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Conceptions of L2 Grammar: Theoretical Approaches and their Application in the L2 Classroom

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Chapter 5

Rethinking a Focus on Grammar: From Drills to Processing Instruction—Data from the French Subjunctive

Wynne Wong, The Ohio State University

Decades of research in second language acquisition (SLA) have illuminated the critical role that input plays in language acquisition. No matter what their theoretical framework, virtually all researchers would agree that L2 acquisition cannot happen without exposure to ample amounts of input (e.g., Gass, 1997). This fundamental realization has led to new conceptualizations about what effective grammar instruction should look like. This chapter briefly discusses how views about L2 instruction have changed over time as we have developed a fuller understanding of how languages are acquired. It then focuses on a type of grammar instruction that is informed by the theory of input processing known as processing instruction (PI), which includes structured input activities. Next, it presents new data from an empirical study on the French subjunctive to support the use of PI in the classroom along with new research directions within this framework. Finally, the chapter concludes by exploring implications for language program direction.

From Drills to Input Enhancement

The Drill Era

One of the earlier, most widely practiced teaching methodologies that made an attempt to link theory to practice was the audiolingual method (ALM). Based on structural linguistics and a behaviorist framework in psychology, the premise of ALM was that language learning was basically the result of habit formation, which was best developed through extensive drilling.

As rationalist and mentalist views moved to the forefront, language was viewed as a rule-governed entity, and meaningful language learning was advocated over rote learning. Those who attempted to bring together the behaviorist and rationalist views of language learning maintained that the theories of behaviorist psychologists, Chomsky, generative linguists, and cognitive psychologists were compatible, and they pushed for an eclectic approach to language learning that combined structural practice with meaningful language use (see the discussion in Wong & VanPatten, 2003). Paulston (1972) shared this view and proposed an approach to grammar instruction that consisted of giving learners grammatical rules followed by production activities; these activities would begin with mechanical drills and then move to meaningful followed by communicative drills. This approach has been termed *traditional instruction* (e.g., VanPatten & Cadierno, 1993).

Communicative Language Teaching

With the advent of communicative language teaching (CLT) in the 1980s, communication and communicative competence became the main goals of language learning, and L2 grammar instruction took on a more ambiguous role. In some CLT classrooms, teaching practices changed little. That is to say, even though instructors asked personalized questions in efforts to encourage communication, the goal of language practice often remained that of practicing a particular language form. As stated in Lee and VanPatten (2003), “although CLT may have caused a major revolution in the way that some people *thought* about language teaching, no major revolution occurred in the day-to-day *practice* of most language teachers” (p. 11). In fact, traditional instruction as advocated by Paulston (i.e., rules plus drills) remained a staple of many CLT classrooms for quite some time, and it continues to be the case in some classrooms today.

At the other extreme, in what was known as the “strong” form of CLT, grammar was virtually absent. Hinkel and Fotos (2002), for example, describe CLT as instruction that does not include “formal grammar instruction” (p. 4). Learners were instead presented with large quantities of “meaning-focused input containing target forms and vocabulary” (p. 4). This idea led some to conclude erroneously that grammar had no place in the CLT classroom. As discussed in Katz and Blyth (2007), one of the biggest misconceptions about CLT is “the presumption that this method considers grammatical accuracy unimportant” (p. 222). To highlight this point, they cite Savignon (2002), who states that “while involvement in communicative events is seen as central to language development, this involvement necessarily requires attention to form. Communication cannot take place in the absence of structure, or grammar” (as cited in Katz & Blyth, p. 222).

Krashen and Input

The reluctance to include grammar in some classrooms was perhaps due in part to the overdose of drills used in earlier methods that did not serve to develop any kind of communicative ability. Another reason why some might have shunned grammar could perhaps be attributed to the theoretical position articulated by Krashen—namely, that languages are acquired via exposure to comprehensible input alone. According to Krashen, if learners have access to an optimal amount of appropriate comprehensible input, then acquisition should occur naturally (Krashen, 1985).

Krashen’s views have certainly been debated and criticized, but no matter what position one takes regarding the issue of input and acquisition, one cannot deny that he has made a significant contribution to the field of SLA by underscoring the important role of input in L2 acquisition. While not all scholars may agree that input is a sufficient condition for SLA, there is no debate that it is necessary (see the discussions in Gass, 1997, and Wong, 2005).

Input Enhancement

With the realization that input is essential for L2 acquisition, along with the position that a focus on form may be beneficial, instructed SLA has increasingly moved toward the concept of input enhancement (IE) as a way of describing how outside

intervention might make a difference in the acquisition of formal properties of language. A term coined by Sharwood Smith (1981, 1991), IE is grounded in the idea that work with formal properties of language for the purposes of fostering acquisition is best done if (1) learner attention is simultaneously focused on form and meaning, and (2) the learner is actively processing input (VanPatten & Wong, 2006). In terms of classroom practice, this concept means that effective language instruction must (1) contain ample amounts of comprehensible input and (2) provide learners with opportunities to process input for both meaning and form.

Processing Instruction and Structured Input

A type of input enhancement that has been the focus of much attention and research is *processing instruction* (PI). Empirically investigated for the first time by VanPatten and Cadierno (1993), the conception of PI was influenced by two motivations: (1) the prevalent practice of traditional instruction (à la Paulston) and (2) the desire to design pedagogical practice that was grounded in contemporary theory and research in SLA. While few SLA scholars (if any) today would support the use of drills (in particular mechanical drills) as sound pedagogical practice in terms of developing underlying L2 competence (e.g., see Lightbown, 2000; Izumi & Izumi, 2004; Wong & VanPatten, 2003; Toth, 2006; and many others), drills continue to be indispensable in many classrooms and textbooks. Indeed, they are considered important by a good number of practitioners today.¹

As an input enhancement technique, PI is informed by a theory of input processing and by the strategies that L2 learners use to make form-meaning connections. The goal of PI is to help L2 learners create richer intake from input by having them engage in structured input (SI) activities that are designed to pull them away from inefficient processing strategies and toward more optimal ones (Wong, 2007).

VanPatten's Model of SLA

This model illustrates that acquisition is dependent on input and not on output, as only intake data are available for acquisition. The richer the input, the more likely that intake will be created; the more intake that is created, the more likely intake data will make it into the developing system. By the same token, it becomes more likely that learners will eventually be able to access data from the developing system as output for production (see also the model suggested by Gass, 1997).

