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6. CURRENT DEVELOPMENTS IN RESEARCH ON THE TEACHING OF GRAMMAR

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With the rise of communicative methodology in the late 1970s, the role of grammar instruction in second language learning was downplayed, and it was even suggested that teaching grammar was not only unhelpful but might actually be detrimental. However, recent research has demonstrated the need for formal instruction for learners to attain high levels of accuracy. This has led to a resurgence of grammar teaching, and its role in second language acquisition has become the focus of much current investigation. In this chapter we briefly review the major developments in the research on the teaching of grammar over the past few decades. This review addresses two main issues: (1) whether grammar teaching makes any difference to language learning; and (2) what kinds of grammar teaching have been suggested to facilitate second language learning. To this end, the chapter examines research on the different ways in which formal instruction can be integrated with communicative activities.

Continuing in the tradition of more than 2000 years of debate regarding whether grammar should be a primary focus of language instruction, should be eliminated entirely, or should be subordinated to meaning-focused use of the target language (for historical reviews see Howatt, 1984; Kelly, 1969), the need for grammar instruction is once again attracting the attention of second language acquisition (SLA) researchers and teachers. We briefly review arguments against and in support of grammar teaching before examining the approaches to grammatical instruction investigated in current research.[1]

Arguments Against Grammar Teaching

Much grammar research over the past few decades has concentrated on determining whether grammar should be taught at all. This focus has been motivated in part by debates in the field of cognitive psychology over the role of explicit versus implicit language learning and whether such learning occurs through conscious manipulation of information or primarily through unconscious processes when

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people are exposed to language input (Bialystok, 1990, 1994; N. Ellis, 1994; Reber, 1967, 1989, 1993). Theoretically, the debate was represented by Krashen's (1981) distinction between conscious learning and unconscious acquisition of language. It was claimed that language should be acquired through natural exposure, not learned through formal instruction. It was therefore believed that formal grammar lessons would develop only declarative knowledge of grammar structures, not the procedural ability to use forms correctly, and that there was no interface between these two types of knowledge since they existed as different systems in the brain (see reviews in DeKeyser, 1998, 2001; R. Ellis, 2001, 2002a; Skehan, 1998).

This position was supported by evidence from studies on the acquisition of English morphology, particularly the findings that speakers of different first languages (L1s) learn English morphemes in a similar order (Bailey, Madden, & Krashen, 1974; Dulay & Burt, 1974). These results led to the claim that similar processes underlie both first and second language (L2) learning and that, if L1 learners do not require formal instruction to learn languages, neither should L2 learners (Krashen, 1981; Schwartz, 1993; Zobl, 1995). Schwartz (1993), for example, claimed that "only positive data can effect the construction of an *interlanguage grammar* [italics are the author's] that is comparable to the knowledge system that characterizes the result of first language acquisition" (p. 147).

Similar claims were also made in the context of Universal Grammar (UG) and its application to SLA. Researchers argued that if UG is accessible to L2 learners, then L2 learning, like L1 learning, occurs mainly through the interaction of UG principles with input (Cook, 1991; Dulay, Burt, & Krashen, 1982; Schwartz, 1993; also see Goldschneider & DeKeyser, 2001). Again, formal instruction was seen to be unnecessary.

Research Supporting Grammar Teaching

Current research in SLA, however, has led to a reconsideration of the role of grammar in the L2 classroom. There are at least four reasons for the reevaluation of grammar as a necessary component of language instruction.

First, the 1980s hypothesis that language can be learned without some degree of consciousness has been found theoretically problematic. Schmidt (1990, 1993, 2001) suggests that conscious attention to form, or what he calls "noticing," is a necessary condition for language learning (see also Leow, 1998, 2001, 2002; Rutherford, 1987, 1988; Tomlin & Villa, 1994). He emphasizes the role of attention:

> The concept of attention is necessary in order to understand virtually every aspect of second language acquisition (SLA), including the development of interlanguages (ILs) over time, variation within IL at particular points in time, the development of L2 fluency, the role of individual differences such as motivation, aptitude and learning strategies in L2 learning, and the ways

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> interaction, negotiation for meaning, and all forms of instruction contribute to language learning. (Schmidt, 2001, p. 3)

