Studies in Second Language Acquisition, 2010, **32**, 169–179.
doi:10.1017/S0272263109990489

INTRODUCTION

The Role of Oral and Written Corrective Feedback in SLA

Younghee Sheen
American University, Washington DC

For almost half a century, theories of first language (L1) and second language (L2) acquisition have taken different positions regarding the importance of corrective feedback (CF). Accordingly, we have seen a number of pendulum swings in what the teacher should do with learner errors. For example, in the 1950s and 1960s, under the influence of behaviorist views of language learning that emphasized habit formation, errors were considered to be damaging to learning and thus in need of immediate eradication. In the 1970s and 1980s, under the influence of nativist views about language learning, acquisition was seen as driven by positive evidence and CF as playing no role at all, or only a minor role. More recently, under the influence of interactionist theories of language learning, errors were seen as treatable through the feedback that arises naturally in interaction. These theoretical differences can only be resolved empirically—through studies that examine where CF affects interlanguage development as well as the various types of learners and the external factors that mediate the effect of CF (e.g., Sheen, 2008).

Since Chaudron's (1977) influential descriptive study of oral CF, research into CF has played an important role in both SLA theory-building and language pedagogy. More recently, Lyster and Ranta's (1997) seminal study of oral CF in the context of immersion classrooms has helped lay the groundwork for more comprehensive and systematic investigations of oral CF in SLA and sparked a great deal of interest in the pedagogical utility of different CF types. Truscott's (1996) critical review of

The idea of putting together a thematic issue of *SSLA* originated in a colloquium on oral and written corrective feedback given at the 2008 American Association of Applied Linguistics conference in Washington, DC. I would like to thank Roy Lyster for his thoughtful comments on an earlier draft of this article.

Address correspondence to: Younghee Sheen, American University, 4400 Massachusetts Ave. NW, Washington DC, 20016; e-mail: sheen@american.edu.

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https://doi.org/10.1017/S0272263109990489 Published online by Cambridge University Press

the research has spawned a great deal of controversy regarding the role of written CF in the teaching of L2 writing (see, e.g., Ferris, 2004; Truscott, 2004) and has led to more methodologically robust yet ecologically valid research on written CF.

Previous special issues of *SSLA* by Gass, Mackey, and Pica (1998) and by Mackey and Gass (2006) as well as Mackey's (2007) edited volume have explored ways in which CF research can move forward. These investigations, however, have dealt primarily with oral interaction research in general, not exclusively with CF research. The time is right to devote an entire issue of *SSLA* to CF, with a view to exploring for the first time the relationships between oral and written CF. This thematic issue is thus unique in bringing together researchers from both SLA and L2 writing in an attempt to further our understanding of the role that CF plays in L2 learning. Another unique feature of this issue is that it provides both a cognitive and a sociocultural perspective on CF. It is becoming increasingly clear that the study of CF can be enhanced by taking multiple perspectives.

Considerable support for CF comes from a number of cognitive and psycholinguistic theories of SLA such as the interaction hypothesis (Long, 1991, 1996), the output hypothesis (Swain, 1985, 1995), the noticing hypothesis (Schmidt, 1995, 2001), the skill learning theory (e.g., DeKeyser, 1998, 2007), the transfer appropriate learning (e.g., Segalowitz & Lightbown, 1999), and, more recently, the counterbalance hypothesis (Lyster & Mori, 2006). In these cognitive theories, CF is considered to make a substantial contribution to interlanguage development. CF promotes learning because it induces noticing and noticing-the-gap. However, the theories differ with regard to the specific type of CF claimed to be needed. Whereas Long (1991, 1996) emphasized the importance of input-providing feedback (recasts) in the context of negotiating for meaning, Lyster and his associates (e.g., Ammar, 2008; Ammar & Spada, 2006; Lyster, 2004) have argued that, of the feedback that occurs in the negotiation of form, output-prompting feedback is also effective, if not more effective.

