Language Teaching (2021), **54**, 407–423
doi:10.1017/S0261444821000070

CAMBRIDGE UNIVERSITY PRESS

THINKING ALLOWED

Research agenda: Researching grammar teaching and learning in the second language classroom

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Abstract

We propose five research tasks targeting grammar teaching and learning, focusing on extending previous research and exploring under-studied features and contexts. The first two tasks outline replications and extensions of seminal studies on pedagogical grammar, Toth (2008) and Samuda (2001), designed to advance our understanding of the teacher role in providing rich practice opportunities. Another task examines how features of peer interaction during oral communication might encourage attention to grammar among young second language (L2) classroom learners in school-based foreign language programs, a common yet under-studied context. A fourth task investigates the unique properties of spoken grammar across languages and effective approaches for its teaching and learning, and the fifth explores the (re)design and use of corpus-based tools to enhance accessibility and learner autonomy in data-driven grammar learning. Each task is designed to be feasible across a variety of classroom contexts and target languages. We highlight concrete implications for language pedagogy and include suggestions for capturing both learning outcomes and participants' perspectives on their learning and teaching, using a range of quantitative and qualitative methodologies. We end with some thoughts on repetitive practice for learning certain features of grammar, and recommendations for collaborative research that would encourage greater replication of future studies.

Introduction

For people outside of the field of second language (L2) pedagogy, language teaching is often synonymous with grammar teaching. The common experience of studying foreign languages in classes characterized by extensive attention to the formal aspects of language reinforces this impression. Even within our field, although form-focused instruction (FFI) research has targeted a broad array of language features, the discussion of pedagogical issues related to FFI has largely been informed by research on L2 grammar (Nassaji, 2016; Collins & Ruivivar, 2019). Moreover, a considerable amount of this research has been conducted in actual language classrooms, complementing the work done in lab-based settings. Consequently, scholars exploring issues in grammar teaching and learning can benefit from a large body of research to guide new investigations and provide replicable instruments and materials. Indeed, a recent search on IRIS (Instruments for Research into Second Languages: https://www.iris-database.org) yielded close to 300 records for grammar teaching, compared with 200 for vocabulary and 40 for pronunciation.

With so much interest in L2 grammar, one might wonder whether there is really a need for suggestions for research tasks in this domain. Our perspective is that it is precisely because of the volume of existing work that some guidance on avenues that merit attention is of potential benefit. We do so with the caveat that the choice is selective, informed by our familiarity with the existing literature, our experience as classroom researchers and language teachers, and our work with pre-service and in-service teachers. Choices were further motivated by issues that allowed for feasible research designs across a variety of contexts and target languages (i.e. not narrowly focused on English).

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https://doi.org/10.1017/S0261444821000070 Published online by Cambridge University Press

One guiding principle was the promotion of replication studies. For this, we have focused on two seminal studies that focus on the TEACHING ROLE itself in helping students make form-meaning connections. As both are widely cited in the field, we offer ideas for replicating or building upon this work to improve their generalizability and enhance their pedagogical relevance.[1] Paul Toth's (2008) study of Spanish L2 learners yielded the somewhat surprising finding that teacher-led, whole-class communicative tasks provided better grammar learning opportunities than student-led practice in small groups using the same tasks. This difference between teacher-led discourse (TLD) and learner-led discourse (LLD) is intriguing, given the extensive literature on the benefits of pair/small group work for language acquisition, from a variety of theoretical accounts of second language acquisition (SLA), notably interactionist (e.g. Swain & Lapkin, 1998), socio-cultural (e.g. Lantolf & Thorne, 2006) and cognitive-sociocultural (e.g. Kunitz, 2018). To our knowledge, however, there have been no published replications of Toth's original study, which would allow researchers and teachers to see how generalizable the findings on the benefits of TLD are to other grammar features, L2s, types of communicative task, and teaching contexts/cultures (the original study was in a university foreign language setting). **Research Task 1** describes a conceptual replication designed to address these issues.