Lee and VanPatten (2003) point out that traditional instruction (TI) (as defined earlier in this chapter) contradicts this model of SLA in that TI is exclusively output oriented: "Because it focuses on output, traditional grammar instruction engages those processes involved in accessing a developing linguistic system rather than those involved in forming the system" (p. 133). Lee and VanPatten describe TI with the metaphor of putting the cart before the horse, because learners are asked "to produce when the developing system has not yet had a chance to build up a representation of the language based on input data" (p. 33). PI, in contrast, was designed

to provide learners with rich input and the means to make form-meaning connections so that the potential for intake is maximized.

The Components of Processing Instruction

PI contains three components:

1. Learners are given information about how the target form works.
2. Learners are informed about a particular input processing strategy that might lead them not to notice and/or not to process the input correctly.
3. Learners are given structured input (SI) activities in which input has been manipulated to push learners to rely on the target form so as to get meaning.

The strategies referred to in component 2 come from VanPatten's model of input processing (VanPatten, 1996, 2004a). The model explains which strategies guide how L2 learners make form-meaning connections and why they make certain connections before others. The first principle of the model, the *Primacy of Meaning Principle*, states that learners process input for meaning before they process it for form (VanPatten, 2004a).² This means that when exposed to input, learners will try to understand the message the input conveys before paying attention to how that message is encoded linguistically. As a result, more meaningful items in the input will be processed before less meaningful ones, which implies that content words are probably the first items that learners process (*Lexical Preference Principle*). For example, learners of French may have difficulty processing the French subjunctive because the subjunctive form is redundant, as in the following sentence:

Je doute que Georges soit intelligent.
(I doubt that Georges is [-subjunctive form] intelligent.)

The subjunctive form *soit* expresses doubt. This form is redundant because the main clause of that sentence, *Je doute que*, also expresses doubt. Consequently, learners may have trouble processing the subjunctive form because they will likely rely on the more meaningful items in the input (*Je doute que . . .*) to get the same information that the subjunctive form encodes. This is, in essence, the *Primacy of Meaning Principle* and the *Lexical Processing Principle*. If we wish to use PI to help learners process subjunctive forms more efficiently, we would create SI activities that force learners to rely on the subjunctive form to determine whether doubt or certainty was expressed in an utterance, as in the following example:

The phrases below come from a magazine article about Ben Affleck. Indicate whether the author believes each idea or doubts each idea. Place an X under the opinion that fits with each phrase.

Je crois qu'il . . .
(I believe that he . . .)

Je doute qu'il . . .
(I doubt that he . . .)

1. *soit un bon acteur.*
(is [-subj] a good actor)

- | | | |
|--|--|--|
| | | 2. <i>sort avec beaucoup de jeunes filles.</i>
(goes out [-indic] with lots of young girls) |
| | | 3. <i>ait une nouvelle petite amie.</i>
(has [-subj] a new girlfriend) |

(Source: More items of the same/adapted from Farley, 2005.)

In this activity, learners are not able to rely on the main clauses to determine whether doubt or certainty has been expressed; they are forced to process the subjunctive form to get that information. This type of SI activity, which is called a *referential activity*, requires learners to pay attention to form to get meaning and have right or wrong answers to enable instructors to check whether they are making correct form-meaning connections.

Affective activities (another type of SI activity) do not necessarily have right or wrong answers. Instead, they require learners to express an opinion, belief, or some other affective response. These activities provide learners with positive evidence containing the target form as they are engaged in processing information about the real world (see Wong, 2005, for information on the creation of SI activities).

PI Research

Traditional Instruction versus Processing Instruction

Using a pretest/post-test design, VanPatten and Cadierno (1993) set out to compare PI as an instructional treatment with TI that included the use of mechanical drills. The target forms in this study were Spanish object pronouns and word order. The members of the PI group were first given explicit information about how object pronouns function in Spanish and were told that learners of Spanish have a tendency to think that the first noun they encounter is the subject. Following this instruction, subjects engaged in a series of SI activities that pushed them to interpret word order and object pronouns correctly. They were never required to produce the target forms. By contrast, the members of the TI group received an explanation of object pronouns (but were not given information about processing strategies) and then were given mechanical, then meaningful, then communicative output drills. A control group received no instruction or practice.

Results of a sentence-level interpretation post-test revealed that the PI group made statistically significant improvements, whereas the TI and control groups did not. On a production post-test, both the TI and PI groups showed the same amount of improvement; the control group did not improve. These results were maintained one month later.

Results of this study led to the conclusion that PI is more beneficial than TI: Not only did members of the PI group demonstrate improvements in their ability to interpret object pronouns, but their input processing of this structure also allowed them to produce the target form as well as the TI group did, even though the PI group never produced the structure during treatment. These findings led researchers to posit that PI resulted in some kind of change in the

learners' developing system. Drills, by comparison, merely permitted the TI group to perform well on a task that they had practiced during treatment.

Other studies that have found similar results using the same research design include those carried out by Cadierno (1995; Spanish past tense), Benati (2001; Italian future tense), Cheng (2004; *ser/estar*), and VanPatten and Wong (2004; French causative).³ VanPatten and Sanz (1995) demonstrated that the effects of PI may be generalized to assessment tasks that involve more complex cognitive processing such as a video narration task.

Processing Instruction, Structured Input, and Explicit Information

Another strand of studies (VanPatten & Oikkenon, 1996 [Spanish object pronouns]; Benati, 2004 [Italian future tense]; Sanz & Morgan-Short, 2004 [Spanish object pronouns]; and Wong, 2004b [French articles with negation]) set out to examine whether the beneficial effects found for PI were due to the SI activities, to the explicit information (EI) in PI, or to both. These studies typically used a pretest/post-test design as follows: The PI group received explicit information and structured input activities; the SI group received only the activities; and the EI group received only the explicit information.

Overall, these studies show that the beneficial effects of PI were attributed to the SI activities and not to the EI, because while SI and PI treatments were significantly better than the EI treatments, there was no difference between the SI and PI treatments. In the case of Benati (2004) and Wong (2004b), EI also made gains but these gains were not significantly better than those from SI. In a computer-assisted learning experiment, Sanz and Morgan-Short (2004) also found similar results.

Researchers posited that SI activities alone were effective because unlike other input activities, SI activities are created with learners' processing strategies in mind and push learners to make correct form-meaning connections from input (see Wong, 2004a). Marsden (2006) validated this position when she demonstrated that not all input activities are created equal. This study compared SI activities with regular input activities that did not require subjects to process form for meaning. Marsden found that those who engaged in SI activities performed significantly better on post-tests that assessed knowledge of target forms than those who received regular input activities that were not based on learners' processing strategies.