Sociocultural theory differs from these cognitive and psycholinguistic theories: It claims that there is no single type of CF that will work best for acquisition but rather that CF is effective when tailored to the learner's stage of development. According to sociocultural theory, the effectiveness of CF lies in its propensity for scaffolding interaction to construct a zone of proximal development (where learners are assisted to perform a linguistic feature that they are not yet able to handle independently) for the learner. Through such scaffolding, learners are able to use the target language with the assistance of an interlocutor and to produce utterances they would be unable to on their own. According to this view, what constitutes a beneficial form of CF for one learner might not for another, either because it is fixed at too difficult a level for the

https://doi.org/10.1017/S0272263109990489 Published online by Cambridge University Press

learner or because it fails to push the learner by posing a sufficient challenge.

Oral CF research has been largely grounded in SLA theories and hypotheses, whereas written CF research has drawn on L1 and L2 writing composition theories. These differences notwithstanding, there are a number of issues common to the study of oral and written CF: (a) whether oral and written CF works, (b) what constitutes the most effective approach for implementing CF, (c) what contextual and individual learner factors contribute to the effectiveness of oral and written CF, and (d) whether it is possible to develop a common methodology for investigating the effectiveness of oral and written CF. I will briefly consider these key issues and pinpoint articles in the special issue that address them.

DOES CF WORK?

There is now a substantial number of studies that have demonstrated the positive effect of oral CF on L2 learning (see Mackey, 2007). In contrast, there have been far fewer studies that have demonstrated the efficacy of written CF, and the extent to which written CF can influence acquisition remains a matter of some controversy (see Truscott, 2004, 2007). However, a number of recent studies have shown that written CF, like oral CF, can contribute to acquisition. Three studies reported in this special issue examine the effects of CF on L2 development: Two investigate the effects of oral CF (Lyster & Saito; Yang & Lyster), and the third one investigates the effects of written CF (Storch & Wigglesworth).

In the last decade, efforts have been made to synthesize oral CF research findings to provide a more robust picture of the role CF plays in SLA (Keck, Iberri-Shea, Tracy, & Wa-Mbaleka, 2006; Li, 2009; Mackey & Goo, 2007; Russell & Spada, 2006). The effects of oral CF on SLA appear to differ somewhat depending on whether the study was carried out in a laboratory or a classroom setting, with recasts generally proving more effective in laboratory than in classroom settings. The effectiveness of oral CF in the classroom can also be mediated by the structural complexity of the linguistic features targeted. Yang and Lyster's contribution sheds light on this by investigating the effects of oral CF on the acquisition of rule-based versus exemplar-based grammatical forms in an English-as-a-foreign-language (EFL) classroom setting. Furthermore, Lyster and Saito make a much needed contribution to the existing CF literature in their meta-analysis of classroom oral CF studies.

In the case of written CF, a key issue is whether the effect is to be examined in terms of learners' ability to revise an initial piece of writing or to incorporate corrections in a new piece of writing (which arguably serves as a better measure of acquisition). As pointed out earlier, the

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role of written CF has been hotly debated. This debate has spawned a number of empirical studies of written CF using quasi-experimental designs to investigate whether CF is effective at all, and, if it is, which types of CF are more effective. These studies fall into three major categories: (a) studies that have examined the effect of CF on learners' revised texts; (b) studies that have compared different types of CF—that is, feedback on form versus feedback on content, direct versus indirect correction, error codes versus underlining—and (c) studies that have investigated the effect of CF on new pieces of writing over time.

As Truscott (2007) pointed out, the fact that students are able to revise their papers does not constitute evidence that they will be able to transfer this skill to a new piece of writing. Nor do studies that have compared different types of CF demonstrate that written error correction affects acquisition unless these studies included a control group. Indeed, written CF research has suffered from a number of methodological limitations (e.g., the lack of a control group in Lalande, 1982, and in Robb, Ross, & Shortreed, 1986). For this reason, earlier research findings failed to provide clear evidence that written CF helps learners improve linguistic accuracy over time. However, more recent studies (e.g., Ellis, Sheen, Murakami, & Takashima, 2008; Sheen, Wright, & Moldawa, 2009) have provided evidence that written CF can promote interlanguage development, which disputes Truscott's (1996, 1999) claim that written grammar error correction is ineffective and even harmful.

