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27 Teaching and Testing Grammar

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Introduction

Perhaps no term in the language teaching field is as ambiguous as *grammar*. It has been used to mean:

- 1 an internal mental system that generates and interprets novel utterances (mental grammar)
- 2 a set of prescriptions and proscriptions about language forms and their use for a particular language (prescriptive grammar)
- 3 a description of language behavior by proficient users of a language (descriptive grammar)
- 4 the focus of a given linguistic theory (linguistic grammar)
- 5 a work that treats the major structures of a language (reference grammar)
- 6 the structures and rules compiled for instructional and assessment purposes (pedagogical grammar)
- 7 the structures and rules compiled for instructional purposes for teachers (usually a more comprehensive and detailed version of (6)) (teacher's grammar)

A reading of this list readily reveals why the use of the term "grammar" is fraught with ambiguity. It includes both implicit and explicit grammars, universal and language-specific grammars, the way that language "ought to be used" and the way it actually is used, theoretically exclusive grammars and more eclectic ones, etc. The ambiguity in the term "grammar" is magnified by the fact that every one of these seven definitions is multidimensional. For instance, (1) can be used to represent both learner grammars and proficient language speaker grammars. Descriptive grammars (3) can take as their starting point the form or structure of language (formal grammar), or conversely, can conceive of language as largely social interaction, seeking to explain why one linguistic form is more appropriate than another in satisfying a particular communicative purpose in a particular context (functional grammar). To cite a final example, linguistic

grammars (4) adopt distinct theoretical units: structures (Structural Linguistics), rules (Traditional Grammar), principles and parameters (Generative Linguistics), constraints (Lexical Functional Grammar; Optimality Theory; Head-Driven Phrase Structure Grammar), texts (Systemic Functional Linguistics), constructions (Cognitive Linguistics; Construction Grammar), patterned sequences (Corpus Linguistics; Pattern Grammar), and so forth.

The lesson in all this is that it is important to be clear about what is meant when one is making claims about grammar. Thus, following this introduction, a definition of a pedagogical grammar (6) will be proposed, one that is broad enough to draw on many of these linguistic theories for their insights, yet sufficiently focused to fulfill its teaching and testing functions. Then, too, as with any subject, an understanding of grammar teaching and assessment is better served by knowing how the subject is learned or acquired. Indeed, it was this awareness that drew many language teachers to investigate the learning of grammar, which in turn led to the establishment of SLA as a separate area of inquiry in the early 1970s. Much work has been done since then, and many SLA researchers still take the explanandum to be a mental grammar (1). Obviously, though, a comprehensive review of SLA findings is beyond the scope of this chapter.

A Definition

Many pedagogical grammars are formal, comprising morphosyntactic rules from traditional and structural linguistics and, to a lesser extent, from Generative Linguistics. Formal grammarians assume a faculty of language must provide first, a structured inventory of possible lexical items (the core semantics of minimal meaning-bearing elements) and second, the grammatical rules or principles that allow infinite combinations of symbols, hierarchically organized. The grammatical principles provide the means to construct from these lexical items the infinite variety of internal structures that enter into thought, interpretation, planning, and other human mental acts (Chomsky, 2004).

Generative Linguistics' principles and parameters approach continues to be productive in accounting for similarities and differences across languages; however, its newer Minimalist Program has not had an impact on pedagogical grammars. This is because "the emphasis in Generative Linguistics has been on identifying ever larger regularities in grammar, to the point that the 'essence' of grammar has been distilled in the Minimalist Program to Merge and Move, or perhaps only to Internal and External Merge" (Culicover & Jackendoff, 2005, p. 534). Such minimalism may be useful for addressing its goal of accounting for language evolution or language acquisition under conditions of inadequate input, but it is not going to advance the quest to facilitate the teaching of second and foreign languages because of its level of abstraction (Larsen-Freeman, 2005, 2006a).

Functional grammarians start from a very different position. Although there are different models of functional grammar, functionalists share the conviction

that it is the use that determines the form that is used for a particular purpose. Thus, functional grammarians see pragmatics and meaning as central, i.e., grammar is a resource for making and exchanging meaning (Halliday, 1974). In Halliday's Systemic-Functional theory, three types of meaning in grammatical structure can be identified: ideational meaning (how our experience and inner thoughts are represented), interpersonal meaning (how we interact with others through language), and textual meaning (how coherence is created in spoken and written texts).

By way of contrast with minimalism, newer functional and cognitive linguistic theories focus on language as it is actually used. The new theories, often referred to collectively as "usage-based," propose that grammatical rules do not precede, but rather, emerge from language use (Bybee, 1985, 2006; Croft, 1991; Givón, 1995; Goldberg, 1995; Hopper, 1988; Langacker, 1987, etc.). Such rules are probabilistic, rather than deterministic. In this way, grammar is said not to be innate or the starting point of a faculty of language, but rather, is derivative. Moreover, in these theories, the traditional distinction between grammar and lexicon is not always observed. "As opposed to conceiving of linguistic rules as algebraic procedures for combining words and morphemes that do not themselves contribute to meaning, this approach conceives of linguistic constructions as themselves meaningful linguistic symbols" (Tomasello, 2003, p. 5). Constructions range from morphemes to syntactic structures such as verb-argument patterns, to meaningful phrasal and clausal sequences. Such a theoretical position finds support in corpus-based grammars (e.g., Biber et al., 1999; Carter & McCarthy, 2006; Collins COBUILD, 1990), which rely on computer-assisted research to show the patterned lexical/grammatical sequences in language usage. For example, there are relatively fixed English patterns with limited options for slot fillers to express time relationships as in *a ___ ago* (e.g., *a day ago, an hour ago, a short while ago*).