Although some researchers have questioned Schmidt's noticing hypothesis (e.g., Truscott, 1998), most SLA investigators agree that noticing or awareness of target forms plays an important role in L2 learning (e.g., Bialystok, 1994; Bygate, Skehan, & Swain, 2001; DeKeyser, 1998, Doughty, 2001; R. Ellis, 2001, 2002a; Ellis, Basturkmen, & Loewen, 2001a, 2001b; Fotos, 1993, 1994, 1998; Nassaji, 1999, 2000, 2002; Nassaji & Swain, 2000; Robinson, 1995, 2001; Skehan, 1998; Swain & Lapkin, 2001). In addition, investigators such as Skehan (1998) and Tomasello (1998) have presented findings indicating that language learners cannot process target language input for both meaning and form at the same time. Thus, it is necessary for learners to notice target forms in input; otherwise they process input for meaning only and do not attend to specific forms, and consequently fail to process and acquire them.

A second reason for the renewed interest in L2 grammar instruction is evidence that L2 learners pass through developmental sequences. Based on empirical evidence from German learners of English, Pienemann (1984, 1988, 1999) developed what has been known as the *teachability hypothesis*, which suggests that while certain developmental sequences are fixed and cannot be altered by grammar teaching, other structures can benefit from instruction any time they are taught. Based on this hypothesis, it is possible to influence sequences of development favorably through instruction if grammar teaching coincides with the learner's readiness to move to the next developmental stage of linguistic proficiency (Lightbown, 2000). Recent suggestions on the place of grammar in the second language curriculum, particularly in classrooms with a communicative focus (e.g., R. Ellis, 2002b), take these considerations into account.

A third reason for renewed interest in grammar instruction is a large body of research pointing to the inadequacies of teaching approaches where the focus is primarily on meaning-focused communication, and grammar is not addressed. Extensive research on learning outcomes in French immersion programs by Swain and her colleagues showed that, despite substantial long-term exposure to meaningful input, the learners did not achieve accuracy in certain grammatical forms (Harley & Swain, 1984; Lapkin, Hart, & Swain, 1991; Swain, 1985; Swain & Lapkin, 1989). This research suggested that some type of focus on grammatical forms was necessary if learners were to develop high levels of accuracy in the target language. Thus, communicative language teaching by itself was found to be inadequate (also see Celce-Murcia, Dörnyei, & Thurrell, 1997; R. Ellis, 1997, 2002b; Mitchell, 2000).

A fourth reason for the reconsideration of grammar teaching in the L2 classroom is evidence for the positive effects of grammar instruction. This evidence comes from a large number of laboratory and classroom-based studies as well as extensive reviews of studies on the effects of instruction over the past 20 years (R. Ellis, 1985, 1990, 1994, 2001, 2002a; Larsen-Freeman & Long, 1991; Long, 1983, 1988, 1991). For example, studies of the effects of instruction on the development of

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specific target language forms (e.g., Cadierno, 1995; Doughty, 1991; Lightbown, 1992; Lightbown & Spada, 1990) as well as corrective feedback on learner errors (Carroll & Swain, 1993; Nassaji & Swain, 2000) indicate that grammatical instruction has a significant effect on the attainment of accuracy. In an early review, Long (1983) concluded that grammar instruction contributes importantly to language learning. In later reviews, R. Ellis (1990, 1994, 1997, 2001, 2002a), N. Ellis (1995), and Larsen-Freeman and Long (1991) suggest that, while instructed language learning may not have major effects on sequences of acquisition, it has facilitative effects on both the rate and the ultimate level of L2 acquisition. Similarly, a recent meta-analysis of 49 studies on the effectiveness of L2 instruction (Norris & Ortega, 2000) concludes that explicit instruction (presenting the structure, describing and exemplifying it, and giving rules for its use) results in substantial gains in the learning of target structures in comparison to implicit instruction (usually consisting of communicative exposure to the target form) alone, and that these gains are durable over time.

How Much and What Type of Grammar Teaching?