Samuda's (2001) seminal paper documented a skillful teacher's manipulation of the timing of grammar instruction provided to students during a problem-solving task. The innovation in the approach she detailed was having students move from meaning to form to meaning rather than the more common sequence of grammar presentation/production/practice. In the 'leading from behind' approach Samuda described, the teacher drew students' attention to task-useful grammar (Loschky & Bley-Vroman, 1993) once they had begun expressing their ideas in the target language. Samuda's chapter continues to be widely cited in L2 grammar teaching publications from different theoretical perspectives, for both researcher and practitioner audiences. Yet, as Samuda (2001) was careful to point out, the paper reports on a pilot case study of one teacher and her nine students. It was not an experimental study with control/comparison groups or reliable pre- and post-tests measuring learning, nor were students' or teachers' perspectives on the experience probed to document the feasibility of the approach. To make claims about learning and teaching, Samuda noted that 'the instructional strategies discussed here need to be rigorously investigated across a broader range of contexts' (p. 136). To our knowledge, this call has not been taken up. **Research Task 2** proposes an extension of the original study.

Another priority area in our view is the teaching and learning of grammar by children in classroom settings. Many foreign language classes, particularly those targeting EFL, are increasingly being offered to primary school-age learners in programs that offer limited exposure to the target language (in contrast to the more widely studied content-based, immersion-type programs, Collins & Muñoz, 2016). There is extensive research on peer interaction and grammar among adolescents and adults in L2 classrooms but as Garcia Mayo and Imaz-Agirre (2019) point out, comparatively little research on learners' conscious focus on form during classroom tasks in primary school. One reason for this is the current lack of consensus on how children learn grammar and, consequently, how their learning can be supported in the classroom. **Research Task 3** targets this issue.

The distinction between written and spoken grammar is another area with important consequences for teaching and learning. Since Carter and McCarthy's (1995) seminal paper calling for teaching materials and practice to better represent authentic spoken language, the grammar of speech, in particular speech that deviates from prescriptive, writing-based norms, has been recognized in various pedagogical grammars and reflected in some language teaching materials. However, research on HOW spoken grammar should be taught remain scarce. We also know very little about spoken grammar features in languages other than English (and to a lesser extent French). Furthermore, even though spoken grammar is a resource used by proficient speakers for effective communication, there is evidence of L2 users' reluctance to employ certain conventions commonly found in spoken language, out of a feeling of inauthenticity or non-belonging to the speech community (Soruç & Griffiths, 2015; Ruivivar, 2020). This points to the importance of pedagogical approaches that take learners' perspectives into consideration. **Research Task 4** proposes two related studies that address these issues.

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Recent years have seen increased interest in the value of corpora for teaching grammar, particularly in the context of data-driven learning (DDL). Students examine authentic samples of language to extract patterns, correct their own errors, or verify hypotheses about their understanding of how to use language to express intended meanings. DDL promotes attention to grammatical structures and independent learning strategies, documented by studies reporting positive learning outcomes as well as participants' perceptions of usefulness and enjoyment. However, learners have also reported challenges in using DDL tools autonomously, particularly when using computer-based DDL to access corpora for exploring grammar on their own. The issues range from technological challenges to inadequate metalinguistic knowledge and search skills. In addition to identifying teaching practices that optimize the benefits of DDL for different learner populations, we argue that to support independent learning, it is also worth exploring how DDL tools THEMSELVES can be made more accessible for learning purposes. These questions about DDL inform the design of **Research Task 5**.

These research tasks are all focused on language teaching/learning in actual classrooms. Each includes suggestions for how to conduct the research in separate studies (of potential interest to novice researchers and/or researchers with limited resources) or in phases of a broader research program. We end with some thoughts on practice as it applies to the teaching and learning of grammar and with recommendations for increasing replication and collaborative research.

Research Task 1:

Conduct a conceptual replication of Toth's (2008) study on the benefits of teacher-led practice for learning grammar.

The goal of the research would be to investigate factors that may mediate the effectiveness of teacher-led communicative practice with grammar, including grammar feature, task, teacher experience, and opportunities for feedback.