To date, the effects of oral and written CF on SLA have been investigated independently of each other, and no study has systematically examined the relative efficacy of oral and written CF. Sheen's contribution to this special issue constitutes the first attempt at such a comparison. Additionally, Ferris (this issue) explores the potential connections between oral and written CF research while emphasizing the different agendas of SLA and L2 writing researchers.

WHAT TYPES OF CF ARE MOST EFFECTIVE?

Researchers who investigate oral CF have studied implicit versus explicit feedback and input-providing (e.g., recasts) versus output-prompting feedback (e.g., prompts in the form of elicitation, clarification requests, and repetition of error) while targeting just one or two linguistic structures. For example, Ellis, Loewen, and Erlam (2006) compared the effects of implicit CF in the form of recasts and explicit CF in the form of metalinguistic comments on adult English-as-a-second-language (ESL) learners' acquisition of regular past tense. They found no effect for either treatment on the immediate posttests, but the explicit CF group outperformed both the control group and the group that received implicit feedback on the delayed posttests. Sheen (2007a) also found

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that whereas explicit CF (in the form of metalinguistic comments along with the correct form) resulted in significant gains in learning in both immediate and delayed posttests, the implicit CF did not. Thus, in a classroom context, it would appear that explicit CF is more effective than implicit recasts.

Other experimental studies have investigated the relative effects of input-providing and output-prompting CF. Lyster (2004) investigated fifth-grade French immersion learners and compared the effects of recasts (as an input-providing strategy) and of a mixture of output-prompting CF strategies on the acquisition of gender marking on articles and nouns. The prompt group was the only group to outperform the control group on all eight measures of acquisition. In another study, Ammar and Spada (2006) investigated sixth-grade learners in intensive ESL classes: They compared the effects of recasts and prompts on their acquisition of possessive pronouns. Prompts were especially effective for learners who had pretest scores below 50%, whereas learners with pretest scores above 50% benefited similarly from both recasts and prompts. Taken together, these studies suggest that output-prompting feedback is more effective than input-providing feedback, at least in the case of learners who have begun to acquire the target feature. Building on this earlier research and the theoretical claims that input-providing and output-prompting feedback demand different types of processing (Lyster; Lyster & Izquierdo, 2009; Lyster & Mori, 2006), Yang and Lyster's contribution compares the effectiveness of oral recasts and oral prompts on language development in a Chinese EFL setting, whereas Lyster and Saito's meta-analysis examines 15 classroom-based studies to determine the effects of three different oral CF types on SLA.

Researchers who investigated written CF have compared direct versus indirect correction as well as various ways of providing indirect correction and, typically, have addressed a wide range of linguistic error categories. A number of more recent studies (e.g., Bitchener & Knoch, 2008; Ellis et al., 2008; Sheen, 2007b), however, have set out to investigate focused CF—that is, feedback directed at rectifying a specific linguistic error. These studies have shown that focused error correction leads to gains in linguistic accuracy and that the more explicit the feedback is, the greater the benefit for the students. However, these studies have all investigated the same grammatical feature—English articles—so it is not clear whether focused correction will prove generally effective in improving learners' linguistic accuracy. What these studies suggest is that written CF, at least when focused on a single feature, can be effective and that the investigation of written CF is a worthwhile endeavor.

It is clear that written CF is a complex phenomenon. Storch and Wigglesworth's contribution explores this complexity: They further our understanding of why some types of written CF may be more effective

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than others by reporting case studies that document ways in which individual learners respond to two different types of written CF as reflected in their subsequent texts. Sheen's study compares the effects of two types of CF that differ in terms of explicitness on both oral and written language use. Thus, the search for the most effective form of CF is clearly evident in the studies reported in this issue. Lyster and Saito, Storch and Wigglesworth, Sheen, and Yang and Lyster all help to advance our understanding of the role different types of CF play in L2 learning.