Although there have certainly been linguists who have advocated the consolidation of lexicon and grammar all along (e.g., Bolinger, 1968; Chafe, 1970; Nattinger & DeCarrico, 1992; Pawley & Syder, 1983), and the reconceptualization of grammar as "lexicogrammar" (Celce-Murcia & Larsen-Freeman, 1999; Halliday, 1985), the fact that usage-based theories occupy the forefront of linguistics today represents a major change in the way grammar is conceived. However, from a pedagogical grammar perspective, they bring with them the potential for a problem as well, one exactly opposite to that of the Minimalist Program's abstraction. If it is lexicogrammatical constructions that are the units of analysis, this can easily lead to a proliferation of mini-grammars, with every unique pattern (or even lexical item) requiring a grammar of its own. For example, the English lexical item *matter* is often preceded by an indefinite article and followed by the preposition *of* and a gerund beginning with *-ing* (e.g., *a matter of developing skills, a matter of learning a body of information, a matter of becoming able to*) (Hunston & Francis, 1999). There is, therefore, little point in treating *matter* as a single lexical item that can be slotted into a general grammar of English. Rather, the word *matter* comes with attendant phraseology. While this level of analysis may be

warranted in a comprehensive reference grammar, such generalizations may be too narrow for a pedagogical grammar.

One final point to be made is that linguistic grammars, no matter what the unit of analysis, describe the abstract system underlying a language. Neither rules nor patterns contain directions for actually producing or comprehending language (Garrett, 1986). While attempts are underway to produce a real-time description of syntax, an account of how grammatical speech is produced in real time (Brazil, 1995), we still do not have a processing account of how speakers express and comprehend meaning.

Nevertheless, a description of the system is an essential starting point for proper pedagogy. A definition for a pedagogical grammar that is broad enough to accommodate both traditional and newer approaches, and one that can be applied to different languages, is that *grammar is a system of meaningful structures and patterns that are governed by particular pragmatic constraints*. Larsen-Freeman (2001) has referred to the three dimensions present in this definition of grammar as *form*, *meaning*, and *use*.

An example from English will have to suffice here. As cognitive linguists and construction grammarians have observed, the passive voice has the grammatical *meaning* of communicating something about/to which something happens/ed. Learners need to know this, and they need to know how to *form* the passive construction – in English, for example with some form of the *be* verb and the past participle. They also need to know when to *use* the passive. Such occasions include when the agent is unknown, should be concealed, is redundant, or when the use of the passive reflects the preferred word order for marking given and new information, etc. Not knowing when to use a structure appropriately results in overuse and underuse of the target structure, as for learners of Chinese having difficulty suppressing overt subjects (Odlin, 2003), or learners of Korean failing to choose correctly between the discursive patterns of *V-a/e pelita* versus *V-ko malta*, completive aspect markers (Strauss, Lee, & Ahn, 2006). In fact, learning to make a specific choice between two structures with approximately the same meaning in a context-appropriate way is *the* challenge in learning grammar, according to Rea Dickens and Woods (1988).

The *structures and patterns* in the above definition (with examples) include:

Morphemes

In Turkish, the roots of verbs each have thousands of different forms (Hankamer, 1989).

Function words

Indonesian auxiliaries (*sudah* and *siang*) are used as tense/aspect markers.

Phrases

Subcategorization constraints vary from language to language and produce different transitivity patterns. For example, in Chinese, (*fuk6 mou6* (*serve*)) is intransitive (Chan, 2004, p. 60), whereas in English, *serve* must take an object.

Clauses

Canonical word order in English is S-V-DO-IO; in Japanese, it is S-IO-DO-V (Cann, Kempson, & Marten, 2005).

Clausal formulas/constructions/patterned sequences

French formulas (*je ne sais pas; des choses comme ça; c'est _____ ; il y a _____*) (from work by Raupach on German acquirers of French, cited in Weinert, 1995).

Discourse-level patterns

Chinese supra-sentential topic chaining or English theme–rheme organization.

Typological patterns

Patterns that arise from language typology, realized, for example, in the topic prominence of Korean, Chinese, and Japanese versus the subject prominence of Arabic, Farsi, Spanish, and English.

Grammar Pedagogy (in General)

Before discussing grammar teaching in any detail, several general points should be made. First, although linguists believe that languages are equally complex, *where* they are complex varies. For instance, teachers of Russian to speakers of English spend a great deal of time teaching inflected morphology and the complicated system of verbal aspect (Russian is classified by the United States Defense Language Institute as a challenging category 3 language in terms of the difficulties that it poses to learners who are native speakers of English), and teachers of German spend time on the form of function words, because, for example, German has six distinct forms of the definite article, inflected for case, number, and gender. Second, implicit in these claims is the assumption that to some extent the learning challenge the grammatical complexity presents will differ depending on the starting point, e.g., Portuguese speakers will have an easier time learning Spanish grammar than speakers of non-Romance languages, all other things being equal. Third, since learners build on earlier knowledge, it is also the case that knowledge of other languages can influence the acquisition of grammar. For example, in learning Italian, English and Spanish first-language speakers who knew some French were found to use significantly more subject insertion than speakers without knowledge of French (De Angelis, 2005). In addition to the learners' knowledge of other languages, there are many other factors known to affect the rate of acquisition of grammatical forms, e.g., their frequency, salience, and the consistency of their meaning (DeKeyser, 2005).