Background

As Toth (2008) documented, the effective management of a whole-class communicative task can provide models of the target grammar for the students, along with procedural assistance in generating and reformulating utterances. In addition, although teacher-fronted activities may provide fewer opportunities than pair/group work for individual student turns, it does provide input and rehearsal opportunities for non-participating students (e.g. Ohta's, 2000, 2001 observations of private speech). Moreover, when the teacher goes beyond simply managing activities to actually PARTICIPATING in whole-class conversations with students, this can increase the richness of the input for learning grammar features (Collins, White, Trofimovich, Cardoso & Horst, 2012).

We also know from decades of L2 classroom research that feedback can be provided both by peers and by the teacher, and both are effective for learning (e.g. Sato & Lyster, 2012; Sippel & Jackson, 2015). Peers can also construct grammatical knowledge cooperatively (e.g. Donato, 1994; Swain, Lapkin, Knouzi, Suzuki & Brooks, 2009). However, peer-initiated attention to language may often be more narrowly focused on language needed for accomplishing TASK objectives (e.g. solving a puzzle, guessing a partner's picture); in contrast, teacher assistance may be more focused on the LANGUAGE objectives of the task (Davin & Donato, 2013). In addition, learner-generated attention to form in pair/group work tends to be much more focused on vocabulary than grammar (Philp, Walter & Basturkmen, 2010; Kim & McDonough, 2011; Collins & White, 2019) and the grammar students focus on may not necessarily be the language objectives of the task anticipated by the teacher (Springer & Collins, 2008; Nassaji, 2013). While learner agency and control over learning is a desirable feature of L2 pedagogy, the dynamics of pair/group interaction may not maximize the learning potential of tasks that were chosen and designed to provide practice with specific grammar features (the contrast between task as workplan versus task as process, Breen, 1989; Coughlin & Duff, 1994).

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Research building on Toth's (2008) study has focused on ways in which teacher-managed oral practice can facilitate interlanguage development (e.g. Lantolf & Poehner, 2011; Toth, 2011; Davin & Donato, 2013; Ko, 2014) and has documented ways in which teachers can create conditions for attention to language forms in peer interaction (e.g. Chavez, 2018; Collins & White, 2019). However, as Toth (2008) himself noted, the qualitative data, though informative, was limited to the recording of one task by one group only, which limited insights on the quantity and quality of the input/output opportunities that students had in their peer groups and how this compared with the teacher-led condition.

Research design

We begin by describing each of the four targeted variables, and then suggest how the study could be carried out.

(1) Grammar feature. The target feature in Toth's study was the Spanish anticausative *se*. It is simple in form, but semantically complex, which may explain the advantage to learners of receiving guidance from the teacher during oral practice. This raises the issue of whether forms that are more transparent in meaning and/or that require more repetitive practice to master their formal properties (e.g. compound verb tenses) may lend themselves better to communicative tasks in pairs/groups. An additional factor is learner familiarity with the target form: teacher guidance may be particularly beneficial in the early stages of learning a new grammar feature.
(2) Task. The tasks chosen for the Toth (2008) study for the two conditions (whole class/pair and small group interactions) were information exchanges that are more typically done in pairs/groups, such as comparing and describing pictures. Adapting the tasks to whole-class interaction resulted in uneven time spent doing the tasks, in favour of the whole-class condition. While this in itself is an interesting finding in terms of the teacher's management of on-task behaviour, it begs the question as to whether different types of communicative tasks would unfold in more comparable amounts of time in the two conditions (pair/group and whole class), facilitating more valid comparisons between TLD and LLD. In addition, the usefulness of the forms for completing the task could influence how much attention students give to the target form in LLD – for example, a spot the difference task involving various objects in different places may generate contexts where *se* could be used, but prepositions of place may actually be USEFUL for solving the task.
(3) Teacher experience. The teacher in Toth's (2008) study was quite skilled at managing the discourse to allow for rich and more sustained student participation than has often been seen in research of teacher-fronted classes. How much experience and training do teachers need to be effective at leading discourse that yields richer turns/exchanges than the limited use of 'initiation, response, feedback' discourse frequently observed in teacher-fronted L2 classes?
(4) Feedback and target form use during task. As noted above, the amount and quality of feedback and of the use of the target form across all of the tasks during the two conditions were not measured in Toth (2008). This is clearly an important source of information for understanding any observed learning differences in the TLD and LLD conditions.