WHAT FACTORS INFLUENCE THE EFFECTIVENESS OF CF?

Attention has increasingly been paid to a number of factors that influence the effect of CF (e.g., Mackey, 2007). Three articles in this special issue address this question by exploring linguistic, contextual, and individual learner factors. Adding to the earlier meta-analytic studies of oral CF, Lyster and Saito examine the effects of a number of moderating factors that influence the effectiveness of the CF in a classroom context: (a) types of CF, (b) types and timing of outcome measures, (c) instructional setting (second vs. foreign language classroom), (d) treatment length, and (e) learners' age.

Storch and Wigglesworth examine the relationship between the type of errors learners made and their uptake and retention. Additionally, their article is noteworthy because it is grounded in sociocultural theory, and, to the best of my knowledge, there has been no previous study of written CF based on sociocultural theory. As noted, sociocultural theory emphasizes the importance of varying the strategies employed to suit the developmental level of the learner. This raises two key issues for further CF research: (a) How can the theory be applied in instructional contexts in which the teacher has to provide feedback in whole-class interactions rather than just in one-on-one interactions? (b) How can the (online) graduated approach to CF integral to sociocultural theory best be implemented, especially when the feedback takes the form of written comments on learners' texts? With regard to the last question, it remains unclear to what extent the delayed or offline and nonparticipatory nature of written CF can provide the scaffolding needed to construct a zone of proximal development for learners.

IS THERE AN APPROPRIATE METHODOLOGY FOR INVESTIGATING BOTH ORAL AND WRITTEN CF?

Historically, research on oral and written CF has drawn on different theoretical frameworks and different research methodologies. Oral CF has

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been investigated by SLA researchers who have been mainly concerned with how this type of feedback can assist the acquisition of a L2. In contrast, written CF has been investigated by L2 writing researchers who have been more concerned with how feedback aids overall writing development.

Most L2 writing researchers have adopted a process-oriented model of instruction to investigate the effects of written feedback (e.g., Ferris, 1999; Hedgcock & Lefkowitz, 1992). Thus whereas some experts such as Ferris (1999) view error correction as an important element of L2 writing pedagogy, other experts consider the correction of linguistic errors as of relatively minor importance or prefer to treat CF within the broader framework of how feedback, in general, can assist the development of L2 writing skills (Hyland & Hyland, 2006).

However, there is another way of viewing written CF. One can argue that instead of viewing the goal of teaching writing as that of improving the learners' writing skills, practice in writing can be seen as one form of output that, in conjunction with CF, can facilitate interlanguage development. In other words, instruction that incorporates written CF constitutes a technique to draw L2 learners' attention to linguistic forms in their own output and thereby facilitate acquisition. This alternative approach to L2 writing provides a way of bridging the gap between the L2 writing and SLA research paradigms.

It is somewhat surprising, however, that there has been little communication about CF between SLA and L2 writing researchers. Although it is true that writing researchers often cite studies of oral CF to support their findings and to develop arguments for or against written CF, or both (e.g., Ferris, 1999, 2004; Truscott, 1996, 1999), it is rare to find SLA researchers who discuss the findings of written CF studies. Additionally, until recently, L2 writing researchers have not benefited methodologically from CF research in SLA. As Leki (2000) pointed out, L2 writing research has lacked a sound methodological framework for investigating writing pedagogy. For example, whereas written CF studies (e.g., Polio, Fleck, & Leder, 1998; Robb et al., 1986) have typically been unfocused and compared outcomes in terms of overall improvement across a number of different grammatical structures, studies of oral CF in SLA (e.g., Han, 2002; Lyster, 2004) have focused on a specific grammatical feature and measured acquisition in terms of that feature. This special issue was conceptualized, in part, based on the belief that L2 writing research on CF can benefit from adopting the methodological practices of oral CF research in SLA.