It should also be noted that the pedagogic approach to the teaching of grammar in various parts of the world differs, depending not only on different grammatical complexities, but also on the pedagogic traditions. For example, Sampson (1984) points out that both the teacher and the texts are seen as crucial models for learning in the Chinese educational system. Also, in a survey of teachers in

Colombia, Schulz (2001) found that Colombian students and teachers had stronger beliefs in the efficacy of explicit grammar instruction and error correction than did their US counterparts. Indeed, it is not uncommon to hear of teachers who are not particularly impressed with the benefit of grammar instruction, yet who are teaching grammar, nonetheless, because that is what students expect (see, e.g., Borg, 1999).

Approaches to Grammar Teaching

Four approaches to the teaching of grammar will be presented here: PPP, input-processing, focus on form, and grammaring, in addition to one non-interventionist approach to language teaching that calls for no explicit grammar instruction.

PPP

Across the various languages and subsystems of grammar, perhaps the most widely practiced traditional approach to grammatical instruction has been portrayed as the three Ps – present, practice, produce.

In the first stage, an understanding of the grammar point is provided; sometimes by pointing out the differences between the L1 and L2. In the second stage, students practice the grammar structure using oral drills and written exercises. In the third stage, students are given “frequent opportunities for communicative use of the grammar to promote automatic and accurate use” (Sheen, 2003, p. 226).

DeKeyser (1997) offers Anderson’s skill-based approach to explain how grammar practice may work in the second stage. Once students are given a rule (declarative knowledge) in the first step, output practice aids students to proceduralize their knowledge. In other words, with practice, declarative knowledge takes the form of procedural knowledge, which encodes behavior. Continued practice automatizes the use of the rule so that students do not have to think consciously about the rule any longer. As Doughty and Williams (1998, p. 49) put it, “proceduralization is achieved by engaging in the target behavior – or procedure – while temporarily leaning on declarative crutches . . .”

Countless generations of students have been taught grammar in this way – and many have succeeded with this form of instruction. In support of this, following their meta-analysis of research on the effectiveness of instruction, Norris and Ortega (2000) conclude that “L2 instruction of particular language forms induces substantial target-oriented change . . .” (p. 500). However, it is also true that the traditional approach has had its detractors. One of most trenchant criticisms of this approach is that students fail to apply their knowledge of grammar when they are communicating. Appropriating Alfred North Whitehead’s term, Larsen-Freeman (2003) has referred to this as the “inert knowledge problem.” Students know the grammar – at least, they know the grammar rules explicitly – but they fail to apply them in communication. This problem has been discussed by others as the “non-interface problem,” in that there is no apparent connection between

explicit knowledge of the rules and implicit control of the system, and the "learnability problem," following from the observation that grammar is not learned in a linear and atomistic fashion (R. Ellis, 1993). Moreover, what learners do produce bears no resemblance to what has been presented to them or has been practiced.

Non-interventionist

Such observations led one influential researcher, Krashen (1981, 1982), to claim that explicit grammar instruction has very little impact on the natural acquisition process because, he argued, studying grammar rules can never lead to their unconscious deployment in fluent communication. According to Krashen, the only way for students to acquire grammar is to get exposure to comprehensible input in the target language in an affectively non-threatening situation, where the input is finely tuned to students' level of proficiency. Krashen believes that if the input is understood and there is enough of it, the necessary grammar will automatically be acquired. At best, students can use their grammar knowledge to monitor and revise their spoken and written products after they have been produced. Other non-interventionist positions have been adopted as well. "While differing considerably . . . each has claimed that the best way to learn a language . . . is not by treating it as an object of study, but by experiencing it as a medium of communication" (Long, 1991, p. 41).

Studies of French immersion programs in Canada, however, show that when language is only used as a medium of communication, with no explicit attention being paid to grammatical form, the interlanguages of naturalistic learners go through long periods of stability, in which non-native forms are used (Harley & Swain, 1984). White (1987) makes the point that the positive evidence that immersion students receive is not always sufficient for learners to analyze the complex grammatical features of French. In other words, ". . . while positive evidence contains information about what is possible in the target language, it does not contain information about what is *not* possible" (Spada, 1997, pp. 80-1). Thus, learners require the "negative evidence" that they get from instruction (e.g., corrective feedback) to help them sort out L1/L2 differences. Larsen-Freeman and Long (1991) have made the further point that the right kind of formal instruction should accelerate natural acquisition, not merely imitate it.