Despite such empirical support for grammar instruction, however, there is still controversy over the relative importance of explicit grammar teaching. This is due to the complex relationship between teaching and learning, and the fact that how something is taught is not directly related to how it is learned. At one extreme are those who have persistently denied the importance of any explicit instruction in language acquisition. Krashen (1993), for example, describes the effects of grammar instruction as "peripheral and fragile" (p. 725), arguing that explicit grammatical knowledge about structures and rules for their use may never turn into implicit knowledge underlying unconscious language comprehension and production. He suggests that studies showing an effect for formal instruction present only "modest increases in consciously-learned competence consistent with the claims of the Monitor hypothesis" (Krashen, 1999, p. 245). Truscott (1996, 1998) also rejects the value of explicit grammar instruction on similar grounds, arguing that its effects are short-lived and superficial and that grammar instruction alone may not promote what he called "genuine knowledge of language" (p.120). Truscott suggests that if studies have shown benefits for form focused instruction, such results have been obtained from tests that measure only explicit metalinguistic knowledge, not the learner's ability to use the target language in spontaneous communication.

Other researchers have taken a more cautious approach, not questioning the need for explicit instruction but rather objecting to traditional grammar teaching pedagogy which treats language as an object of learning and has consisted of grammar lessons in which grammatical structures are explicitly presented by the teacher in a decontextualized manner. The traditional assumption has been that through such conscious presentation and manipulation of forms through drills and practice, learners will develop the kind of knowledge they need for communicative language use. However, Skehan (1996) suggests that this traditional presentation-practice model is not supported by current research. He maintains that "the belief that a precise focus on a particular form leads to learning and

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automatization . . . no longer carries much credibility in linguistics or psychology" (p. 18).

Even those researchers who support explicit grammar instruction have suggested that it may not directly lead to implicit knowledge or to immediate changes in the learner's interlanguage (Batstone, 1994; R. Ellis, 2002a, 2000b, 2003; R. Ellis, Basturkmen, & Loewen, 2002; Lightbown, 2000). For example, Ellis et al. point out

> while there is substantial evidence that focus-on-forms instruction results in learning as measured by discrete-point language tests (e.g., the grammar test in the TOEFL), there is much less evidence to show that it leads to the kind of learning that enables learners to perform the targeted form in free oral production (e.g., in a communicative task). (2002, p. 421)

While not denying a role for explicit instruction, N. Ellis (2002) suggests that language learning is ultimately implicit in nature, "the slow acquisition of form-function mappings and the regularities therein. This skill, like others, takes tens of thousands of hours of practice, practice that can not be substituted for by provision of a few declarative rules" (p. 175). Ellis's consideration is supported by other researchers, particularly those involved in research on cognitive processing (for example, see DeKeyser, 2001; Doughty, 2001; Robinson, 1995, 1996, 2001).

However, this does not mean that grammar instruction is not useful. Rather, what is suggested is that learners must also have opportunities to encounter, process, and use instructed forms in their various form-meaning relationships so that the forms can become part of their intelanguage behavior (see Larsen-Freeman, 2003). Reviewing research on the effects of grammar instruction on SLA, Spada (1997) notes that when learners receive communicative exposure to grammar points introduced through formal instruction, their awareness of the forms becomes longer-lasting and their accuracy of use improves. Reviewing recent studies on formal instruction, R. Ellis (2002a) suggests that when grammar instruction is extensive and is sustained over a long period of time (several days or weeks), such instruction contributes to the development of implicit knowledge as measured by performance on free production tasks. Instruction also promotes accuracy in the use of difficult forms such as English articles. He therefore notes (2001, 2002b, 2003) that current research strongly supports the need for provision of communicative opportunities containing instructed grammar forms, and he recommends a combination of form focused instruction and meaningful communication, suggesting possible intervention points for instruction in a task-based communicative curriculum (2002b).

Thus, current research indicates that learners need opportunities to both encounter and produce structures which have been introduced either explicitly, through a grammar lesson, or implicitly, through frequent exposure (also see reviews in Gass, Mackey, & Pica, 1998; N. Ellis, R. Ellis, 2001, 2002a, 2000b, 2003;

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Lightbown, 2000, 1995, 2002), a consideration raised several decades ago by Swain in her work on learner output (1985, 1995).

Current Approaches to Grammar Teaching

Because of problems presented by traditional structure-based grammar teaching, Long, (1991) proposed an approach that he termed "focus on FORM," distinguishing it from a "focus on FORMS" approach to teaching grammar (see the discussion in Long & Robinson, 1998). Whereas focus on FORMS involves discrete grammatical forms selected and presented in an isolated manner, focus on FORM involves the teacher's attempts to draw the student's attention to grammatical forms in the context of communication (also see DeKeyser, 1998; Doughty & Varela, 1998; Long, 2000). Using a psycholinguistic perspective, Doughty (2001) has recently described the cognitive processes that take place when learners become aware of forms in input. However, Long (2000) takes a more pedagogic view, suggesting that this approach is effective for teaching grammar since it is learner-centered and tuned to the learner's internal syllabus.