The methodological limitations of much of the written CF research are now generally recognized (Ferris, 2004; Guénette, 2007). These limitations explain why the findings of written CF research are often incomplete or inconclusive (see, e.g., Truscott, 2007). One limitation is that written CF researchers have generally chosen to investigate unfocused CF.

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This is in direct contrast to SLA research that has almost invariably examined highly focused CF; that is, it has investigated the effects of correcting errors related to specific linguistic features. With more studies focused on written CF, it will be possible to examine an interesting theoretical issue—namely, whether the modality of the feedback (oral vs. written) constitutes a variable that influences its effectiveness. Sheen's contribution aims to bridge this gap between oral and written CF research by extending the methodology adopted from oral CF inquiries to the study of written CF.

However, there are some obvious and significant differences between written and oral CF, and these must be acknowledged. First, whereas oral CF typically occurs immediately after an error has been committed, written CF is delayed; that is, it is typically provided hours or days after the errors were committed. Second, written correction imposes less of a cognitive load on memory than oral CF, which typically demands an online cognitive comparison, which requires learners to rely heavily on their short-term memory. Third, written CF can be much more complex than oral CF (as reflected in the current SLA literature). It addresses many aspects of writing—for example, overall quality, grammatical accuracy, syntactic complexity, lexical features, content, mechanics, coherence and discourse features, and fluency (Polio, 2001). In contrast, oral CF (as a focus-on-form technique) is arguably much simpler because it only involves drawing attention to form in learners' erroneous utterances as these arise in communicative activities. For this reason, Ferris's article proposes that total convergence in the approach for investigating CF in the two media—oral and written—may not be possible or even desirable. That said, I would argue that the differences are more a matter of tradition than of necessity and that it is possible to devise a common methodology for examining oral and written CF (see Sheen, this issue).

The common methodology I have suggested is grounded in cognitive and psycholinguistic views of SLA. It should be noted, however, that sociocultural SLA has adopted a very different methodology based on the microgenetic method employed by Vygotsky (1978, 1987). Aljaafreh and Lantolf (1994), for example, developed a regulatory scale that reflects different levels of implicitness or explicitness in the feedback strategies employed by instructors while responding orally to written errors in one-on-one conferences. Aljaafreh and Lantolf explored the strategies the instructors used from one time to the next and showed that these instructors tried to use the least explicit strategy that would enable the learner to self-correct. Development was measured not just in terms of whether the learners could self-correct but also in terms of whether the level of assistance they needed decreased over time. Although such a technique clearly has considerable potential for promoting L2 development, its applicability in typical classrooms settings remains to be demonstrated.

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The interest in CF—reflected in this special issue of *SSLA*—is likely to continue because of the significance it carries for both SLA theory-building and language pedagogy. One of the key contributions CF research has made to date is to highlight the importance of taking into account multiple factors in explanations of SLA. In the case of CF, these factors include feedback type, error type, interaction type, mode (oral vs. written vs. computer-mediated), L2 instructional contexts, age, proficiency, L1 transfer, learner orientation, anxiety, and cognitive abilities. CF research is also of obvious relevance to language pedagogy: It helps to inform when, how, and how often learner errors should be corrected. CF is an ideal object of inquiry for researcher-teacher collaboration and constitutes an area of inquiry that can connect theory, research, and practice.

REFERENCES

Aljaafreh, A., & Lantolf, J. (1994). Negative feedback as regulation and second language learning in the zone of proximal development. *Modern Language Journal*, *78*, 465–483.

Ammar, A. (2008). Prompts and recasts: Differential effects on second language morphosyntax. *Language Teaching Research*, *12*, 183–210.

Ammar, A., & Spada, N. (2006). One size fits all? Recasts, prompts, and L2 learning. *Studies in Second Language Acquisition*, *28*, 543–574.

Bitchener, J., & Knoch, U. (2008). The value of written corrective feedback for migrant and international students. *Language Teaching Research Journal*, *12*, 409–431.