Input-processing

VanPatten (1990) argued that the problem is that L2 learners have difficulty attending simultaneously to meaning and form. To remedy this problem, VanPatten (2004) has proposed "input processing," whereby learners are guided to pay attention to a feature in the target language input that is likely to cause a problem. The following task from Cadierno (1992, as discussed in Doughty & Williams, 1998) illustrates input-processing. For this task, students are shown a picture and are asked to imagine that they are one of the characters in the picture. They then have to listen to a sentence in the target language and to select

the picture that best matches it. For example, when the target language is Spanish and the students are English speakers, they hear:

Te busca el señor. ('The man is looking for you.')

Later when viewing two more pictures, the students hear:

Tú buscas al señor. ('You are looking for the man.')

English speakers use word order to determine subjects and objects. Presumably, however, with information about differences in Spanish and with enough of this input-processing practice, students will learn to discern the difference in meaning, and that distinguishing subjects from objects requires paying attention to the ends of words and to small differences in the function words themselves (e.g., *te* vs. *tú* and *el* vs. *al*).

Focus on form

Noting that some aspects of an L2 require awareness and/or attention to language form, and further, that implicit learning is not sufficient for SLA mastery, Long (1991) calls for a focus on form within a communicative or meaning-based approach to language teaching, such as task-based (e.g., R. Ellis, 2003; Pica, Kang, & Sauro, 2006) or content-based language teaching. Rodgers (2006), for example, has demonstrated that when third-semester students of Italian engaged in content-based instruction, in which they studied Italian geography, and at the same time, either through incidental or planned opportunities, attended to problematic grammatical features, the students increased not only in their knowledge of geography, but also in their form-function abilities. Since there is a limit on what learners can pay attention to, focusing on form may help learners to notice structures (Schmidt, 1990) that would otherwise escape their attention when they are engaged in communication or studying content. Long (1991, p. 47) hypothesizes that "a systematic, non-interfering focus on form produces a faster rate of learning and (probably) higher levels of ultimate SL attainment than instruction with no focus on form." Various means of non-intrusive focusing on form have been proposed and studied.

Input enhancement

Sharwood Smith (1993) suggests that visual enhancement (color-coding, underlining, boldfacing, enlarging the font) be made to written instructional texts in an attempt to make certain features of the input more salient. Input enhancement can also apply to speech. For instance, phonological manipulations such as oral repetition might help learners pay attention to grammar structures in the input. At this point, however, the contribution of visual input enhancement is not clear (Wong, 2003), though Jensen and Vinther did find a significant increase in grammatical accuracy of Danish learners of Spanish when input was enhanced through exact repetition and through speech rate reduction (2003).

Input flooding/Priming

A second means of calling attention to form is flooding meaningful input with the target form. For example, talking about historical events would give learners abundant opportunities to notice the past tense. One possible function of input flooding, besides making certain features in the input more frequent and thus more salient, is that it might prime the production of a particular structure. "Syntactic priming is a speaker's tendency to produce a previously spoken or heard structure" (Mackey & Gass, 2006, p. 173).

Output production

Believing comprehensible input alone to be inadequate for accomplishing successful second-language acquisition, Swain (1985) advocated the use of output production in language teaching (see also Morgan-Short & Wood Bowden, 2006; Shehadeh, 2003; Toth, 2006). "Comprehensible output," according to Swain, forces learners to move from semantic processing of input to syntactic processing, in order to produce target output. She also hypothesizes that comprehensible output serves to have learners notice features of the target language, especially "to notice what they do not know, or know only partially" (Swain, 1995, p. 129).

Long (1996) concurs about the importance of noticing. "[C]ommunicative trouble can lead learners to recognize that a linguistic problem exists, switch their attentional focus from message to form, identify the problem, and notice the needed item in the input" (p. 425). Indeed, helping students to notice their errors is an important function of focusing on form, a point to which I return later.

Not everyone is convinced by an input-processing or focus-on-form approach, however. While acknowledging the "carry-over" problem, i.e., the difficulty of achieving simultaneous fluent and accurate spontaneous production, Swan (2005) disputes the claim that the traditional PPP has failed. Further, he admonishes that it does not follow that the problem will be solved by eliminating the first two Ps.

Grammaring

Larsen-Freeman (2001, 2003) offers "grammaring" – the ability to use grammar structures accurately, meaningfully, and appropriately as the proper goal of grammar instruction. The addition of "-ing" to grammar is meant to suggest a dynamic process of grammar using. In order to realize this goal, it is not sufficient for students to notice or comprehend grammatical structures. Students must also practice *meaningful use of grammar* in a way that takes into account "transfer-appropriate" processing (Roediger & Guynn, 1996). This means that in order for students to overcome the inert knowledge problem and transfer what they can do in communicative practice to real communication outside of the classroom, there must be a psychological similarity between the conditions of learning and the conditions of use (Segalowitz, 2003). Bearing the need for psychological similarity in mind, Gatbonton and Segalowitz (1988) offer "creative automatization." Rather than automatizing knowledge of rules, as was suggested by DeKeyser,

Gabonton and Segalowitz call for practice that automates control of patterned sequences, ones that would naturally occur in given communicative contexts.