A study with a slightly different outcome was conducted by Farley (2004), who found that PI was better than SI (there was no EI group) on both an interpretation task and a production task on the development of the Spanish subjunctive. Farley attributed this difference to the nature of the target form. He proposed that while linguistic features such as tense and agency have a transparent form-meaning relationship, mood may not be as clear to learners; consequently, the explicit information made a difference in this case.

Processing Instruction and Output

Another branch of PI research compares PI to treatments that involve output. Since it had become increasingly clear that mechanical drills do not affect acquisition,

these studies compared PI to meaning-rich output. Before examining these studies, however, a brief discussion of the role of output in SLA is warranted.

In the discussion of VanPatten's model of SLA, we saw that one role that output plays in SLA is in accessing linguistic data that have been internalized. In other words, input is responsible for developing the implicit linguistic system, whereas output is responsible for accessing data from the system, which ultimately leads to fluent and accurate use of the L2. Some scholars also posit that output may play roles in SLA that go beyond developing fluency and accuracy.

Swain's output hypothesis (1993, 1995), for example, attributes at least three roles to output: (1) hypothesis testing, (2) metalinguistic analysis, and (3) noticing. Swain states that when L2 learners are pushed to produce output, they move from a purely semantic to a syntactic analysis of language as they become aware of—that is, *notice*—what they can and cannot say. In other words, learners may very well be able to comprehend input without having to analyze the syntactic structure of utterances, but when they are pushed to produce output, they are forced to pay attention to sentence structure and the way in which forms are encoded. VanPatten (2003, 2004b) agrees with Swain's position that output can promote noticing: "It is theoretically possible that some aspects of the input would not be processed or noticed if learners did not have experience making output. Making output may push them to be better processors of input, something they might not do otherwise" (2003, p. 69).

Given these positions, we may conclude that both input and output can potentially have an impact on the developing linguistic system. In other words, output can also be a form of input enhancement. What remains unclear, however, is *how direct* output's role in developing underlying competence in SLA is. To date, no clear empirical data have been made available to answer this question. While few would dispute that output may play a facilitative role, there are currently no data to support that this role is direct: "No theory to date has articulated any mechanisms that would lead output to provide data for the developing system" (VanPatten, 2003, p. 68). Given current existing data, we may perhaps summarize the roles of input and output as follows:

- In terms of developing underlying competence, input is essential and output is beneficial.
- In terms of developing fluency, both input and output are essential.

Studies that have compared treatments containing meaning-based (as opposed to mechanical) output to PI have overall found facilitative effects for output. Farley (2001a, 2001b) compared PI to meaning-based output instruction (MOI) on the development of the Spanish subjunctive. The learning materials for the MOI group were identical to the PI group (explicit information and practice activities). The difference was that while the PI group engaged in structured input (SI) practice, the mode of the MOI group activities was output based (with vocabulary and number of activities held constant). In the 2001a study, Farley found that PI was better than MOI on the interpretation task but that the two groups were not significantly different on the production task. In the 2001b study, Farley found no differences between groups on either measure. Farley (2001b) suggested that the MOI group may have been able to perform as well as the PI group on the interpretation task

because the review of answers in the MOI treatment also served as incidental input for those subjects. In other words, one person's output becomes input for another person. Additionally, an interesting finding in this study was that while the MOI group's performance declined on delayed post-tests administered one week later, the PI group's performance did not change.

Benati (2005) compared the effectiveness of PI, MOI, and TI on the development of L2 English simple past tense operationalized as an interpretation and a production task. On the interpretation task, the PI group outperformed both the MOI group and the TI group, with no significant difference between the MOI and TI groups being observed. On the production task, no significant differences among any of the three groups were identified. Benati's conclusion was that PI is not only better than TI, but also more effective than MOI; therefore, he advocated that input practice should precede output practice.

Morgan-Short and Wood Bowden (2006) investigated whether meaningful output-based instruction (MOBI) and practice could, in conjunction with input, lead to linguistic development (also operationalized as an interpretation and production task) of Spanish object pronouns. Overall, the results of their study showed that on an interpretation task, both the PI and MOBI groups outperformed a control group. On the production task, only the MOBI group outperformed the control group, but neither the PI group nor MOBI group outperformed the other. These researchers concluded that MOBI was as effective as PI. Interestingly, on the delayed post-tests administered one month later, as in the study conducted by Farley (2001b), the performance of the MOBI group declined (but was still better than at the time of the pretest), while the performance of the PI group remained the same.

Overall, this collection of output studies supports the conclusion that when output is meaning based, output plays a facilitative role in promoting linguistic development of various target forms (at least as operationalized in the collection of studies reviewed). This role is evidenced by the finding in all the studies that output treatments are always as effective as PI treatments on production tasks. For the interpretation tasks, the results are mixed. While Farley (2001b) and Morgan-Short and Wood Bowden (2006) found equal effects for PI and meaning-based output treatments, Farley (2001a) and Benati (2005) found PI to be superior to meaning-based output. In particular, Benati found that PI was superior to output practice regardless of whether the output treatment contained mechanical practice (TI) or not (MOI). Thus, while data exist to support the notion that output may play a facilitative role in L2 development, more research is needed to understand how input and output may separately and together enhance SLA, and to address some of the inconsistencies observed across studies.

The Present Study

The present study builds on existing PI research by comparing the effectiveness of five instructional treatments: processing instruction (PI), traditional instruction (TI), meaning-based output instruction (MOI), structured input alone (SI), and explicit information alone (EI) using a pretest/post-test design similar to the studies

reviewed. In addition to comparing PI to TI and MOI, this study investigates the individual components of PI—that is, the explicit information and structured input activities that are a part of PI. The study also provides data for a different linguistic feature, the French subjunctive.

Research Questions

The following research questions motivated the study:

1. What are the relative effects of PI, TI, MOI, SI, and EI on the development of the French subjunctive as measured by a sentence-level interpretation task?
2. What are the relative effects of PI, TI, MOI, SI, and EI on the development of the French subjunctive as measured by a sentence-level production task?

Target Form

The target form for this study was the French subjunctive used with expressions of opinion (e.g., *Il est bizarre que . . .* /It is bizarre that . . .).⁴ In general, when an opinion is expressed in a main clause in French (*Il est bon que . . .* [It is good that . . .]), the verb in the subordinate clause takes the subjunctive form. Conversely, if the main clause expresses a fact (*Il est évident que . . .* [It is evident that . . .]), the verb takes the indicative form.