Chaudron, C. (1977). A descriptive model of discourse in the corrective treatment of learners' errors. *Language Learning*, *27*, 29–46.

DeKeyser, R. (1998). Beyond focus on form: Cognitive perspectives on learning and practicing second language grammar. In C. J. Doughty & J. Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 42–63). New York: Cambridge University Press.

DeKeyser, R. (2007). Skill acquisition theory. In B. VanPatten & J. Williams (Eds.), *Theories in second language acquisition* (pp. 97–113). Mahwah, NJ: Erlbaum.

Ellis, R., Loewen, S., & Erlam, R. (2006). Implicit and explicit corrective feedback and the acquisition of L2 grammar. *Studies in Second Language Acquisition*, *28*, 339–368.

Ellis, R., Sheen, Y., Murakami, M., & Takashima, H. (2008). The effects of focused and unfocused written corrective feedback in an English as a foreign language context. *System*, *36*, 353–371.

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

Ferris, D. R. (2004). The "grammar correction" debate in L2 writing: Where are we and where do we go from here? *Journal of Second Language Writing*, *13*, 49–62.

Gass, S. M., Mackey, A., & Pica, T. (1998). The role of input and interaction in second language acquisition: Introduction to the special issue. *Modern Language Journal*, *82*, 299–307.

Guénette, D. (2007). Is feedback pedagogically correct? Research design issues in studies of feedback on writing. *Journal of Second Language Writing*, *16*, 40–53.

Han, Z. (2002). A study of the impact of recasts on tense consistency in L2 output. *TESOL Quarterly*, *36*, 543–572.

Hedgcock, J., & Lefkowitz, N. (1992). Collaborative oral/aural revision in foreign language writing instruction. *Journal of Second Language Writing*, *4*, 51–70.

Hyland, K., & Hyland, F. (2006). Contexts and issues in feedback on L2 writing: An introduction. In K. Hyland & F. Hyland (Eds.), *Feedback in second language writing: Contexts and issues* (pp. 1–19). New York: Cambridge University Press.

https://doi.org/10.1017/S0272263109990489 Published online by Cambridge University Press

Keck, C., Iberri-Shea, G., Tracy, N., & Wa-Mbaleka, S. (2006). Investigating the empirical link between task-based interaction and acquisition: A meta-analysis. In J. M. Norris & L. Ortega (Eds.), *Synthesizing research on language learning and teaching* (pp. 91–131). Amsterdam: Benjamins.

Lalande, J. (1982). Reducing composition error: An experiment. *Modern Language Journal*, *66*, 140–149.

Leki, I. (2000). Writing, literacy, and applied linguistics. *Annual Review of Applied Linguistics*, *20*, 99–115.

Li, S. (2009, March). *The effectiveness of corrective feedback in SLA: A meta-analysis*. Paper presented at the meeting of the American Association of Applied Linguistics, 2009, Denver, CO.

Long, M. H. (1991). Focus on form: A design feature in language teaching methodology. In K. de Bot, R. Ginsberg, & C. Kramsch (Eds.), *Foreign language research in cross-cultural perspective* (pp. 39–52). Amsterdam: Benjamin.

Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In W. Ritchie & T. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 413–468). San Diego, CA: Academic Press.

Lyster, R. (2004). Differential effects of prompts and recasts in form-focused instruction. *Studies in Second Language Acquisition*, *19*, 37–66.

Lyster, R., & Izquierdo, J. (2009). Prompts versus recasts in dyadic interaction. *Language Learning*, *59*, 453–498.

Lyster, R., & Mori, H. (2006). Interactional feedback and instructional counterbalance. *Studies in Second Language Acquisition*, *28*, 269–300.

Lyster, R., & Ranta, L. (1997). Corrective feedback and learner uptake. *Studies in Second Language Acquisition*, *19*, 37–66.