One approach to researching this issue would be to begin with a descriptive study examining discourse features in the two conditions on different grammar points, accompanied by focus-group interviews or stimulated recall to probe learners' and teachers' perspectives on the different practice conditions. This could be followed by experimental research targeting one of the features examined in the first study, comparing learning gains in the two conditions.

Alternatively, if time and resources permit, a full experimental study measuring both learning outcomes and the process of learning (including student/teacher perspectives) would yield rich data that could be analyzed in stages in separate but linked studies from the same data set. The design should include pre-, post-, and delayed post-treatment measures of learning; audio/video recordings of several pairs/groups doing the same task (LLD), and of whole class interaction with the same task (TLD)

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ideally at different points in the intervention; and interviews with teachers and (subsets of) students, making use of stimulated recalls where possible.

An alternative to comparing two groups of students in TLD and LLD conditions, as Toth (2008) did, would be to use a time-series design (see Mackey & Gass, 2016 for information on time series designs in SLA). This design could vary the SAME students' experience with the two types of practice in succession: TLD with one feature; LLD with another. Another possible design would be to vary the order in which students experience TLD and LLD with the SAME form: TLD followed by LLD; LLD followed by TLD. From a practical perspective, time-series designs require a smaller sample size; from a validity perspective they have the advantage of holding the participant variable constant across the different conditions, allowing for the exploration of the impact of LLD vs TLD on learning/use of a grammar feature within the SAME group of students.

Research Task 2:

Carry out an extension of Samuda's (2001) study on the timing of teacher guidance in promoting form/meaning relationships.

The three main components of this pedagogical approach were: (i) the task/teacher's creation of a meaning context for a target form that students were not yet using productively; (ii) the brief interruption of the task in progress to provide explicit instruction on the form needed for the context, using and modifying the students' original language; (iii) subsequent opportunities during the task for students to use the target language to express their intended meanings. An extension study would aim to explore the immediate and long-term benefits of the approach for learning the target grammar; whether it is equally effective for developing new knowledge of language or consolidating partially acquired knowledge (what Samuda refers to as 'knowledge construction' and 'knowledge activation' respectively); and how much experience or training is needed for a teacher to create and manage a meaning/form/meaning sequence effectively.

Background

Samuda's (2001) study documented students' increased use of target grammar (modals of prediction) during the completion of the task following the teacher's intervention – a finding that was corroborated by Little & Fieldsend's (2018) small-scale study using the approach to encourage students' use of passive voice during task performance. However, neither study was designed to address the questions raised above. It has nevertheless received considerable attention in support of the 'leading from behind' approach in the theoretical literature. For example, it has been used as a model to illustrate how the given-to-new and awareness principles can be used to guide the oral production of selected grammar features (e.g. Batstone & Ellis, 2009; Nava & Pedrazzini, 2018); it has served as an example of how grammar can be integrated into communicative activities (e.g. Spada & Lightbown, 2008), consistent with principles of interactionist and transfer-appropriate learning; and it has been chosen to illustrate the role of the teacher in supporting students' use/learning of grammar in task-based teaching (e.g. Bygate, 2016; Van den Branden, 2016; Han, 2018).

In addition, the approach addresses an attested long-term learning challenge that many features of grammar present; that is, the choice of the appropriate form for a given meaning/situation (Larsen-Freeman, 2014) – particularly for features that are not semantically transparent, such as modality in English. It also engages students in 'pushed output' (Swain, 1998), a key benefit attributed to guided production, as it helps students notice gaps in their L2 knowledge for expressing intended meanings (Swain, 1995). Moreover, there is evidence that learner-generated attention to form (including the resolution of grammatical problems) is greater and more successful when the teacher has identified key language useful for doing the task, and when the task requires repetition of the task-useful forms (Collins & White, 2019).