Il est vrai que Sarkozy est un ami des Etats-Unis.

(It is true that Sarkozy is-[indicative form] a friend of the United States.)

Il est bon que Sarkozy soit un ami des Etats-Unis.

(It is good that Sarkozy is-[subjunctive form] a friend of the United States.)

As discussed earlier, learners may have difficulty processing the subjunctive form because the information expressed by the subjunctive (i.e., opinion) is already contained in the main clause of the sentence (the Primacy of Meaning/Lexical Preference Principles).

Participants

Eighty-three subjects participated in this study. Participants were university students from six sections of a fourth-quarter French course. All were native speakers of English and had not received any formal instruction on the target structure prior to treatment. Each section was randomly assigned to one of six groups: PI, TI, MOI, SI only, EI only, and a control (C) group. To be included in the final data pool, participants had to have been present for the pretests, full treatment, and post-tests. Additionally, they had to have scored 60% or lower on the pretests for inclusion. Final *n* sizes were PI = 17,⁵ TI = 15, MOI = 15, SI = 12, EI = 16, and C = 8.

Materials

Five treatment packets were designed for the study, one for each instructional group. The PI packet contained EI about the meaning and function of the French

subjunctive. To alert participants to the processing problem, they were told that the subjunctive verb ending is redundant and were told to pay attention to the verb form despite its redundancy. Eight SI activities followed this information. These activities pushed participants to rely on the subjunctive form rather than on the main clause to determine whether the information expressed was an opinion (subjunctive) or a fact (present indicative).

Members of the SI group received these same eight activities but were not given the EI. The EI group received the EI only without any practice activities. The MOI group received the same EI as the PI and EI groups plus eight practice activities. The subject matter, vocabulary, and number of tokens were identical to the activities in the SI and PI groups, except that the type of practice for this treatment was meaningful output.

The TI group received basically the same explicit information as the PI, EI, and MOI groups. However, following the model of VanPatten and Cadierno (1993), the TI group was not given information about the processing strategy because this is not a typical procedure of TI. This group also received eight practice activities that were identical in subject matter, content, and number of tokens to the activities given in the PI, MOI, and SI groups. The difference was that the nature of practice here involved a combination of mechanical, meaningful, and communicative drills.

The interpretation task consisted of 10 target items and 10 distracter items, and required subjects to choose between two main clauses that were written on an answer sheet. Participants also had the option of responding that both clauses were correct or that neither was correct. The production task consisted of a 16-item sentence-completion task: Eight items were distracters, and eight were target items. Subjects had to complete sentences with appropriate verb forms. One version of each task was used as the pretest; the other version was used as the post-test.

Procedure

All testing and treatment were conducted in participants' regular classrooms by the researcher. All participants were pretested two weeks before treatment. Treatment lasted one day. On the treatment day, the PI, MOI, and TI groups first read their respective explicit information with the researcher and completed the practice activities. During the activity phase, participants were told whether their responses were correct or incorrect, but they were not given any explanation as to why. After completing the last activity, participants were immediately given the interpretation post-test, followed by the production post-test. The members of the SI group completed their practice activities only and then immediately took the two post-tests. The members of the EI group read the explicit information and then engaged in a cultural lesson and reading activity that were unrelated to the target structure. Following this activity, they were given the post-tests. The members of the control group received no instruction, and they were given the pretests and post-tests only.

Scoring

Only target items were scored. On the interpretation task, one point was awarded for each correct response, with the maximum score being 10. On the production

task, a maximum of two points was awarded for each of the eight target items, for a maximum score of 16. Two points were awarded if the mood and spelling were correct; one point was awarded if there was a clear attempt to use the subjunctive but the response contained a minor spelling error.

Results

Two analyses of variance (ANOVAs) were conducted on the pretest scores: one for the interpretation task and one for the production task. The analyses revealed no significant difference between groups before treatment on either task.

Interpretation Task

A repeated-measures ANOVA revealed a main effect for treatment, $F(5, 76) = 9.643$, $p < .0001$; a main effect for time, $F(1, 76) = 78.393$, $p < .0001$; and an interaction between treatment and time, $F(5, 76) = 6.293$, $p < .0001$. All groups made gains except for the control group. A post hoc Fisher's PLSD confirmed that all five treatment groups were significantly better than the control group. There was no difference between the PI and MOI groups, and both groups demonstrated significantly better performance than the TI and EI groups. No difference was seen between the TI and EI groups, nor was there a significant difference between the PI, MOI, and SI groups, or between the SI and EI groups.

Production Task

A repeated-measures ANOVA revealed a main effect for treatment, $F(5, 77) = 4.791$, $p < .0007$; a main effect for time, $F(1, 77) = 202.990$, $p < .0001$; and an interaction between treatment and time, $F(5, 77) = 10.751$, $p < .0001$. All groups except the control group made gains. A post hoc Fisher's PLSD revealed that all treatment groups except for SI were significantly better than the control group. The performance of the MOI group was significantly better than that of the TI group, and there was no difference between the TI and EI groups. The performance of the PI group was also not significantly different from that of any of the other four treatments (MOI, TI, SI, EI).

Discussion

Interpretation Task

The finding on the interpretation task that PI = MOI corroborates the findings of Farley (2001b) and Morgan-Short and Wood Bowden (2006), but conflicts with the findings of Farley (2001a) and Benati (2005), who found that PI > MOI. The finding in this study that PI and MOI were equally effective allows for the conclusion that both the SI activities and the MOI activities were successful in helping learners make form-meaning connections, thereby enabling them to process the French subjunctive with some success. This outcome may reflect the fact that both activity types were designed to help learners connect form to meaning, and perhaps the possibility that the output in the MOI group also served as incidental input for participants in this group. The finding that the performance of both the PI and MOI groups was better than that of the EI group, and the fact that there

was no difference between the PI and SI groups' performance, also confirms that the EI did not have any significant impact on the results.

This result corroborates the findings of previous studies that investigated the separate effects of SI and EI in PI and found that the beneficial effects for PI were due to the SI activities and not to the EI received: VanPatten and Oikkenon (1996), Benati (2004), Sanz and Morgan-Short (2004), and Wong (2004b). As in the study conducted by Wong (2004b), the performance of the EI group was also significantly better than that of the control group, which suggests that EI did help subjects make some gains on the task.

