Corrective Feedback

Can Corrective Feedback Bring About Substantial Changes in the Learner Interlanguage System?

Satoko Yamamoto¹

Teachers College, Columbia University

ABSTRACT

This paper explores the role of corrective feedback in communicative language classrooms. Seven empirical studies investigating the effectiveness of corrective feedback are examined to determine if corrective feedback can lead to substantial changes in learners' interlanguage systems over the long term and to find out what factors are necessary for effective feedback. The review of literature reveals that corrective feedback can have an impact on learners' interlanguage systems if teachers follow the necessary procedures: assessment of learners' needs, analysis of the nature of errors, and employment of methods that pinpoint errors to make learners notice a mismatch between their output and the target form. However, corrective feedback over a short period is not sufficient and the availability of numerous opportunities to receive corrective feedback and follow-up exposure seems to be a crucial factor in deciding the efficacy of feedback.

INTRODUCTION

Research on the efficacy of meaning-focused communicative approaches for learning English as a Second Language (ESL) reveals that input alone is not sufficient, especially for older learners, to acquire the target language to a high level of proficiency (e.g., Lightbown & Spada, 1999; Long, 1996; Long & Robinson, 1998). Swain (1995, 1998) emphasizes the role of output, maintaining that the attempt to produce the target language encourages learners to notice their linguistic problems precisely, to test hypotheses, and to promote reflection that "enables them to control and internalize linguistic knowledge" (Swain, 1995, p.126). Long (1991, 1996) and Long and Robinson (1998) propose focus on form, which "often consists of an occasional shift of attention to linguistic code features—by the teachers and/or one or more students—triggered by perceived problems with comprehension or production" (Long & Robinson, 1998, p.23). Focus on form is based on a cognitive psychological theory proposed by Schmidt

-

¹ Satoko Yamamoto is currently teaching English at Narita Seiryo High School in Japan. Correspondence should be sent to Satoko Yamamoto, 896 Tateyama Tateyama Chiba, 294-0036, Japan. E-mail: stkyamamoto@hotmail.com.

(1990, 1995) that noticing is necessary for input to become intake. Corrective feedback is considered to facilitate ESL development in that it can provide learners with opportunities to notice differences between output and input through negotiation of meaning (Long, 1996).

A number of studies have examined whether corrective feedback in a communicative or task-based language classroom is effective (e.g., Doughty & Varela, 1998; Long, Inagaki, & Ortega, 1998; White, 1991). There seems to be a general agreement that form-focused instruction is effective, at least in the short term (e.g., Ellis, 2002; Lightbown, 1998). However, Krashen (1992) still argues that the effect of form-focused instruction is "peripheral and fragile" (p.409). It is still not clear whether or not corrective feedback can bring about substantial changes in learners' interlanguage systems in the long term.

This essay attempts to address two questions: 1) whether corrective feedback has a long-lasting impact on the learner's language usage, and 2) if it does, what factors are necessary for corrective feedback to have long-lasting effects. It seems that corrective feedback, if provided properly and followed up with subsequent instruction or exposure in real life, can facilitate or accelerate acquisition. However, corrective feedback alone is not sufficient for the learner's long term automatic use of the targeted language. This essay has three parts. First, I will present a literature review of seven empirical studies. In the second part, I will discuss the two research questions. Lastly, I will draw conclusions and suggest implications for ESL instruction.

REVIEW OF THE LITERATURE

A number of researchers have shed light on the effectiveness of corrective feedback over the short and long term. White (1991) conducted a study with francophone learners of ESL in Quebec to examine the role of negative evidence in Second Language Acquisition (SLA). Learners were in grades 5 and 6 of an intensive ESL program that emphasized communication. There were two experimental groups: one received instruction in adverb placement and the other received instruction in question-formation. Seven hours of instruction were given by explicit teaching of contextualized activities and corrective feedback. The instruction lasted for two weeks. The researcher administered a pretest, two posttests (immediate and 5 weeks later), and a follow-up posttest one year later consisting of three written tasks on adverbs. The results of the two posttests revealed that the group who had instruction in adverb placement performed significantly better on the two posttests than the group who had instruction in question formation. However, the results of the follow-up posttest administered to the former group showed that the effects of instruction did not last in the long term. Therefore, White concluded that providing negative evidence is very effective in assisting ESL learners in learning certain forms, but does not have long lasting effects. White explained that lack of suitable follow-up instruction or exposure might account for the students' failure to retain the gained knowledge.

