified. These include: *explicit correction, recasts, clarification requests, metalinguistic feedback, elicitation and repetition*.⁶ Lyster and Ranta developed their CF model based on extensive observations in Canadian French immersion classes. In addition to describing the different types of CF that teachers provided they also examined learners' immediate responses to the CF, referred to as *uptake*. The results showed that the most frequently occurring type of CF that teachers used was the *recast* (i.e. a correct reformulation of a student's error). Yet when they examined learner *uptake*, they found that learners responded least to *recasts* and more to other types of CF particularly *clarification requests, elicitation and metalinguistic feedback*. What these three types of CF have in common is that they try to get the learner to self-repair by pushing them with questions such as *Could you repeat that?* or *What is the past tense of the verb 'to be'?* On the basis of their findings, Lyster and Ranta (1997) concluded that learners did not seem to perceive *recasts* as corrective in nature. They suggested that learners may have interpreted the teachers' reformulations as just another way to say the same thing. This was reinforced by the fact that teachers were observed to use *recasts* to reinforce the content (not the form) of students' utterances as well.

⁶ For definitions and examples of the different types of CF see Lyster & Ranta, 1997.

While these findings are interesting and have been confirmed in several other second and foreign language classrooms (e.g. Lochtman, 2002; Simard & Jean, 2011; Ellis et al., 2001) they were based on descriptive studies exploring the effect of different types of CF on learners' immediate responses. To investigate whether the CF effects are long lasting, experimental research was needed, and this has led to a proliferation of such research over the past two decades. Most of it has compared the effects of *recasts* versus *prompts* (a label that includes all CF types that push learners to self-correct including *elicitation*, *clarification requests*, *metalinguistic feedback* and *repetition*) on L2 learning. These studies have been carried out in L2 classrooms and laboratories. Although many more studies have been carried out in laboratories, I have chosen to focus on the classroom studies because they have more ecological validity for a teacher audience, precisely because the research was carried out in real L2 classrooms.

Experimental Studies of CF

In the classroom research to investigate *recasts* versus *prompts*, several theoretical and pedagogical arguments have been made for the benefits of each. For example, *recasts* are thought to create opportunities for learners to notice the difference between what they say and the teacher's reformulation. They also have the advantage of not interrupting the flow of the conversational interaction. *Prompts* are considered to create opportunities for learners to remember information better because they take an active part in producing it. They are also thought to help learners improve their control over forms that they have not fully learned (for more discussion of the arguments for the benefits of *recasts* and *prompts* see Lyster et al., 2013).

The results of the classroom studies to examine the relative benefits of each CF type are mixed. For example, in a study with secondary level French immersion learners, Lyster (2004) found long term benefits for *prompts* over *recasts* on learners' written production but not oral production. In a study with grade 5 learners in intensive ESL programs, Ammar and Spada (2006) found benefits for *prompts* over *recasts* on oral and written tests but differences were found depending on the learners' prior knowledge of the target form. That is, learners with greater proficiency benefitted equally from both types of CF, whereas learners with less proficiency benefitted from *prompts* but not *recasts*. In two studies with adult ESL learners *prompts* were reported to be more effective than *recasts* (Ellis et al., 2006; Sheen, 2007). Some of the studies also found that different types of CF may be more effective depending on the target feature. For example Ellis (2007) reported that metalinguistic feedback led to greater

improvement on past tense - *ed* than on comparative - *er*. Yang and Lyster (2010) reported that errors in regular and irregular past tense forms improved with *prompts* and only irregular past tense forms improved with *recasts*.

Other Factors Related to CF

Most of the research to investigate the differential effects of *recasts* and *prompts* on L2 learning has focused on grammatical development. However, there are a few studies that have explored their effects on other aspects of L2 development. For example, in a study of vocabulary learning Dilans (2010) reported that *prompts* and *recasts* led to partial receptive/productive vocabulary knowledge but only prompts led to greater in-depth knowledge of lexical items. In a study that explored the effects of *recasts* on pronunciation development, Saito and Lyster (2012) found that hearing the correct model via *recasts* is crucial in pronunciation development and that more explicit recasts worked best.

One of the important factors that relates to the relative benefits of one CF type over another has to do with context. You will recall that in their original study in French immersion classrooms Lyster and Ranta (1977) found that *recasts* virtually went unnoticed by learners. However, in a subsequent study in Japanese immersion classrooms in the U.S. Lyster and Mori (2006) found the opposite – learners immediately responded to the teachers' *recasts*. These conflicting findings were explained by the general orientation of the instruction in the two settings. That is, the Japanese immersion classrooms were much more traditional and analytic in their orientation. Thus, learners in these classrooms knew that accuracy was important and they expected to receive CF. Therefore it seems that they interpreted all types of CF (including *recasts*) as corrective in nature. However, learners in French immersion in Canada were focused on the content/meaning of their subject matter instruction, and formal accuracy was not considered to be primary. Thus, the subtle corrective input in *recasts* went unnoticed. These findings led to the *counterbalance hypothesis* and the suggestion that learners' attention will be drawn to classroom events that are different from those to which they are accustomed (Lyster & Mori, 2006).

It is difficult to conclude on the basis of the CF research that one type of CF is more effective than another. In fact, there are good reasons to argue that there are differential benefits for each and this depends on a variety of factors including instructional context, learner characteristics and language features.

Conclusion

In this article I have reviewed some of the instructed SLA research that is directly relevant to L2 teaching. Although the research is not conclusive, I believe there are implications that can be drawn for L2 pedagogy. For example, we can be confident from the work that has been done on the contributions of different types of instruction to L2 learning that a combination of form and meaning-based instruction is more effective than an exclusive focus on either one. While this may seem obvious to some, strongholds for the two extreme positions on L2 teaching (i.e. exclusive focus on form or meaning) still exist throughout the world. The mixed findings from research on the effects of different CF types on L2 development suggest that more research is needed. Nonetheless, the fact that context and learner factors likely play an important role in whether a particular type of CF is noticed and incorporated into a learners L2 grammar suggest that teachers should vary their use of CF types in the classroom and not rely on one particular strategy. To be sure, many questions remain unanswered about the optimal conditions for L2 learning in classroom settings. Continued research in instructed SLA will lead to more clarity and insight and in turn relevance and applicability to L2 teaching.

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