What might explain why the PI treatment was significantly better than the MOI treatment in the studies carried out by Farley (2001a) and Benati (2005)? In the case of Benati (2005), this finding may be attributed to the different linguistic structure used (i.e., English simple past) and the fact that the subjects' L1s were not English. Virtually all studies conducted under the PI framework have used native speakers of English as participants. Perhaps it required more effort for Chinese and Greek speakers to produce utterances/sentences containing the simple past tense in English, and this in turn had a negative effect on their ability to process the form on the interpretation task. The case of Farley (2001a) is much more difficult to explain, especially given that this researcher found, in a very similar study with the same target structure (Farley 2001b), that the PI and MOI treatments were equally effective (see the earlier discussion pertaining to Farley, 2001a).

Given the results of previous PI studies, the finding on the interpretation task that $PI > TI$ was expected, allowing us to generalize previous findings to a new target form, the French subjunctive. This study provides further evidence to support the contention that instruction is more effective when it is designed to help learners process input better, as opposed to instruction that is drill oriented. However, the finding that $MOI > TI$ contradicts the results obtained by Benati (2005), who found that PI was better than both MOI and TI on interpretation, whereas there was no difference between MOI and TI.

If we take the position that output is beneficial, provided that it is meaningful (as opposed to mechanical) and helps learners make form-meaning connections, then we should expect $MOI > TI$ and $MOI = PI$, as supported by the results of the present study. So why did Benati find that PI was better than both MOI and TI, and why was there no difference between MOI and TI? A plausible explanation may go back to the nature of the target structure (simple past tense in English) and the subjects' L1s (Greek/Chinese). It is possible that subjects in the MOI condition produced output too soon, perhaps before form-meaning connections were made or strengthened. Even though the output in MOI was meaningful, and even though subjects were exposed to incidental input, the nature of the L1s and the different target structure in Benati (2005) might have exhausted available processing resources and, as a result, did not allow these subjects to process the forms as well as the subjects in the PI group (who did not produce) could.

In the present study, as well as in the work of Farley (2001b) and Morgan-Short and Wood Bowden (2006), it appears that when output was meaningful and contained incidental input, output did not tax learners' processing resources to the same degree as it might have for subjects in Benati's study. Consequently,

output (when it was meaningful) did not have any detrimental effects on the subjects' ability to process the target forms. This possibility, however, is speculative and without empirical support.

Production Task

The finding that the effects of PI were just as good as those of MOI and TI on the production task corroborates previous findings by Farley (2001a, 2001b), Benati (2005), and Morgan-Short and Wood Bowden (2006). These four studies and the present study also support findings from previous PI studies (Benati, 2001; Cadierno, 1995; VanPatten & Cadierno, 1993; VanPatten & Wong, 2004), which revealed that not only PI is effective in helping learners interpret different linguistic forms, but their input processing also allowed participants to access the target forms for production, even though they never produced the target form during treatment.

The finding that $MOI > TI$ merits closer examination, because it contradicts the findings of Benati (2005), who found no difference between PI, MOI, or TI on his production task. In the present study, MOI was not significantly different from PI, but it was significantly better than TI. Because these are the only two studies to date that have examined TI and MOI together, it is difficult to offer a definitive explanation. Perhaps the nature of the two production tasks used affected the study outcomes. The French task required participants to distinguish between required use of the subjunctive mood and other verb tenses (i.e., present and past indicative) and then produce the correct subjunctive form where needed. The task in the Benati (2005) study called for subjects to write sentences in the simple past tense to describe pictures; participants were not required to make a distinction between when to use the target form and other verb forms/tenses. Thus we may speculate that processing meaning during practice activities in the French study was more critical because on the post-test, in addition to producing the subjunctive form, participants had to decide whether a sentence required the subjunctive.

The finding on the production task—namely, that PI was not significantly better than SI—supports the finding of earlier studies that demonstrated SI activities alone were sufficient to have an impact on production. However, the finding in this study that the performance of members of the SI group was not significantly better than that of members of the EI and control groups also suggests that the EI played a bigger role in the production task here than in those previous studies that also investigated the separate effects of SI and EI. It may be, as Farley (2004) suggests, that the subjunctive may privilege EI more than some other target structures.

A more recent study that supports this possibility has been carried out by Fernandez (2008). This study compared the role of EI on the development of the Spanish subjunctive to word order/object pronouns with L1 English speakers. Four treatment groups were used: (1) subjunctive + EI; (2) subjunctive – EI; (3) word order/object pronouns + EI; and (4) word order/object pronouns – EI. As subjects performed computerized SI activities, a program tracked their responses to examine how many trials it took before participants began to make correct form-meaning connections. Fernandez's results showed a clear effect for EI on the subjunctive but not for word order/object pronouns. In other words, participants who received

EI before doing SI activities with the subjunctive demonstrated fewer trials to criterion than those who did not receive EI. By comparison, for the word order/object pronoun activities, whether participants received EI prior to these activities did not make any difference.

Fernandez attributes these results to the nature of the target structures. Like Farley (2004), she posits that the subjunctive may favor EI more than some other structures. She goes on to explain that in the case of the subjunctive, the processing strategy needed to complete the activities successfully already existed in the subjects' L1. Thus, in a sense, they were applying an existing processing strategy to a new feature (see Fernandez, 2008) and were consequently able to activate their explicit knowledge to complete the task.

Another possible reason why EI might have played a larger role in this study could be that producing the French subjunctive was a more difficult task because many of the subjunctive verb forms in this study were irregular forms. Furthermore, French words, in general, are not written as they sound. For example, in the phrase *Il ait* (translation: He has-[subjunc]), the *-t* in the verb *ait* is not pronounced. Given these factors, EI might have helped subjects to monitor and perform better on the production task.

Summary of PI Research

One of the most striking findings that we may glean from the collection of PI studies reviewed, including the present study, is that PI is always *as effective as* or *better than* other instructional treatments (TI, MOI, SI, and EI). Furthermore, this finding may be generalized to a variety of linguistic features in different L2s. A limitation of this line of research is that some of these studies offer results only in the short term. At the same time, in those studies that did include delayed post-tests (from one week to one month later), overall PI treatment groups maintained their results on delayed measures (Benati, 2001, 2004; Cadierno, 1995; Cheng, 1995; Farley, 2004; VanPatten & Cadierno, 1993) but output groups declined (Farley, 2001b; Morgan-Short & Wood Bowden, 2006) from the first post-test to the second.