Mackey, A. (2007). The role of conversational interaction in second language acquisition. In A. Mackey (Ed.), *Conversational interaction in second language acquisition: A series of empirical studies* (pp. 1–26). Oxford: Oxford University Press.

Mackey, A., & Gass, S. M. (2006). Pushing the methodological boundaries in interaction research: An introduction to the special issue. *Studies in Second Language Acquisition*, *28*, 169–178.

Mackey, A., & Goo, J. (2007). Interaction research in SLA: A meta-analysis and research synthesis. In A. Mackey (Ed.), *Conversational interaction in second language acquisition: A series of empirical studies* (pp. 407–452). Oxford: Oxford University Press.

Polio, C. (2001). Research methodology in second language writing research: The case of text-based studies. In T. Silva & P. K. Matsuda (Eds.), *On second language writing* (pp. 91–116). Mahwah, NJ: Erlbaum.

Polio, C., Fleck, N., & Leder, N. (1998). "If only I had more time": ESL learners' changes in linguistic accuracy on essay revisions. *Journal of Second Language Writing*, *7*, 43–68.

Robb, T., Ross, S., & Shortreed, I. (1986). Salience of feedback on error and its effect on EFL writing quality. *TESOL Quarterly*, *20*, 83–93.

Russell, J., & Spada, N. (2006). The effectiveness of corrective feedback for second language acquisition: A meta-analysis of the research. In J. M. Norris & L. Ortega (Eds.), *Synthesizing research on language learning and teaching* (pp. 133–164). Amsterdam: Benjamins.

Schmidt, R. (1995). *Attention and awareness in foreign language learning*. Honolulu: University of Hawai'i Press.

Schmidt, R. (2001). Attention. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 3–32). New York: Cambridge University Press.

Segalowitz, N., & Lightbown, P. (1999). Psycholinguistic approaches to SLA. *Annual Review of Applied Linguistics*, *19*, 43–63.

Sheen, Y. (2007a). The effect of corrective feedback, language aptitude and learner attitudes on the acquisition of English articles. In A. Mackey (Ed.), *Conversational interaction in second language acquisition* (pp. 301–322). Oxford: Oxford University Press.

Sheen, Y. (2007b). The effect of focused written corrective feedback and language aptitude on ESL learners' acquisition of articles. *TESOL Quarterly*, *41*, 255–283.

Sheen, Y. (2008). Recasts, language anxiety, modified output and L2 learning. *Language Learning*, *58*, 835–874.

https://doi.org/10.1017/S0272263109990489 Published online by Cambridge University Press

Sheen, Y., Wright, D., & Moldawa, A. (2009). Differential effects of focused and unfocused written correction on the accurate use of grammatical forms by adult ESL learners. *System*, *37*, 353–371.
Swain, M. (1985). Communicative competence: Some roles of comprehensible input and comprehensible output in its development. In S. M. Gass & C. Madden (Eds.), *Input and second language acquisition* (pp. 91–103). Rowley, MA: Newbury House.
Swain, M. (1995). Three functions of output in second language learning. In G. Cook & B. Seidlhofer (Eds.), *Principle and practice in applied linguistics: Studies in honor of H. G. Widdowson* (pp. 125–144). Oxford: Oxford University Press.
Truscott, J. (1996). The case against grammar correction in L2 writing classes. *Language Learning*, *46*, 327–369.
Truscott, J. (1999). The case for "the case for grammar correction in L2 writing classes": A response to Ferris. *Journal of Second Language Writing*, *8*, 111–122.
Truscott, J. (2004). Evidence and conjecture on the effects of correction: A response to Chandler. *Journal of Second Language Writing*, *13*, 337–343.
Truscott, J. (2007). The effect of error correction on learners' ability to write accurately. *Journal of Second Language Writing*, *16*, 255–272.
Vygotsky, L. S. (1978). *Mind in society*. Cambridge, MA: Harvard University Press.
Vygotsky, L. S. (1987). *The collected works of L.S. Vygotsky: Vol. 1. Thinking and speaking*. New York: Plenum Press.

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