Of course, what is practiced and the way it is practiced will depend on the nature of the learning challenge. Some structures may need little, if any, pedagogical focus. With others, when the learning challenge is how to *form* the construction, it is important that learners get to practice the target item over and over again meaningfully, for example by using it in a task-essential way (Fotos, 2002; Loschky & Bley-Vroman, 1993; Samuda, 2001). When the challenge is *meaning*, students need practice in associating form and meaning, such as associating various spatial and temporal meanings with prepositions. Finally, when the challenge is *use*, students need to be given situations where they are forced to decide between the use of two or more different forms with roughly the same meaning, but which are not equally appropriate in a given context. Use would be a challenge for learners, for example, in choosing between the active and passive voices or between English present perfect and past tenses.

Larsen-Freeman (2003) underscores the importance of output practice in addition to consciousness-raising activities; however, she goes a step further in suggesting that output practice is not only useful for the purpose of rehearsal and automatizing, but that it also leads to restructuring of the underlying system (McLaughlin, 1990) and to linguistic innovation or morphogenesis. The fact that "the act of playing the game has a way of changing the rules" (Larsen-Freeman, 1997) blurs the distinction between the essence of a linguistic system and its use. This also means for Larsen-Freeman (2006b) that although there is stability in a grammatical system, there is no stasis.

As a consequence, Larsen-Freeman (2006a) calls for grammar teaching to help develop capacity within students, not formal grammatical competence (Widdowson, 1983). Capacity involves learners using lexicogrammatical resources for the creation of meaning. Doing so enables language learners to move beyond the memorized formulas and static rules they employ, especially at the beginning of instruction. This is what accounts for the fact that language changes all the time; it does so due to the cumulative innovations that language users make at the local level as they adapt their language resources to new communicative contexts (Larsen-Freeman & Cameron, 2008). In order to develop capacity, learners need to abstract from frequently occurring exemplars. Higher-level constructs, such as schemata, prototypes, and complex constructions, emerge from the interaction of lower-level forms. As learners master the system at an optimal level of abstraction, they are no longer learning only to conform to grammatical uniformity. They are acquiring a way to create and understand meaning.

Other benefits of grammar instruction have been proposed (R. Ellis, 1993, 1998, 2006). One is to help students "notice the gap" between new features in a structure and how they differ from the learners' interlanguages (Schmidt & Frota, 1986). Grammar instruction can also help students generalize their knowledge to new structures (Gass, 1982). Another contribution of grammar teaching may be to fill in the gaps in the input (Spada & Lightbown, 1993), since classroom language will not necessarily represent all grammatical structures that students need to acquire.

Other Topics

Several other topics related to the teaching and testing of grammar are implied or previewed in this chapter so far, but merit separate treatment.

Explicit versus implicit revisited

A great deal of the controversy in the teaching of grammar can be ascribed to the general issue of whether an explicit or implicit approach to teaching structure is best. Explicit instruction is where students are instructed in the rules or patterns (deductive) or guided to induce them, themselves (inductive). An implicit approach makes no reference to rules or patterns (see also a related, but somewhat different, distinction between incidental and intentional learning, Hulstijn, 2003).

Although Norris and Ortega (2000, p. 500) found evidence to support the value of explicit teaching (including inductive and deductive approaches), the outcomes of instruction that their meta-analysis included tended to be ones where learners had to demonstrate explicit knowledge or perform on discrete/decontextualized test items, measures that would presumably favor explicit knowledge (Doughty, 2003; Norris & Ortega, 2000, p. 501).

Another issue is the source of the explicit rules. Instead of presenting students with rules, for instance, Fotos and Ellis (1991) give students linguistic data from which they could work out the rules inductively in their own way. An inductive approach may be very fitting for complex rules, which are difficult to articulate and internalize. In a modification of an inductive approach, Adair-Hauck, Donato, and Cumo-Johanssen (2005) recommend a guided-participatory approach to rule formation, rather than the teacher providing the learner with explanations, or the learners being left to analyze the grammar explanations implicitly for themselves.

On a slightly different note, Larsen-Freeman (2000, 2003) makes the case for guiding students to understand the *reason* why things are the way they are. To the extent that teachers can reduce the arbitrariness in grammatical rules (i.e., teaching meaning-based reasons rather than solely form-based rules), students' learning burden is eased. For instance, if students understand the theme–rheme pattern of discourse organization in English, they will understand a number of different grammatical phenomena, e.g., the form of predicative phrases in sentences with existential *there*, word order variation with direct and indirect objects, and word order variation with phrasal verbs and their particles. Thus, an additional value to reasons is that they are broader than rules, in that they can be applied to many different structures (see also, Rutherford, 1987).

Significantly, although the general assumption behind the non-interface stance, that explicit knowledge cannot become implicit knowledge, may be technically true, it may be overstated. While it is the case that implicit and explicit knowledge are different, it is claimed at the same time that explicit knowledge can influence implicit knowledge (N. Ellis, 2002, p. 164). This fact is significant for older learners who may no longer learn as well implicitly as they did as children

learning their first language. N. Ellis (2005) and N. Ellis and Larsen-Freeman (2006) point out that it is especially in the area of grammatical morphology that conscious involvement may be necessary for successful learning. For without it, the low salience and low communicative value of the morphemes, in English at any rate, lead to L2 learners' continuing to process these aspects of language implicitly, following the habits and tunings laid down by the L1. "Consciousness is necessary to change behavior" (N. Ellis, 2005, p. 327). Changing the cues that learners focus on in their language processing changes what their implicit learning systems tune into. DeKeyser (2003) makes a similar point and adds that the reverse is also true – implicit knowledge can be made explicit when attempting to convey it verbally to someone else (as teachers have always done).