There has been considerable interest in the relationship between types of corrective feedback and their efficacy. Lyster and Ranta (1997) investigated types of corrective feedback and their relationship to learner uptake in a primary French immersion classroom. Four teachers provided corrective feedback on learner errors in speech production in 14 subject-matter lessons and 13 French language art lessons. The researchers classified feedback into six types: explicit correction, recasts, clarification requests, metalinguistic feedback, elicitation, and repetition. Lyster and Ranta also categorized learner uptake, a student utterance following the teacher's feedback, into two types: repair and need-repair, or in other

words, successful and unsuccessful responses.

The results revealed that the most frequent type of feedback was the recast, the teacher's reformulation of all or part of a student's ill-formed utterance, without the error. The recast accounted for about half the total feedback, and led to the least uptake (31% of the time). In addition, the recast never led to student-generated repair; the learner merely repeated what the teacher had said. In contrast, elicitation and metalinguistic feedback, providing the correct form explicitly by indicating that what the student said is incorrect and giving grammatical metalanguage that refers to the nature of the error, were less frequent (14% and 8% of the time, respectively), and were found to be effective in that they encouraged learners to generate repair (45% and 46% of the time, respectively). Lyster and Ranta (1997) explain that the low rate of uptake following the recast was accounted for by the fact that the teachers also used repetition of well-formed utterances to confirm and develop students' statements. As a result, students had to figure out whether the teacher was concerned about form or meaning, and sometimes failed to recognize the recast as corrective feedback. Lyster and Ranta concluded that corrective feedback can lead to learner uptake when there is "negotiation of form, the provision of corrective feedback that encourages self-repair involving accuracy and precision" and when cues are given to make students aware of the necessity of repair of ill-formed utterances (p. 42).

In more recent literature, researchers have devised more focused recasting to decrease its ambiguity. Mackey and Philip (1998) decided to examine the effects of negotiated interaction with intensive recasts on second language development with question formation. Adult learners at two private English schools in Sydney participated in this study. They were at beginning and lower intermediate levels in the intensive language program and their language backgrounds varied. They were classified into two groups according to their developmental levels with question formation. Then, the two groups were further divided in terms of the kinds of instruction given: interaction with or without intensive recast. The four groups were given three 15-25 minute treatment sessions, which involved three conversational tasks aiming at eliciting questions. The teachers were directed to recast question forms as much as possible. The researchers administered a pretest, three posttests (immediate, one week after, and four weeks after), using information gap tasks to elicit questions. The results of the tests showed that learners at the higher developmental level who were provided intensive recasts in negotiated interaction demonstrated a greater stage increase on the three posttests than learners who were not given intensive recasts. Learners at the lower developmental level did not show significant progress in spite of negotiated interaction with intensive recasts. Mackey and Philip also examined how the two groups who received recasts responded to them. They found out that the two groups at different developmental levels reacted to recasts in a very similar way and uttered very few responses following the recasts even if the group at the higher developmental level performed better on the posttests than the one at the lower developmental level. Accordingly, Mackey and Philip suggested that if the learner's developmental level is appropriate for instruction, recasts may eventually be effective for some learners, despite the absence of their immediate response.

Doughty and Varela (1998) investigated whether corrective feedback could be incorporated into a content-based ESL classroom and examined the effectiveness of the corrective feedback. ESL students in grades 6 through 8 (ages 11 to 14) had the instruction spread over four weeks. The researchers selected past time reference, simple past and conditional, as the target form based on 2 weeks of observation to assess the students' interlanguage. Doughty and Varela decided to use corrective recasting, which consisted of two phases: repetition of the learner utterance with rising intonation and added stress on the verb to draw learner attention to problematic linguistic features, and then recasting with falling intonation curve to provide the necessary target exemplar. Only errors concerning past time reference were

corrected. Corrective recasting was provided while students were engaged in communicative activities. The teacher also had students correct errors of the past in the video clip of their presentation. A pretest, a posttest, and a delayed posttest (2 months later) were conducted to examine the effectiveness of corrective recasting.