Although no research has directly compared the effectiveness of a focus on form and a focus on forms approach, and the difference between them is suggested to be difficult to operationalize (R. Ellis, 2002b), the idea of focus of form has been widely advocated in the literature. Pedagogically focus on form can be achieved in many different ways. For example, Nassaji (1999, 2000) proposed that focus on form can be achieved through *process* or through *design*. Focus on form through *process* occurs in the context of natural communication when both the teacher and the learner's primary focus is on meaning. Focus on form through *design* is deliberate and is achieved through designing tasks which have deliberate explicit focus. Focus on form can also be achieved *reactively* through providing reactional feedback on learners' errors or *preemptively* through discussing grammatical forms irrespective of whether an error has occurred or not (Ellis et al., 2001a, 2001b; Long & Robinson, 1998).

A number of researchers have argued (e.g., Doughty & Varela, 1998; R. Ellis 1994, 2002a, 2002b, 2003; Robinson, 2001) that if the goal of second language learning is the development of communicative competence, enabling learners to use language for communicative purposes, then grammar and communication must be integrated. However, the challenge is to identify the best ways of doing so in L2 classrooms (Nassaji, 1999; Nassaji & Cumming, 2000) and to maximize the opportunity for a focus on grammar without sacrificing the focus on meaning and communication. Several proposals have been made during the last 10 years on ways to combine some form of grammar instruction with the provision of opportunities for communicative input and output, and a number of studies have researched their effectiveness.

In the next section, we briefly review research on alternative ways of treating grammar, including studies on processing instruction, interactional feedback,

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textual enhancement, focused grammar tasks, collaborative output tasks, and discourse-based grammar teaching in L2 classrooms.

Processing Instruction

VanPatten (1993, 1996, 2002) suggests that one way to teach grammar communicatively is through processing input or what he called *processing instruction*. In this approach an initial exposure to explicit instruction is combined with a series of input processing activities, consisting mainly of tasks that encourage the comprehension of the target structure rather than its production (see also R. Ellis, 1995, 2003). These activities have been suggested to help learners to create form-meaning connections in input and hence process grammar for meaning (Lee & VanPatten, 1995). Due to the explicit focus on form component of this approach, some researchers have equated it with Long's focus on forms (e.g., Sheen, 2002). VanPatten (2002), however, argues that since the aim of this approach is "to assist the learner in making form–meaning connections during IP [input processing]; it is more appropriate to view it as a type of focus on form" (p. 764).

A number of studies have been conducted by VanPatten and his colleagues to investigate the effectiveness of processing instruction for the learning of grammar (Cadierno, 1995; VanPatten & Cadierno, 1993; VanPatten & Oikennon, 1996) and the results indicate a favorable effect. Additional studies have been carried out involving a range of grammatical structures and target languages. While some have produced evidence supporting the advantage of input processing instruction over traditional grammar instruction, others have failed to produce such evidence (Allen, 2000; Benati, 2001). DeKeyser and Sokalski (2001) suggest that the effectiveness of processing instruction depends on the morphosyntactic complexity of the target structure as well as the length of the testing time, suggesting that input processing is more effective for promoting comprehension skills, whereas production-based instruction is more effective for promoting production skills. Thus, the effectiveness of this type of instruction may depend on the nature of grammatical form as well as the type of skill involved. More research is required to explore the exact effect of input processing and the ways in which it may influence different language skills.

Interactional Feedback

Interactional feedback refers to various negotiation and modification strategies such as repetitions, clarification requests, confirmation checks, and the like, which are made by learners or directed to them to facilitate understanding. Such interactions draw the learners' attention implicitly or explicitly to aspects of the target language such as grammatical forms (Lyster & Ranta, 1997; Nassaji & Swain, 2000; Van den Branden, 1997). This approach is based on the theory that such interactional strategies highlight linguistic or pragmatic problems, pushing learners to intentionally modify their output in order to produce more accurate and comprehensible utterances (see R. Ellis, 1997, 2003, for a discussion of the Interaction Hypothesis; also see Gass et al., 1998). Researchers have also made a distinction between two types of negotiation, negotiation of meaning and negotiation

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of form (R. Ellis, 2002b; Lyster & Ranta, 1997; van Lier, 1988). Negotiation of meaning refers to conversational strategies used to signal or repair problems in communication. These strategies are typical of ordinary conversation or teacher–students interaction in L1 subject-matter classrooms (see Nassaji & Wells, 2000). Negotiation of form, for example, recasts, refers to interactional strategies used mainly to respond to erroneously used forms (Lyster & Ranta, 1997).