Clearly, at the level of debate, explicit versus implicit is too general to be resolved categorically. For instance, DeKeyser (2003) cautions that implicit learning is severely hampered when the learning task requires establishing a relationship between elements that are at some distance, separated by several other elements. There are also issues with regards to the intensity of grammar instruction (Collins et al., 1999). Perhaps all that can be said with certainty at this point is that students who receive a blend of implicit and explicit grammar instruction are likely to be well served (N. Ellis, 1995; MacWhinney, 1997).

Metalinguage

Closely related to teaching grammar explicitly is the role of metalinguage or grammatical terminology. Borg (1999) makes it clear that teachers have a wide range of views on whether metalinguage facilitates learning, and Sharwood Smith (1993) notes that whether or not to use grammatical terminology is still an empirical question. However, once again, general prescriptions are probably not in order because there are aspects of certain languages, e.g., in French, sometimes the masculine and feminine forms are homophones (*bleu*, masculine for *blue*, and *bleue* its feminine counterpart) (Patsy Lightbown, personal communication), such that the concept of gender and the way it is marked would seem to be needed to help learners understand why there are two forms in writing.

Swain and Lapkin (1998) track students' use of metalinguage in collaborative dialogues. For example, they report on an episode where two learners of French discuss the verb *sortir* and whether it does or does not take the reflexive form. The researchers assert that such "language-related episodes," where learners work together to use grammatical metalinguage and the reasoning of others to expand their knowledge of the language, helps learners at the same time to regulate their own cognitive functioning.

Syllabus design

Various principles (e.g., teaching simpler structures first, or more frequently occurring ones, or those with the most communicative utility) have been invoked over the years for the sequencing of structures in grammatical syllabi (Larsen-

Freeman, 1974). However, it has also been established that there are naturally occurring developmental sequences, and U-shaped learning curves, backsliding, and restructuring, which would seem to argue against any such overall principled sequencing of grammar structures in instruction. The concern for developmental readiness is further borne out in work by Pienemann (1984; 1998) and his associates, which has established that certain speech-processing strategies constrain development in the acquisition of German word order. For this reason, students' control of the strategies determines what is learnable, and, therefore, what is teachable at any given moment. These researchers also suggest the futility of attempting to teach word order beyond a learner's current processing ability. Indeed, R. Ellis (1989) found that students learning German word-order rules applied the rules in their interlanguage in the "natural" sequence, no matter how much instructional emphasis each was given (but, cf. Tarone & Liu, 1995).

While developmental sequences may indeed be impervious to instruction, it is likely the case that instruction accelerates the overall rate of acquisition. In support of this claim, Lightbown suggests that grammar instruction in advance of learners' readiness may prime their subsequent noticing (Lightbown, 1998), and Terrell offers a role for grammar instruction in providing students with advance organizers (1991). Acknowledging the constraints that developmental sequences may pose, but mindful of the accelerated learning that comes with grammatical instruction, Larsen-Freeman (2003) recommends that teachers adopt a "grammar checklist" rather than a sequence. In this way, teachers have an unordered set of grammar structures they need to teach, but they can do so locally in a way that attends to their students' readiness to learn. It also means that grammar structures can be worked on as they arise in content or during communicative activities, thus the contextualization that is facilitative of learning the grammar is already present. Finally, using a checklist also prompts teachers to work on certain structures that do not naturally arise during classroom activities, perhaps because students avoid them.

Individual differences

Teachers do not just teach grammar, of course; they teach grammar to particular students. Who the students are will also affect grammar instruction. This point was made earlier with regards to cultural expectations for grammar instruction, learners' language backgrounds, and the need to "localize" sequencing. In addition, the level of learners' target language proficiency should inform pedagogical decisions. For example, Zobl (1985) notes that at a certain point, learners need exposure to marked data if their interlanguage development is not to stagnate. Clearly, there are also individual style differences, which should be taken into account. For instance, Hatch (1974) distinguished between two different types of learners: rule formers and data gatherers, the former of an analytic mind and the latter more likely to memorize pattern sequences. Skehan's (1998) research demonstrating language aptitude differences, partially attributed to differing propensities for language analysis, is also relevant in this regard (see also,

Robinson, 2002). More recently, work by Larsen-Freeman (2006c) has shown that the pressures for competing cognitive resources, e.g., the allocation of attention, lead learners to adopt either grammatical or more expressive orientations to the language-learning challenge.

Error correction/feedback

A huge issue in grammar teaching, but perhaps the most controversial one (Larsen-Freeman, 1991; Truscott, 1999), is the question of error correction. While some feel that correcting students' errors causes students to experience debilitating anxiety, most research supports the value of giving learners feedback on their non-targetlike performance in an affectively-supportive way. However, it is far from clear which error correction techniques are the most efficacious. For one thing, as with other aspects of grammar instruction, providing learners with feedback can be done explicitly or implicitly. The latter takes place through such means as clarification requests, confirmation checks, and recasts, as in the following exchange between a learner (L) and the teacher (T):

- L: I was in pub.
 T: In the pub?
 L: Yeah and I was drinking beer with my friend
 T: Which pub did you go to?