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Research design

The research we suggest would follow the pedagogical principles outlined in the study, but would require innovations to the experimental design to address the research questions. Researchers may want to consider using a version of Samuda's (2001) or Little and Fieldsend's (2018) tasks targeting epistemic modality or the passive voice, respectively, in English or any other language in which the forms exist. For other grammatical features, it will be important to identify those in which the learning challenge of the grammar is semantic (see above). Some examples include other types of modality (e.g. modals of obligation), the polysemous *le* particle in Chinese, and conditional forms in various languages. Of course, any new tasks/features will need to be piloted to ensure that the task generates natural contexts for the target features, and that the features are also useful for completing the task (Loschky & Bley-Vroman, 1993).

Researchers interested in developing a program of research on this topic would ideally begin with rich case studies and follow up with experimental designs with control/comparison groups.

We recommend that initial research control for prior knowledge of the grammar feature, since evidence (Samuda, 2001; Little & Fieldsend, 2018) shows an increased use of the feature during the task by students who are creating new knowledge (as opposed to students who already have some knowledge of the form). Follow-up research could then make knowledge of the target feature a variable to be manipulated. For example, practice using a NEW feature could be compared with practice activating and consolidating EXISTING KNOWLEDGE OF A FEATURE, among the same participants. The comparisons would include both measures of production during the task and overall learning outcomes, in addition to learners' perspectives on the relative benefits of the approach for the different features they practiced.

For the overall impact on the effectiveness of the approach, researchers could compare the relative benefits of SEMANTICALLY enhancing a feature in the ways in which Samuda (2001) describes versus the more commonly used LINGUISTIC enhancement of the feature. The latter involves techniques such as increasing the frequency of the target form in aural or written texts students are working with; or increasing the salience of the form through emphasis or textual enhancement. Another contrast could be the TIMING of the explicit information on the same grammar point: pre-task, similar to a presentation-practice-production approach, versus mid-task, as advocated in Samuda's meaning-form-meaning sequence. Student perspectives would also be an integral part of the design.

Data should include recordings of student interactions during group tasks and whole class interactions with the teacher; counter-balanced pre-, post-, and delayed post-instruction measures of learning (with distractors); and post-instruction questionnaires to teacher and students on their experiences with the instruction and their perceptions of any learning benefits, probed in greater depth during interviews (ideally involving stimulated recalls). Researchers may also want to consider the advantages of a time-series design (explained above for Research Task 1).

Research Task 3:

Investigate young classroom learners' spontaneous focus on grammatical form during classroom tasks.

The goals of the research are: (i) to document and analyze young L2 learners' conscious focus on grammar during their interactions with each other and (ii) to provide insights on the communicative tasks conducive to generating children's attention to grammar and on the guidance children may need from the teacher to do so.

Background

Most classroom research supports the benefits of interaction for language learning. From the interactionist view, it draws attention to the context of meaning and allows learners to give and receive feedback, and adjust their language accordingly (Long, 1996). From a sociocultural perspective, it

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provides opportunities for peers to co-construct knowledge during meaningful interaction (Lantolf & Thorne, 2006) and to strengthen form-meaning connections as learners use and retrieve forms needed for communication (Mackey, 2012). This has often been measured in terms of language-related episodes (LREs) (Swain & Lapkin, 1995) and their characteristics, such as resolution and language focus (Storch, 2008; Payant & Reagan, 2018; García Mayo & Imaz Agirre, 2019). LREs have also been linked to learning outcomes, typically measured in post- and delayed post-tests (e.g. Swain & Lapkin, 1998; Williams, 2001).

Most of the above studies involve adults, with the youngest participants typically being adolescents (Swain & Lapkin, 1998; Kim, 2013) – García Mayo & Imaz Agirre (2019) and Shintani's (2014) work are notable exceptions. It has been posited that children learn their L2 like they learned their L1 – implicitly, relying more on phonological than grammatical cues (Karmiloff-Smith, 1979). This perspective may result from the prevalence of implicit instruction methods for young learners (Lichtman, 2013). Yet there is evidence that children can acquire and use some metalinguistic knowledge to support their development (Harley, 1998; Bouffard & Sarkar, 2008), and that they can identify and resolve some grammatical issues during communicative exchanges, especially when the teacher has cultivated a climate of cooperative learning (Gagné & Parks, 2013; Collins & White, 2019).