The results revealed that the experimental group showed significant positive developmental effects on their interlanguage, whereas the control group, which did not receive corrective feedback, showed no progress. The effect of the instruction on the part of the experimental group was maintained in the delayed posttest. Therefore, Doughty and Varela (1998) concluded that "the combination of communicative pressure and narrowly focused, frequent recasting" was effective (p. 137).

Muranoi (2000) conducted a study with Japanese college students on English as a foreign language class to determine if interaction enhancement plus explicit grammar instruction is effective in learning complicated rules. Learners were divided into three groups and provided three 30-minute sessions on the English article systems. While Groups 1 and 2 were engaged in the activities which presented obligatory contexts for the articles in realistic situations, interaction was enhanced by feedback on errors with articles; feedback was provided in the form of request for repetition to draw attention to problematic linguistic forms, and then, recasts were employed if learners did not repair their utterance. Group 1 was given explicit grammar explanation and Group 2 was given comments on the students' performance in terms of meaning. Group 3 did not have interaction enhancement and were given meaning-based debriefing. A pretest, an immediate posttest and a delayed posttest (five weeks later) were administered to examine the effects of interaction enhancement and explicit instruction. The results revealed that Groups 1 and 2 performed significantly better on both of the posttests, suggesting that interaction enhancement had positive effects on the restructuring of learners' interlanguage systems. It was also revealed that Group 1 outperformed Group 2 significantly. Muranoi decided that interaction enhancement plus explicit grammar instruction was more effective than interaction enhancement plus meaning-based debriefing. Muranoi also suggested that the learning of complex rules such as those in the English article systems can be facilitated by explicit instruction if it is provided with interaction enhancement, which involves a number of exemplars and implicit feedback.

Mackey, Gass, and McDonough (2000) reported similar results to those of Lyster and Ranta (1997). Mackey et al. examined how learners perceived corrective feedback in a study with adult learners in an ESL context and in an Italian as a foreign language (IFL) context. The learners were enrolled in language courses at a university in the U. S. The ESL learners had a variety of first language (L1) backgrounds. The IFL learners were native speakers of English. Corrective feedback was provided in the form of negotiation or recasts while students were working on a communicative task, and their performances were videotaped. Immediately following the activities, the learners watched the videotape. The tape was paused after feedback was provided, and then, the researcher asked the learner to recall their thoughts at the time. Mackey et al. classified the types of feedback according to the nature of error: morphosyntax, phonology, or lexis. They investigated the relationship between the types of correct feedback and their efficiency, or in other words, the degree to which learners recognized the target of feedback. The results showed that recasts were used mostly for morphosyntactic errors and the nature of errors at which the recasts were targeted was seldom perceived. In contrast, negotiation or combinations of recasts and negotiation were utilized mostly for phonological errors, and the nature of errors was perceived more accurately. Mackey et al. suggested that recasts might not be suitable for providing morphosyntactic feedback, at least in terms of learners' perception about the target of feedback.

Different findings were presented by Ellis, Basturkmen, and Loewen (2001) with respect to learner response to recasts. Ellis et al. conducted a study with adult ESL learners at a private English

school. Intermediate- and preintermediate-level students who had varied L1 backgrounds received two part instruction: the first part focusing on grammar forms and the second part on communication. Ellis et al. examined episodes in which two teachers provided feedback to students' utterances in 12 hours of communicative activities. The results showed that recasts were the most frequent feedback and were generally followed by uptake (72% of the time). Approximately 76% of uptake following the recast correctly repaired errors. More direct treatments such as feedback with metalanguage and explicit information were less frequent and were more frequently followed by uptake than recasts. The researchers attributed the high rate of uptake following recasts to the fact that students were adult learners who were motivated to improve their English and thus were cognitively able to pay more attention to linguistic forms. Ellis et al. acknowledged that learners were given form-focused instruction before the communicative activities and it might have influenced learners' attitudes to attend to form in general, although the degree of a match between the target forms in the first and second parts was low.

DISCUSSION

In the four empirical studies reviewed above that attempted to determine the effectiveness of corrective feedback (White, 1991; Mackey & Philip, 1998; Doughty & Varela, 1998; Muranoi, 2001), corrective feedback was seen to have an impact that could facilitate acquisition of the target language. However, it is controversial as to whether corrective feedback can be concluded to have long lasting effects on learners' free production, because the posttests in those studies were administered in settings where learners might have used their explicit knowledge. For instance, Muranoi (2000) utilized the same material for the oral story telling tasks in both pretest and posttest, and the learners had 30 seconds preparation time. Therefore, the results of the posttests do not provide sufficient evidence to claim that corrective feedback had an impact on their interlanguage system for spontaneous speech. Nevertheless, the research findings appear to present three crucial factors to be considered for the question of whether corrective feedback can be beneficial to SLA.