(Loewen, 2005)

The teacher reformulates the learner's initial utterance to include the definite article. Recasts such as this one have great appeal as correction strategies because they are minimally intrusive and occur within meaning-focused activities (Doughty, 2001). Besides, teachers provide them quite naturally, and therefore, frequently.

One problem with recasts, however, is that they can be ambiguous (Lyster, 1998), limiting their acquisition potential. For instance, sometimes teachers repeat correct forms. It is also possible that learners respond to them differently. Some appear to ignore them – at least they do not immediately uptake the correct form (Lyster & Ranta, 1997) – although immediate successful uptake may not be a factor in acquisition (Mackey & Philp, 1998). Other learners who respond to recasts do so in private speech rather than social speech (Ohta, 2000). Indeed, the efficacy of recasts may be determined by a host of factors, such as learners' level of literacy (Tarone & Bigelow, 2005) or their proficiency (Ammar & Spada, 2006). It is also the case that recasts may have a differential effect depending on the linguistic target. For example, in one study of Spanish learners, recasts helped learners with adverb placement, but not with the use of clitic pronouns (Ortega & Long, 1997).

A more direct approach, but one that can still be applied while learners are engaged in communicative activities, is a teacher's use of prompts. For example, Lyster (2004) observes that prompts of varying sorts – such as repeating a student's error verbatim with rising intonation or providing metalinguistic comments – withhold approval and allow students to self-repair.

Then, too, when there is an L1–L2 contrast, the learner may need explicit negative feedback. For example, there is a contrast between English and German with regard to adverbial fronting. In German, one can front an adverbial, but must adhere to the word order of Adv + V + Sub + Obj when doing so:

Gestern sah ich den Film.
'Yesterday saw I the film.'

When learning German, an English speaker's original hypothesis might be that the order Adv + Sub + V + Obj is possible, as it is in English. Without negative feedback, learners may never receive evidence that the English word order is impossible in German. Indeed, Selinker and Lakshmanan (1992) hold that L1 language transfer is a privileged co-factor in fossilized forms, i.e., those non-targetlike forms that have become stable for long periods of time in learners' interlanguages (Han, 2004; Han & Odlin, 2006).

It is important to point out that the "error" does not have to be an error of form at all. For example, Negueruela et al. (2004) show that "even advanced language learners have problems appropriately indicating motion events when they have to cross typological boundaries between their target languages and their native languages. English speakers learning Spanish, for instance, tend to express manner in Spanish as they do in English, which does not result in an error of form but which leads them to mark manner very differently from Spanish speakers. The same is true for grammatical errors relating to pragmatics, when an accurate and meaningful form is used, but one that is inappropriate to the context.

Of course, no technique, even giving the learner the correct form, is effective unless the student can perceive the difference between the recast and what he or she has just said. It would seem necessary for the learners to notice the gap (Nicholas, Lightbown, & Spada, 2001). Long's comments (2007, pp. 114–15) about recasts likely apply to all error correction techniques: "... there is some evidence that recasts, like instruction in general, are differentially frequent and effective depending on setting, learner age, proficiency, and type of L2 structure... as well as developmental stage and task." Indeed, it is unlikely that there is one feedback strategy that is better than others for all occasions. Thus, error correction ultimately comes down to adjusting feedback to individual learners. Adjustments cannot be determined *a priori*; rather they must be collaboratively negotiated online with the learner (Aljaafreh & Lantolf, 1994).

Spoken versus written grammar

With access to corpora of oral data, it has become increasingly apparent that there are differences in the grammar of the spoken versus written form (e.g. Biber, 1986; Carter & McCarthy, 1995); however, Leech (2000) contends that in English, at least, spoken and written forms utilize the same grammatical repertoires, but do so with different frequencies. Reinforcing this point for French, Waugh (1991) studied the distribution of the *passé simple* form and found that

was much more common in writing, presumably because it shows detachment. On the other hand, the differences between the two media may be more dramatic. For example, in Arabic, it has long been known that spoken regional dialects are markedly different from classical written Arabic. In any case, it is important to note the written bias in linguistics (Linell, 2005).

Grammatical Assessment

In the traditional approach to assessing grammar, grammatical knowledge is defined in terms of accurate production and comprehension, and then assessed through the four skills. Testing is typically done by means of decontextualized, discrete-point items such as sentence unscrambling, fill-in-the-blanks, error correction, sentence completion, sentence combining, picture description, elicited imitation, judging grammatical correctness, and modified cloze passages. Such formats test grammar knowledge, but they do not assess whether test takers can use grammar correctly in real-life speaking or writing. A significant contribution of the communicative or proficiency-based approach in the 1970s and 1980s was a shift from seeing language proficiency in terms of knowledge of structures, which could best be assessed using discrete-point items, to the ability to integrate and use the knowledge in performance, which could best be assessed through the production and comprehension of written texts and through face-to-face interaction under real-time processing conditions (McNamara & Roever, 2006, pp. 43–4).

In the latter, more integrative, approach to grammar assessment, grammatical performance is typically assessed by raters using scales that gauge grammatical accuracy, complexity, and the range of grammatical structures used. The judgments are subjective, and because the assessment formats are more open-ended, they are subject to possible inconsistencies. For this reason, certain factors, such as rater severity and prompt difficulty, must be examined, usually accomplished by means of generalizability theory or item-response theory (Purpura, 2006).