A growing body of research has explored the effectiveness of interactional feedback for SLA. Some of these studies have investigated the effects of these interactions on the development of L2 grammar forms (Doughty & Varela, 1998; Iwashita, 2003; Long, Inagaki, & Ortega, 1998; Nassaji, 1999; Nassaji & Swain, 2000; also see the review in Gass, Mackey, & Pica, 1998). For example, a series of studies conducted by Mackey and her colleagues (Mackey, 1999; Mackey & Oliver, 2002; Mackey & Philp, 1998, McDonough & Mackey, 2000) examined the effect of interactional feedback on the development of English questions and found that compared with control groups, the feedback groups progressed further in terms of their ability to form questions. Doughty and Varela (1998) investigated recasts on the learning of past and conditional sentences, finding that learners who received corrective recasts in response to their errors made more progress in use of past tense forms than those who did not. Lyster (2001) investigated the role of interactional feedback with respect to error types and its effects on immediate learner repair. He found that, while negotiation of form was more effective than recasts and explicit corrections in relation to lexical and grammatical errors and the unsolicited use of learner's first language, recasts were more effective in relation to phonological errors.

Ohta (2000, 2001) used a sociocultural framework to examine the role of private speech in adult foreign language learners of Japanese, finding that learners favorably responded to recasts. Within the same framework, Aljaafreh and Lantolf (1994) investigated the effects of interactional feedback in the context of adult ESL writing, and found that feedback negotiated between the learner and the teacher and within the learner's zone of proximal development played an important role in second language learning (see also Nassaji & Cumming, 2000). Nassaji and Swain (2000) conducted a similar study comparing negotiated feedback with random feedback. These researchers also found that negotiated feedback was more effective than feedback provided randomly and nonnegotiatively, though the effects of the two were strongly mediated by the explicit nature of the feedback.

Thus, the results of studies on interactional strategies suggest the effectiveness of these strategies in promoting SLA. However, as Nicholas, Lightbown and Spada (2001) have pointed out, no firm conclusions can yet be drawn, particularly about the role of recasts. For example, Lyster and Ranta (1997) found that, although recasts were the most frequently used interactional strategy by teachers in French Immersion classrooms, elicitation was more effective in encouraging learners to reformulate their erroneous utterances. However, a study by Ellis, Basturkmen, and Loewen (2001a) found that recasts were not only the most frequently used type of strategy, but that they also led to a high degree of uptake of

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the target forms. Such results indicate that more research is needed to examine the effects of interactional strategies not only in response to different types of grammar features but also in different classroom contexts.

Textual Enhancement

There are a number of studies that have investigated the effects of textual enhancement on drawing the learner's attention to grammar, and the method has been described as the least explicit and the least intrusive method of focus on form (Doughty & Varela, 1998). It involves highlighting certain features of input that might go unnoticed under normal circumstances by typographically manipulating them through boldfacing, italicizing, underlining, or capitalizing. The assumption is that such manipulations enhance the perceptual saliency of the target structures, and this, hence, increases their chance of being noticed. A related technique is the provision of numerous instances of target linguistic forms in the input, called an *input flood* (Trahey & White, 1993). Again, the assumption is that frequent exposure to target items enhances their saliency and hence results in noticing the forms (Schmidt, 1990; Sharwood Smith, 1993). Whereas studies by Doughty (1991) and Fotos (1994) reported positive results in terms of awareness of target structures and proficiency gains resulting from textually enhanced structures, a study by White (1998) did not show that learners who received textually enhanced input differed significantly in their ability to use the target structure compared with those who did not. White concluded that the method of enhancement may not have been sufficiently explicit to draw the learners' attention to the type of linguistic features that involved L1–L2 contrasts. Similarly, Leow (2001) investigated the effects of textual enhancement on learning Spanish formal imperatives and found no advantage for enhanced text over unenhanced text. Finally, Izumi (2002) compared two types of focus on form strategies, output and visual input enhancement, on the learning of English relativization by adult ESL learners, finding that those who produced output developed more than those merely received input. However, the visual enhancement did not result in gains in accuracy using the target form.