The extent of explicitness is one of the issues the teacher must consider in deciding the type of feedback to provide. Some teachers are concerned that corrective feedback might interrupt the flow of communication. Recasting has been employed frequently because it is considered as a relatively less obtrusive way to provide feedback. Some researchers claim that recasting is a powerful tool in that it can provide opportunities for learners to become aware of the mismatch between output and input without interrupting communicative flow (e.g., Doughty, 1999; Doughty & Varela, 1998; Long & Robinson, 1998). Doughty (1999) suggests that recasting can be effective if it is targeted at only limited linguistic features and is provided with a clear signal. However, learners might not recognize recasts as feedback or the nature of errors if the recasts are provided without cues or focus, as Lyster and Ranta (1997) and Mackey et al. (2000) found out in their studies. Lyster and Ranta (1997) and Lightbown (1998) maintain that explicit feedback can be provided without breaking the flow of communication if it is given in a short time and the class resumes the conversation. It is difficult to decide whether explicit or implicit feedback is better because teachers must take linguistic and non-linguistic elements of each setting into consideration, such as complexity of target forms, influence or interference from learners' native languages, level of proficiency, motivation, ultimate target level, and so forth. For instance, it has been suggested that explicit instruction combined with explicit metalinguistic feedback may be beneficial for students to understand complicated rules (Carroll & Swain, 1993). In addition, non-linguistic factors like

age and motivation might account for different results from similar feedback as the studies of Lyster and Ranta (1997) and Ellis et al. (2001) revealed. Yet it seems necessary for ESL teachers to signal that they are providing corrective feedback in a consistent way and to pinpoint errors, whether they employ explicit or implicit feedback, since the goal of feedback should be "to ensure that the learner notices a difference between his or her own utterance and the target form," not to have the learner make immediate behavioral changes (Lightbown, 1998, p. 193).

The second factor pertains to whether teachers take a proactive or reactive approach. In other words, in Doughty and Williams' (1998) definition, teachers plan in advance to produce obligatory contexts for a target form, or teachers react to learner errors when a need arises. Some researchers maintain that the reactive stance has advantages over the proactive stance. Long and Robinson (1998), and Doughty and Williams (1998) claim that the reactive stance corresponds to Long's (1991) original theoretical concept of focus on form that "focus on form overtly draws students' attention to linguistic elements as they arise incidentally in lessons whose overriding focus is on meaning, or communication" (pp. 45-46). Despite Long's theoretical explanation, the results of the studies reviewed above and the experience of the author of this essay, as an ESL learner and teacher, appear to suggest that the proactive stance increases efficacy of corrective feedback. That does not deny the effectiveness of the reactive approach as follow-up instruction after the proactive approach, or its necessity for advanced learners or heterogeneous classes. However, the proactive approach appears to involve three important phases that teachers must deal with.

First, in the proactive approach, teachers assess learners' levels and needs, and select target forms appropriate for corrective feedback as Doughty and Varela (1998) did in their study. This is of great importance, given that instruction too far beyond learners' developmental stage is not useful as Mackey and Philip's study (1998) showed. Other researchers such as Pienemann (1989) and Nicholas, Lightbown and Spada (2001) found that instruction was effective only for learners who were ready for pedagogical intervention. In addition, there are several kinds of learner errors, and not all the error types are targets for corrective feedback even if learners' interlanguage development stage is advanced enough. In some cases, learners make errors because they do not have accurate knowledge of the form or they are not aware of a mismatch between their explicit knowledge and output. In other cases, learners are fully aware of their errors, and right after they have uttered a sentence they notice their errors; they cannot produce correct forms in the first utterance due to some reasons, such as the influence of their native language. Only the former cases, in which learners do not have the accurate knowledge of the form or they are not aware of a mismatch between their explicit knowledge and output, are candidates for corrective feedback. The role of corrective feedback in the latter case is questionable, as corrective feedback does not play a role in having the learner notice the mismatch between their output and the target form: the learner is already aware of it. Probably it is only exposure or practice that could solve the problem. To the contrary, corrective feedback could be discouraging because the learner might feel frustrated for being corrected many times about what they are aware of but just do not have control over.