It is possible, as some have suggested, that PI effects are more stable than other instructional treatments. In a study that measured the longest long-term effects of PI (spanning eight months after treatment), VanPatten and Fernandez (2004) found that on the delayed post-tests, learners still performed better than they did before the PI treatment.⁶ Thus at least some evidence supports the notion that PI is not only effective, but its effects are also durable.

New Directions in PI Research

Research related to PI has continued along two strands: (1) research on input processing itself (i.e., what learners do independent of instructional efforts) and (2) research on the effects of PI from a variety of perspectives and comparisons.

As an example of novel research on input processing, a study was recently conducted to investigate the very processing strategies delineated by VanPatten's

model of input processing. In a three-part study using both online and offline procedures, VanPatten and Keating (2007) set out to examine whether L2 temporal reference processing is influenced by L1 processing procedures, and whether L2 learners can achieve native-like processing abilities. In Experiment 1, native and non-native speakers of Spanish read Spanish sentences that contained an adverb that either matched or did not match the inflection of the verb. Eye movement data and comprehension question responses revealed that beginning and intermediate learners of Spanish relied on adverbs to resolve temporal conflicts, whereas advanced learners and native speakers relied on verb inflections. In Experiment 2, off-line data showed that L1 English speakers overwhelmingly relied on adverbs to resolve temporal conflicts in their L1, which suggests that the beginning and intermediate learners in Experiment 1 were using an L1 strategy to interpret the Spanish sentences. Interestingly, in Experiment 3, data from Spanish L1 speakers learning ESL showed that these beginning English learners also relied on adverbs and not verb inflections, suggesting that there was no transfer from Spanish. VanPatten and Keating reach two conclusions based on this evidence:

- The reliance on adverbs is a universal strategy (at least as a starting point) for processing temporal reference (supporting the Lexical Preference Principle).
- Native-like processing is attainable in adult SLA (at least for the type of processing they investigated).

In terms of PI research, some work is emerging that moves beyond the sentence-level focus of the research carried out to date. As one example, Wong (in progress) is investigating PI at the discourse level with a series of reading activities and comprehension questions that require learners to pay attention to target forms and then respond to questions about what they have read. The results of this study will allow researchers to examine whether the documented success of SI activities may be generalized to discourse-level input. Other studies are in progress by Benati and Lee examining the secondary effects of PI: Will learners who receive training for one type of processing strategy for one specific form transfer the use of that strategy to other forms without further instruction in PI? These new research directions, as well as others, demonstrate that PI continues to be an active area of empirical inquiry.

Conclusion and Implications for Language Program Direction

This chapter has discussed how the profession's views about L2 grammar instruction have changed as theory and research in SLA have evolved. Advances in SLA research in the last decades have challenged us to reexamine—and even abandon—some once commonly held notions about L2 acquisition. It is now accepted (at least in research circles) that language acquisition is not habit formation and that practice does not make perfect when it is noncommunicative or does not involve meaning. This shift, in turn, has given us insight into what effective L2 instruction needs to look like. No one would dispute today that effective L2 instruction needs to include the following

components: (1) an abundance of L2 input, (2) the means to make forming-meaning connections, and (3) opportunities to produce meaningful output.

One type of grammar instruction—PI—meets these criteria, and the new data from the study with the French subjunctive support the use of PI as an effective pedagogical tool in the classroom. The results of this study, coupled with findings from previous studies conducted under the PI framework, support current theoretical positions in SLA that (1) input is essential to successful SLA and (2) output is beneficial to SLA provided that the output is meaningful and involves opportunities for learners to receive input. New directions in PI research underscore that this line of investigation provides a rich research agenda for the future.

In discussing PI at length, the goal here is not to give the impression that PI is the only effective way to facilitate the acquisition of formal properties of language. Instead, the goal in this chapter is to demonstrate that PI is grounded in theory and research in SLA, and that it constitutes one example of an effective pedagogical tool for L2 instruction. Like most input enhancement/focus-on-form techniques, PI is meant to be used in conjunction with other instructional activities. Thus it is something that can be “added to” CLT; it is not a method or approach in and of itself. The wide array of instructional interventions that exists today as a result of different active research agendas in instructed SLA provide evidence that we have made much progress in the profession. At the same time, unfortunately, this progress has yet to be reflected in current published pedagogical materials. As noted by Katz and Blyth (2007):

Despite the numerous studies that have been conducted on teaching grammar, little of this research has been incorporated into the textbooks. Why is there such a disparity between the findings in Second Language Acquisition (SLA) and Applied Linguistics research and their application to the classroom? The answer is not clear. (p. 13)

Given this present lacuna, this chapter concludes by offering some ideas to language program directors (LPDs) to implement the focus-on-form technique delineated in this chapter—that is, structured input (SI) activities—into their existing language programs. For ideas on how to implement other SLA research-based approaches such as consciousness-raising tasks, structured output, and discourse analysis, see the work of Katz and Blyth (2007).

Create SI Activities as Supplementary Materials

In the language program that this author directs, I incorporate SI activities into the curriculum by training instructors (mostly graduate teaching associates) to create them as supplementary materials. Instructors first learn how to create SI activities in the methods course that all new instructors are required to take under the rubric of *grammar instruction*. They read Chapter 7 (entitled “Processing Instruction and Structured Input”) in Lee and VanPatten’s book (2003) in preparation, and we spend one class period in a computer lab creating SI activities for different target structures in groups of two or three people. Students share the activities that they have created in their groups with the rest of the class, and we critique the activities together. Instructors subsequently create their own SI activities to be used in the

classes that they currently teach for an upcoming target structure and turn the activities (as well as a self-critique of how the activity worked in the classroom) in to the course instructor for a grade.

During course section meetings, my course supervisors ask instructors (both new and experienced instructors) to bring some of the SI activities that they have created so they may be shared with other instructors. The course supervisors and I also share the bank of SI activities that we have created over the years in electronic format with all instructors so they can easily modify the context (if needed) to use in their own classes if they choose to do so. Good resources on the creation of SI activities include the work of Farley (2005), Lee and VanPatten (2003), and Wong (2005).

Adapt Existing Materials in Textbooks

As noted by Lee and VanPatten (2003) and Katz and Blyth (2007), instructors can substitute the mechanical drills in current textbooks with appropriate SI activities. In Chapter 8 (entitled “Teaching French Grammar in Context”) of their book, Katz and Blyth provide a good discussion of this point illustrating how mechanical output activities can be modified to look like SI activities (as well as other activity types). The following is an example of some sample items of a mechanical activity that one may find for the subjunctive:

Mechanical Version: *Portrait de Bill Clinton par un Français* (Portrait of Bill Clinton by a Frenchman)

What do the French say about Bill Clinton? Here are one person’s statements. Complete each sentence by filling in the blanks with the subjunctive form of the verb.