Thus, the results of the studies on textual enhancement suggest that, while this strategy may promote noticing of grammatical forms (Fotos, 1994, 1998), it may not be sufficient for their acquisition. Thus, while noticing may be a necessary condition for acquisition, it is not the only condition. As Batstone notes, if learners want to learn grammar effectively, they have to "act on it, building it into their working hypothesis about how grammar is structured" (1994, p. 59). This may not happen unless the learners are exposed to continued and sustained noticing activities as well as ample opportunities for producing the target form.

Task-Based Instruction

Focused tasks. The use of communicative tasks has been widely advocated in second language classrooms, but usually these tasks have been interpreted as having a primary focus on meaning. Thus, Nunan (1989) defined communicative tasks as "a piece of classroom work which involves learners in comprehending,

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manipulating, producing, or interacting in the target language while their attention is principally focused on meaning rather than on form" (p. 10). However, three types of structure-based tasks have been proposed recently to promote learner awareness and practice of target forms. Although the tasks are aimed at making grammar forms salient to the learner, this is achieved through communicative activities. Such tasks promote awareness, since the learners' attention is drawn to the nature of the target structure; yet they are also communicative, since the learners are engaged in meaning-focused interaction. Rod Ellis (2003; Nobuyoshi & Ellis, 1993) has described such tasks as "focused" compared with unfocused tasks that are designed purely for communication. He describes these tasks (2003, p. 151) as (1) structure-based production tasks, (2) comprehension tasks, and (3) consciousness-raising tasks.

For structure-based production tasks, use of the target form is required to complete purely communicative activities (R. Ellis, 1995; Loschky & Bley-Vroman, 1993; Mackey, 1999; Nobuyoshi & Ellis, 1993). Thus, the task material is not grammatical in nature, although the learners must produce the target structure to complete the task. Comprehension tasks are designed so that learners must attend to and comprehend target forms in carefully structured input (R. Ellis, 1995; VanPatten, 1996), and they usually consist of a stimulus requiring the learner to make a response (R. Ellis, 2003). Whereas the previous two task types introduce grammar structures implicitly in communicative contexts, consciousness-raising tasks (Fotos, 1993, 1998, 2002; Fotos & Ellis, 1991; Leow, 2001; Sheen, 1992) require learners to communicate with each other about target grammar structures; thus the grammar forms are the task content. Such tasks present examples of the target structure and require learners to manipulate the structure, often generating rules for its use (Ellis, 2003).

Research on the use of such tasks suggests that grammar points with a few easily taught rules are more amenable to form-focused instruction through task performance than structures that are governed by a great many rules (see DeKeyser, 1998; R. Ellis, 1995, 2003; Robinson, 1996). However, it has also been found (R. Ellis, 2003; Loschky & Bley-Vroman, 1993; Robinson, 1996) that meaning-focused activities such as tasks containing communicative instances of target forms are useful for developing learner awareness of grammar structures that are too complex to be understood through formal instruction alone. Additional research (Robinson, 2001) indicates that complex tasks result in greater attention to input as well as increased awareness of output compared with simple tasks. Thus, tasks with grammar structures as implicit or explicit content, even cognitively demanding tasks, appear to be effective in promoting awareness of the target grammar structure, but, again, further research is indicated.

Collaborative output tasks. As mentioned, research by Swain and her colleagues has shown that despite many years of exposure to meaningful input, French immersion students often lacked high levels of accuracy in certain grammatical forms. Swain (1985, 2000, 2001) suggests that this is because the learners were not pushed beyond their current level of interlanguage. She therefore argues that output of the L2 plays an important role in SLA (1985, 1995, 2000, 2001,

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in press). Thus, when learners attempt to produce the L2, they notice that they are not able to say what they want to say (Robinson, 2001; Swain, 2000, 2001), and this "pushes" them to achieve greater accuracy. Pushed output also provides opportunities for formulating and testing hypothesis. When learners produce the target language, such production allows for deeper syntactic processing because they have to "move from the semantic, open-ended, strategic processing prevalent in comprehension to the complete grammatical processing needed for accurate production" (Swain, 2000, p. 99). In a recent article, Swain (in press) describes the output hypothesis, the research context in which it was formulated, and the research evidence that supports its various functions. She also argues for the importance of output as a process, not just a product of language learning.