The second phase is to analyze the nature of learners' linguistic problems (e.g., influence from learners' native language). Han (2001) argues that teachers need to tune in to the elements that account for each error and draw learner attention to the problem so that feedback can "maximize its efficacy" (p. 585). Once the teachers find out the nature of error, they can decide what kind of instruction they should employ.

The third phase is concerned with the burden on the part of teachers in actual instruction moments. The proactive approach decreases the burden of providing appropriate feedback in the classroom. As Muranoi (2000) points out, if teachers predict when and where their learners might make

errors, teachers can provide "well-prepared and organized feedback" (p. 631). During instruction, a teacher must pay attention to both forms and meaning of learners' utterances, sometimes with a strong accent. Therefore, if a teacher takes the reactive stance, it requires high skills to notice and assess the need for provision of feedback and immediately to give corrective feedback that points out the nature of the error. It is difficult especially when the main focus of the class is communication or content of the subject and thus teachers need to maintain communicative flow constantly. In contrast, in the proactive approach a target form and a way to provide corrective feedback have been decided. Consequently, the proactive approach seems to provide teachers with a better chance to provide appropriate feedback than the reactive approach does. When teachers need to take the reactive approach, teachers might find it useful to employ relatively explicit methods to pinpoint error, or jot down learner errors and provide feedback later to have extra time to assess the need for pedagogical intervention.

The third factor is availability of the target form during and after the instruction. In the four studies that examined the effectiveness of corrective feedback reviewed above, namely White (1991), Mackey and Philip (1998), Doughty and Varela (1998), and Muranoi (2001), the treatment was provided extensively. It seems that extensive feedback is more likely to be beneficial than limited treatment. It should be noted that in White's study (1991) the effect of instruction was maintained in the posttest five weeks after the instruction, but not in the follow-up posttest one year later. White attributes the loss of the effect to lack of appropriate follow-up instruction. Although corrective feedback can facilitate acquisition (Doughty & Varela, 1998; Ellis, 2002b; Long, 1996), it might depend on frequency of the target form whether the learners can acquire automatic use in their spontaneous production (Ellis, 2002a). McLaughlin (1990), from the perspective of cognitive psychology, maintains that complex skills, such as second language learning, are learned through the initial attention, and skills become automatic through practice. Therefore, corrective feedback is beneficial in that it provides learners with opportunities to notice their linguistic problems and necessary exemplars. Yet, teachers as well as learners need to ensure that the effects of corrective feedback are maintained and increased by follow-up instruction, practice or exposure.

CONCLUSION

This essay attempted to determine whether corrective feedback has an impact on learners' actual use outside the classroom in the long term and what element is required so that corrective feedback can be effective. Based on the literature reviewed above, it seems that corrective feedback can have an impact on learners' interlanguage systems if it is provided properly; teachers are required to assess learners' needs, analyze the nature of error, and employ a strategy that signals the provision of feedback and makes learners notice a mismatch between their output and the target form. However, corrective feedback in a limited period is not sufficient for learners to maintain its effect. Availability of numerous opportunities to receive corrective feedback and follow-up exposure appears to be a crucial factor in retaining the effects of pedagogical intervention. Nevertheless, corrective feedback can play an important role in raising learners' awareness of their linguistic problems. Doughty and Varela (1998) reported in their study that the learners started to correct errors by themselves or each other's errors before the teacher provided recasts. Therefore, corrective feedback can trigger substantial changes in learners' interlanguage system.

Furthermore, the findings of the studies seem to have important implications for ESL teachers. First, corrective feedback is not a one-way process; the teacher must assess learner needs and the student

is the provider of necessary information (Han, 2001). It might be necessary for teachers to collect information constantly through observation, interviews, questionnaires, students' journals, and so forth. Second, SLA is a slow and non-linear process and the effect of instruction is gradual and cumulative (Long & Robinson, 1998). Therefore, teachers need to remember that a single lesson is not sufficient for changing learner interlanguage and might find it necessary to assess changes in the learner interlanguage system over a long period.