1. Il est bon que Clinton (être) _____ un homme intelligent.
[It is good that Clinton (to be) _____ an intelligent man.]
2. Il est inutile que Clinton (savoir) _____ jouer de la saxophone.
[It is useless that Clinton (to know how) _____ to play the saxophone.]
3. Il est dommage que Clinton (pouvoir) _____ mentir à sa femme.
[It is too bad that Clinton (to be able to) _____ to lie to his wife.]

The following activity shows how the above mechanical activity has been modified:

SI Version: *Portrait de Bill Clinton par un Français* (Portrait of Bill Clinton by a Frenchman)

What do the French say about Bill Clinton? Here are one person’s statements. Read each phrase about Clinton and decide if the speaker is expressing certainty about the statement or is expressing a value judgment about the statement.

- | | |
|------------------------------------|--|
| 1. . . .soit un homme intelligent. | 1. . . .is-[subjunc] an intelligent man. |
| a. Il est bon que Clinton | a. It is good that Clinton |
| b. Il est évident que Clinton | b. It is evident that Clinton |

- | | |
|---|--|
| <p>2. . .<i>sait</i> jouer de la saxophone</p> <p>a. Il est inutile que Clinton</p> <p>b. Il est vrai que Clinton</p> | <p>2. . . <i>knows how-[indic]</i> to play the sax.</p> <p>a. <i>It is useless that Clinton</i></p> <p>b. <i>It is true that Clinton</i></p> |
| <p>3. . .<i>puisse</i> mentir à sa femme.</p> <p>a. Il est clair que Clinton</p> <p>b. Il est dommage que Clinton</p> | <p>3. . . <i>can-[subjunc]</i> lie to his wife.</p> <p>a. <i>It is clear that Clinton</i></p> <p>b. <i>It is too bad that Clinton</i></p> |

Besides not producing output immediately, this SI version forces learners to focus on the form of the verb—subjunctive or indicative—to determine whether each statement expresses a fact or an opinion.

SI Activities and Technology

As discussed in Farley (2005), SI activities are compatible with curricula that promote the use of technology such as Blackboard, WebCT, and other platforms. Farley suggests that instructors create electronic workbooks for SI activities as supplements to existing materials that students can complete outside classroom meetings:⁷

The SI format in particular works well with an Internet-delivered workbook format, because responses to activity items are usually short (especially with true/false, matching, and multiple choice) and easily evaluated. Because SI activities usually have a limited number of possible answers, feedback is easily programmed into online SI workbooks as well. (p. 91)

In Chapter 6 of his book, Farley (2005) presents results from studies that were conducted to evaluate learner reactions to online SI activities. These studies revealed that approximately 75% of students felt that electronic SI activities “complemented the textbook well or extremely well” with an additional 5% making specific comments that “online SI activities were a useful supplement to classroom and/or textbook activities” (p. 104).

In conclusion, there are several ways that LPDs can incorporate SI activities into existing curricula: LPDs can train instructors to create SI activities as supplementary materials, they can adapt existing materials in textbooks, and they can use technology as a means of delivery. The studies reported by Farley (2005) provide some initial data to support the notion that students respond favorably to SI activities as textbook/ classroom supplements.

Notes

1. The most current reference to date on the prevalence of drills in textbooks is Katz and Blyth (2007). In their discussion of modern textbook grammar explanations and activities, they state, “Mechanical exercises, such as drills or fill-in-the-blank activities, are not uncommon, despite a general consensus among researchers that such tasks are ineffective” (p. 13). See also discussions in Lee and VanPatten (2003) and Wong and VanPatten (2003).
2. For a detailed description of all the principles in this model, consult VanPatten (2004a).
3. Other studies by Dekeyser and Sokalski (1996), Allen (2000), Erlam (2003), and Toth (2006) did not operationalize PI as conceived by VanPatten and Cadierno (1993).

4. Because some subjunctive forms in French are identical to the present indicative form, we were careful to use subjunctive verb forms that would be clearly different from the indicative such as the verbs *avoir*; *boire*, *être*, and *prendre*.
5. In the PI group, $n = 16$ for the interpretation task and $n = 17$ for the production task; one subject scored too high on the interpretation task to be included in the final pool.
6. There was a decline in performance from the immediate to delayed post-tests, but the delayed post-test results were still better than the pretest results eight months later (Morgan-Short and Wood Bowden MOBI group's gains declined after one month).
7. See Chapter 6 of Farley (2005) for a discussion on this point. Farley also remarks that several institutions have already implemented Web-based SI activities in the classroom. These institutions include Georgetown University, Notre Dame University, and the University of Illinois at Urbana-Champaign. See also Sanz and Morgan-Short (2004) to examine how this technique has been empirically investigated using computer-assisted instruction.

References

- Allen, L. Q. (2000). Form-meaning connections and the French causative: An experiment in processing instruction. *Studies in Second Language Acquisition*, 22, 69-84.
- Benati, A. (2001). A comparative study of the effects of processing instruction and output-based instruction on the acquisition of the Italian future tense. *Language Teaching Research*, 5, 95-127.
- Benati, A. (2004). The effects of structured input activities and explicit information on the acquisition of the Italian future tense. In B. VanPatten (Ed.), *Processing instruction: Theory, research and commentary* (pp. 207-225). Mahwah, NJ: Erlbaum.
- Benati, A. (2005). The effects of processing instruction, traditional instruction and meaning-output instruction on the acquisition of the English past simple tense. *Language Teaching Research*, 9, 67-93.
- Cadierno, T. (1995). Formal instruction in processing perspective: An investigation into the Spanish past tense. *Modern Language Journal*, 79, 179-194.
- Cheng, A. (2004). Processing Instruction and Spanish *ser* and *estar*: Forms with semantic-aspectual values. In B. VanPatten (Ed.), *Processing instruction: Theory, research and commentary* (pp. 119-141). Mahwah, NJ: Erlbaum.
- Dekeyser, R., & Sokalski, K. (1996). The differential role of comprehension and production practice. *Language Learning*, 46, 613-642.
- Erlam, R. (2003). Evaluating the relative effectiveness of structured-input and output-based instruction in foreign language learning. *Studies in Second Language Acquisition*, 25, 559-582.
- Farley, A. (2001a). Processing instruction and meaning-based output instruction: A comparative study. *Spanish Applied Linguistics*, 5, 57-94.
- Farley, A. (2001b). Authentic processing instruction and the Spanish subjunctive. *Hispania*, 84, 289-299.
- Farley, A. (2004). Processing instruction and the Spanish subjunctive: Is explicit information needed? In B. VanPatten (Ed.), *Processing instruction: Theory, research and commentary* (pp. 227-239). Mahwah, NJ: Erlbaum.
- Farley, A. (2005). *Structured input: Grammar for the acquisition-oriented classroom*. Boston: McGraw-Hill.
- Fernandez, C. (2008). Re-examining the role of explicit information in processing instruction. *Studies in Second Language Acquisition*, 30, 277-305.
- Gass, S. (1997). *Input, interaction and the second language learner*. Mahwah, NJ: Erlbaum.