One way of promoting pushed output is through focused communicative tasks where learners are pushed to reproduce language forms accurately (R. Ellis, 1997, 2003; Nobuyoshi & Ellis, 1993). Another way of achieving this is through the use of collaborative output tasks that require learners to cooperatively produce language (Swain, 2001). For example, the *dictogloss* (Wajnryb, 1990) has been effectively used for such collaborative output tasks. Here the teacher reads a short L2 text twice and asks the learners to work in groups or pairs to reproduce the text as accurately as possible. The effectiveness of dictogloss has been investigated in studies by Swain and her colleagues (Kowal & Swain, 1994; Swain, 2000; Swain & Lapkin, 1998, 2001). These researchers suggest that dictogloss tasks not only promote meaningful interaction in the L2 but also lead to improvement in accuracy in the use of target forms. Kowal and Swain (1994) also found that when learners produced the target language during such tasks, they noticed gaps in their linguistic knowledge which then triggered a cooperative search for the solution. Comparing the effect of a dictogloss task with a jigsaw task in which pairs of students worked together to create a story based on a series of pictures, Swain and Lapkin (2001) note that the dictogloss task led to more accurate reproduction of the target forms than the jigsaw task but both "generated a similar and substantial proportion of language related episodes" (p. 111). Thus, the various task-based approaches to grammar instruction appear to be successful in promoting awareness of target forms and promoting accuracy gains but, again, further comparative research is necessary.

Discourse-Based Approaches

Discourse-based grammar teaching is an important component of other recent approaches to grammar teaching reviewed in this discussion. Here instruction of target forms is supported by extensive use of authentic or simplified discourse, including corpus analysis, to supply learners with abundant examples of contextualized usages of the target structure to promote the establishment of form-meaning relationships (Batstone, 1994; Carter, Hughes, & McCarthy, 2000; Celce-Murcia, 2002, Celce-Murcia, Dörnyei, & Thurrell, 1997; Hinkel, 1999, 2002a, 2002b 2002c; Hughes & McCarthy, 1998). Research by Carter, Hughes, and McCarthy (2000) and Hughes and McCarthy (1998) emphasizes the difference between spoken and written English grammars and recommends the use of corpus analysis to provide learners with authentic examples of spoken L2 forms. Celce-Murcia and Olshtain

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(2000) call for the end of a primarily sentence-based approach to grammar instruction, noting that grammar instruction requires both a top-down and bottom-up approach (Nassaji, 2002). The first relates target structures to the macrostructure of the text as a whole, a discourse-analytic approach, whereas the second specifies the function of target structures, a microanalytic approach.

In her studies of ESL learners' writing Hinkel (1999, 2002a, 2002b, 2002c) finds that even highly educated learners tend to be influenced by their cultural rhetorical and discourse traditions when writing in the L2, and require extensive and persistent instruction in L2 grammar and the complex feature of L2 texts. Noting that grammar teaching is usually treated separately from the teaching of writing, she recommends that instruction in L2 writing include explicit instruction on grammar, lexical forms and rhetorical patterns as exemplified by authentic text and discourse (2002a). She also presents research findings (2002b, 2002c) indicating that, although difficult forms, such as the English tenses and passive need to be instructed, such forms "cannot be studied in isolation from their syntactic functions and pragmatic uses" (2002b, p. 235). Thus, recent approaches to grammar emphasize the need for provision of extensive exposure to, as well as focus on, the target forms to promote their acquisition.

Conclusion

Current research clearly indicates that grammar feedback is necessary in order for language learners to attain high levels of proficiency in the target language. However, traditional structure-based grammar teaching approaches have been replaced by treatments which may or may not include an explicit discussion of target forms and the rules for their use, but present the forms in numerous communicative contexts designed to promote learner awareness of meaning–form relationships and to permit processing of the form to occur over time. Although the exact nature of this kind of instruction and the various forms it can take in second language classrooms are still far from clear, it is now suggested that among the essential conditions for acquisition of grammatical forms are (1) learner noticing and continued awareness of target forms, (2) repeated meaning-focused exposure to input containing them, and (3) opportunities for output and practice. It is also recognized that, because the acquisition of grammar is affected by internal processing constraints, spontaneous and accurate production cannot be instantaneous but will naturally require time as learners move toward mastery.

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