Because of the preference in recent years for measuring the use of grammar holistically through speaking and writing, some standardized examinations, e.g., the TOEFL, no longer have a separate section of the test that deals with structure explicitly. The decision to eliminate the explicit testing of grammar was made in at least two cases based on research showing that a separate subtest of grammatical knowledge could not be adequately differentiated from other sections of a test (Cushing Weigle & Lynch, 1995 and Alderson, 1993, cited in Purpura, 2004). A consequence of such decisions, however, is that it is difficult to separate out what in the ability to read or write the texts is due to the lack of knowledge concerning grammatical structures and what might be due to other factors. We also have no way of diagnosing grammatical difficulties learners may be experiencing or in providing them with feedback (Purpura, 2004). In sum, discrete-point and integrative tests represent different approaches to grammar assessment, each of which have a contribution to make.

Innovations in grammar assessment

There are a number of innovations underway, or at least proposed, in the way grammar is being assessed.

Redefining the construct

The first involves a definition of the grammar construct itself. Expanding beyond form to include grammatical meaning is one such move. For instance, Purpura (2004, p. 89) defines grammatical ability for assessment purposes as involving "the capacity to realize grammatical knowledge accurately and meaningfully in test-taking or other language-use contexts." Grammatical ability may (also) interact with pragmatic ability, which Purpura considers a different ability area.

Expanding the grammatical construct even further are researchers at the University of Michigan who are responsible for developing standard examinations of English proficiency (the ECCE and ECPE). They are going beyond the assessment of grammatical form and meaning and including grammatical use as well. Doing so necessitates assessing how grammar functions at the discourse level, where its use in cohesion, thematic continuity, anaphora, cataphora, grammatical focus, backgrounding and foregrounding, etc., are measured, as well as assessing students' knowledge of how sociolinguistic functions, such as constructing identity, conveying politeness, displaying power, etc., are realized grammatically. Speakers have a choice of which of their grammatical resources to deploy. Grammar is not a linguistic straitjacket (Larsen-Freeman, 2002; see also Batstone, 1994; Cullen, 2008).

Partial scoring

Discrete-point tests usually rely on dichotomous scoring of grammatical accuracy. Recently, it has been proposed that scoring grammatical items polytomously would yield information about learners who have an intermediary knowledge of grammar, rather than their being treated as if they have no knowledge at all (Purpura, 2006). To examine the extent to which answers on multiple-choice grammar items can be ordered along a path of progressive attainment, Purpura (2006) examined the grammar section of the University of Michigan ECPE, and found that many of the items did show what seemed to be a progressive attainment pattern in the response patterns of 1,000 candidates. If these items are indeed measuring developmental levels, dichotomous scoring raises several concerns. First, a considerable amount of developmental information is lost with students who have partial knowledge. More seriously, scoring dichotomously underestimates some students' true ability, and it makes it impossible for some students to receive feedback appropriate to their developmental level. While partial scoring is not a complete solution, it is one step in the long-hoped-for development of an interlanguage-sensitive approach to assessment (Larsen-Freeman & Long, 1991).

The social dimension

Language tests have ignored the social use dimension of language and have followed traditional psychometric methods in measuring isolated pieces of grammar and vocabulary knowledge; as a consequence, measuring test takers' ability to use language in social contexts has been overlooked (McNamara & Roever, 2006). Importantly, this awareness goes beyond extending the construct being measured. A social view of performance is incompatible with the traditional view of performance as a simple projection or display of individual competence. Increasingly, therefore, language testers are questioning whether it is possible to isolate the contributions of test takers from those of the test takers' interlocutors, say in oral proficiency interviews.

Along somewhat similar lines, Lantolf and Poehner (2004) call for "dynamic assessment," arguing against the assumption that the best sort of assessment is that of independent problem solving. Since higher order thinking emerges from our interactions with others, dynamic assessment involves testing the examinee before and after an intervention designed to teach the student how to perform better on the test. The student's final score represents the difference between pre-test (before learning) and post-test (after learning) scores.

The standard

Another issue that could be discussed under grammar teaching or testing is the issue of what the target standard is. For instance, some researchers have claimed that as English increasingly becomes the language of communication between non-native speakers, it is likely that "ungrammatical, but unproblematic" constructions, such as "he look very sad," "a picture who gives the impression" (Seidlhofer, 2001, p. 147), once they exist sufficiently frequently in non-native speaker discourse, would arguably become standardized and exist as a variety (English as a *lingua franca*) alongside English as a native language. Kachru and Nelson (1996, in Siegel, 2003) point out that considering the non-native features of indigenized varieties to be the result of L1 interference and fossilization would be wrong because learners may not wish to emulate a native standard, and standard models may not be available in the environment. Even for those who do wish to emulate a native standard, there is always the question concerning ultimate attainment in a classroom setting. For instance, in discussing the teaching of Russian as a foreign language, Rifkin (2005) advocates that students study abroad in a Russian-speaking environment because there is a ceiling effect as to what can be accomplished in a class where Russian is the target language.

The instruction and assessment of grammar will likely continue to foment a great deal of discussion as the field struggles with how to do both in harmony with students' natural learning processes. The effort is worth it for there is much at stake.

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