REFERENCES

- Carroll, S., & Swain, M. (1993). Explicit and implicit negative feedback: An empirical study of the learning of linguistic generalizations. *Study in Second Language Acquisition*, *15*, 357-386.
- Doughty, C. (1999). The cognitive underpinnings of focus on form. *University of Hawai'i Working Papers in ESL*, 18, 1-69.
- Doughty, C., & Varela, E. (1998). Communicative focus on form. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 114-138). Cambridge: Cambridge University Press.
- Doughty, C., & Williams, J. (1998). Pedagogical choices in focus in form. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 197-261). Cambridge: Cambridge University Press.
- Ellis, N. (2002a). Frequency effects in language processing. *Studies in Second Language Acquisition*, 24, 143-188.
- Ellis, R. (2002b). Does form-focused instruction affect the acquisition of implicit knowledge? *Studies in Second Language Acquisition*, *24*, 223-236.
- Ellis, R., Basturkmen, H., & Loewen, S. (2001). Learner uptake in communicative ESL classroom. *Language Learning*, *51*, 281-318.
- Han, Z-H. (2001). Fine-tuning corrective feedback. Foreign Language Annals, 34, 582-589.
- Krashen, S. (1992). The effect of formal grammar teaching: Still peripheral. *TESOL Quarterly*, 26, 409-411.
- Lightbown, P. (1998). The importance of timing in focus on form. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 177-196). Cambridge: Cambridge University Press.
- Lightbown, P. M., & Spada, N. (1999). *How languages are learned*. Oxford: Oxford University Press.
- Long, M. H. (1991). Focus on form: A design feature in language teaching methodology. In K. deBot, C. Kramsch, & R. Ginsberg, (Eds.), *Foreign language research in cross-cultural perspective* (pp. 39-52). Amsterdam: John Benjamin.
- Long, M. H. (1996). The role of linguistic environment in second language acquisition. In W. C. Ritchie & T. K. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 413-468). New York: Academic Press.
- Long, M. H., Inagaki, S., & Ortega, L. (1998). The role of implicit negative feedback in SLA: Models and recasts in Japanese and Spanish. *Modern Language Journal*, 82, 357-371.
- Long, M. H., & Robinson, P. (1998). Focus on form: Theory, research, and practice. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 15-41).

- Cambridge: Cambridge University Press.
- Lyster, R., & Ranta, L. (1997). Corrective feedback and learner uptake: Negotiation of form in communicative classrooms. *Studies in Second Language Acquisition*, *19*, 37-61.
- Lyster, R. (1998). Recasts, repetition and ambiguity in L2 classroom discourse. *Studies in Second Language Acquisition*, 20, 51-81.
- Mackey, A., Gass, S., & McDonough, K. (2000). How do learners perceive interactional feedback? *Studies in Second Language Acquisition*, 22, 471-497.
- Mackey, A., & Philip, J. (1998). Recasts, interaction and interlanguage development: Are responses red herrings? *Modern Language Journal*, 82, 338-356.
- McLaughlin, B. (1990). Restructuring. Applied Linguistics, 11, 113-128.
- Muranoi, H. (2000). Focus on form through interaction enhancement: Integrating formal instruction into a communicative task in EFL classrooms. *Language Learning*, *50*, 617-673.
- Nicholas, H., Lightbown, P. M., & Spada, N. (2001). Recasts as feedback to language learners. *Language Learning*, *51*, 719-758.
- Pienemann, M. (1989). Is language teachable? Psycholinguistic experiments and hypotheses. *Applied Linguistics*, *10*, 52-79.
- Schmidt, R. (1990). The role of consciousness in second language learning. *Applied Linguistics*, 11, 206-226.
- Schmidt, R. (1995). Consciousness and foreign language: A tutorial on the role of attention and awareness in learning. In R. Schmidt (Ed.), *Attention and awareness in foreign language learning* (pp. 1-63). Honolulu: University of Hawai'i Press.
- Swain, M. (1995). Three functions in output in second language learning. In G. Cook & B. Seidhofer (Eds.), *Principles and practice in applied linguistics: Studies in honor of H.G. Widdowson* (pp. 125-144). Oxford: Oxford University.
- Swain, M. (1998). Focus on form through conscious reflection. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 64-81). Cambridge: Cambridge University Press.
- White, L. (1991). Adverb placement in second language acquisition: some effects of positive and negative evidence in the classroom. *Second Language Research*, 7, 133-161.