- Hinkel, E., & Fotos, S. (2002). *New perspectives on grammar teaching in second language classrooms*. Mahwah, NJ: Erlbaum.
- Izumi, Y., & Izumi, S. (2004). Investigating the effects of oral output on the learning of relative clauses in English: Issues in the psycholinguistic requirements for effective output tasks. *Canadian Modern Language Review*, 60, 587-609.
- Katz, S., & Blyth, C. (2007). *Teaching French grammar in context*. New Haven: Yale University Press.
- Krashen, S. (1985). *The input hypothesis: Issues and implications*. London: Longman.
- Lee, J. F., & VanPatten, B. (2003). *Making communicative language teaching happen* (2nd ed.). New York: McGraw-Hill.
- Lightbown, P. M. (2000). Anniversary article: Classroom SLA research and second language teaching. *Applied Linguistics*, 21, 431-462.
- Marsden, E. (2006). Exploring input processing in the classroom: An experimental comparison of processing instruction and enriched input. *Language Learning*, 56, 507-566.
- Morgan-Short, K., & Wood Bowden, H. (2006). Processing instruction and meaningful output-based instruction: Effects on second language development. *Studies in Second Language Acquisition*, 28, 31-65.
- Paulston, C. B. (1972). Structural pattern drills: A classification. In H. Allen & R. Campell (Eds.), *Teaching English as a second language* (p. 129-138). New York: McGraw-Hill.
- Sanz, C., & Morgan-Short, K. (2004). Positive evidence versus explicit rule presentation and explicit negative feedback: A computer-assisted study. *Language Learning*, 54, 35-78.
- Sharwood Smith, M. (1981). Consciousness-raising and the second language learner. *Applied Linguistics*, 2, 159-168.
- Sharwood Smith, M. (1991). Speaking to many minds: On the relevance of different types of language information for the L2 learner. *Second Language Research*, 7, 118-132.
- Swain, M. (1993). The output hypothesis: Just speaking and writing aren't enough. *Canadian Modern Language Review*, 50, 158-164.
- Swain, M. (1995). Three functions of output in second language learning. In G. Cook & B. Seidlhofer (Eds.), *Principles and practice in applied linguistics: Studies in honor of H. Widdowson* (pp. 125-144). Oxford, UK: Oxford University Press.
- Toth, P. D. (2006). Processing instruction and a role for output in second language acquisition. *Language Learning*, 56, 319-385.
- VanPatten, B. (1996). *Input processing and grammar instruction*. Norwood, NJ: Ablex.
- VanPatten, B. (2003). *From input to output: A teacher's guide to second language acquisition*. New York: McGraw-Hill.
- VanPatten, B. (2004a). *Processing instruction: Theory, research, and commentary*. Mahwah, NJ: Erlbaum.
- VanPatten, B. (2004b). Input and output in establishing form-meaning connections. In B. VanPatten, J. Williams, S. Rott, & M. Overstreet (Eds.), *Form-meaning connections in second language acquisition* (pp. 29-47). Mahwah, NJ: Erlbaum.
- VanPatten, B., & Cadierno, T. (1993). Explicit instruction and input processing. *Studies in Second Language Acquisition*, 15, 225-243.
- VanPatten, B., & Fernandez, C. (2004). The long term effects of processing instruction. In B. VanPatten (Ed.), *Processing instruction: Theory, research, and commentary* (pp. 273-289). Mahwah, NJ: Erlbaum.
- VanPatten, B., & Keating, G. (2007). *Getting tense: Lexical preference, L1 transfer and native and non-native processing of temporal reference*. Paper presented at the annual meeting of the American Association of Applied Linguistics, Costa Mesa, CA, April 21-24, 2007.
- VanPatten, B., & Oikkenon, S. (1996). Explanation vs. structured input in processing instruction. *Studies in Second Language Acquisition*, 18, 495-510.

- VanPatten, B., & Sanz, C. (1995). From input to output: Processing instruction and communicative tasks. In F. Eckman, D. Highland, P. Lee, J. Mileham, & R. Rutkowski Weber (Eds.), *Second language acquisition theory and pedagogy* (pp. 169-185). Mahwah, NJ: Erlbaum.
- VanPatten, B., & Wong, W. (2004). Processing instruction and the French causative: A replication. In B. VanPatten (Ed.), *Processing instruction: Theory, research and commentary* (pp. 97-118). Mahwah, NJ: Erlbaum.
- VanPatten, B., & Wong, W. (2006). *Grammar without drills!* Workshop presented at the annual meeting of the Northeast Conference for the Teaching of Foreign Languages, New York, NY, March 31, 2006.
- Wong, W. (2004a). The nature of processing instruction. In B. VanPatten (Ed.), *Processing instruction: Theory, research, and commentary* (pp. 33-63). Mahwah, NJ: Erlbaum.
- Wong, W. (2004b). Processing Instruction in French: The role of explicit information and structured input. In B. VanPatten (Ed.), *Processing instruction: Theory, research and commentary* (pp. 187-205). Mahwah, NJ: Erlbaum.
- Wong, W. (2005). *Input enhancement: From theory and research to the classroom*. Boston: McGraw-Hill.
- Wong, W. (2007). Processing instruction and structured input as input enhancement. In C. Gascoigne (Ed.), *Assessing the impact of input enhancement in second language education: Evolution in theory, research, and practice* (pp. 89-106). Stillwater, OK: New Forums.
- Wong, W. (in progress). The effects of discourse level SI activities on the French causative.
- Wong, W., & VanPatten, B. (2003). The evidence is in: Drills are out. *Foreign Language Annals*, 36, 403-423.