Research design

As noted in the introduction, examining this issue in school-based foreign language programs would make an important contribution to our understanding of children's focus on language in these common yet under-researched contexts. From a methodological perspective, it can also be easier for researchers in these contexts to control for and/or document some of the external factors that can have an impact on language learning behaviour, such as the amount of exposure and interaction in the target language outside of class time.

One approach would be to observe different aspects of children's classroom interaction using audio or video recordings of students during classroom communicative activities. Features examined could include interactional moves (e.g. clarification, correction), the extent and quality of collaboration, focus on language and/or task completion, and interactional roles assumed by the students. These variables could be compared with instances of focus on form identified in the recordings (perhaps operationalized as LREs) and to the type of grammar that children attend to. The latter could vary along several dimensions already documented in research among older learners, such as semantic salience (Bardovi-Harlig, 1995; Doughty & Williams, 1998), perceptual salience (Goldschneider & DeKeyser, 2001), and task-essentialness (Loschky & Bley-Vroman, 1993). Observations of activities typically used by teachers (as opposed to those designed by researchers for teachers to use) would enhance ecological validity (Collins & White, 2019).

The analysis could examine statistical associations between interactional features and type of language attended to. Depending on the interactional feature under study, coding may be categorical (e.g. interactional moves, student role, task versus linguistic focus), interval (e.g. number and length of turns), or ordinal (e.g. collaboration rating, Winke, 2013). Grammatical items attended to can be classified according to semantic and perceptual salience, task-essentialness, or type of challenge presented. Researchers may choose to do in-depth analyses of individual learners or pairs, and report group results if the sample size allows. Group results can offer insights on what learners might be EXPECTED to do during specific tasks, which can help teachers choose or design tasks that promote desired behaviours (for example, which tasks can help them focus on a non-salient form). However, because the main goal of this research task is to examine learners' on-task behaviour, focusing on specific learners or pairs might be more informative, documenting the inherent variability among individual learners.

Research questions targeting students' and teachers' perceptions of usefulness will also be informative. For example, do teachers choose communicative tasks that naturally promote focus on form or set up existing tasks to focus on language? Do young learners perceive differences between tasks with

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more communicative or more linguistic focus, and does this affect whether (and the extent to which) they focus on form? Exploring teachers' perspectives will inform decisions such as whether tasks are best planned or adapted for target grammatical forms to minimize set-up time for teachers, and students' perspectives can offer insights on how much guidance they need to focus on grammar during classroom activities.

Research Task 4:

Document functional similarities in spoken grammar across languages and varieties and explore classroom approaches to teaching spoken grammar.

The goals of the two sets of studies for this research task are: (i) to gain an understanding of spoken grammar as a CROSS-linguistic phenomenon and (ii) to design and evaluate pedagogical approaches to teaching spoken grammar, documenting teachers' and students' views on their experiences with such approaches.

Background

There is evidence that students are interested in at least a receptive knowledge of spoken grammar (Timmis, 2002; Goh, 2009), and that they could benefit from a more representative coverage of spoken grammar in course materials (Cullen & Kuo, 2007; Jones & Waller, 2011). In addition, recent studies point to challenges in teaching spoken grammar in classrooms: learners may hesitate to use certain spoken forms for fear of being seen as 'inauthentic' and appearing 'too native-like' (Soruç & Griffiths, 2015), and their use of these forms may be perceived as less correct or acceptable compared with syntactically equivalent forms produced by native speakers (Ruivivar & Collins, 2019).

These issues stem from limitations in current research, one of which is that much of it has been with English, with some findings also available for French (e.g. Armstrong, 2001). Another is that many descriptive accounts of spoken grammar are based on discourse analyses, which depend on preselection of grammatical constructions that fulfill discourse functions in a particular language, language variety, or context (Dontcheva-Navratilova, 2012). The teaching of spoken grammar is therefore informed by a limited understanding of a few well-studied features, such as discourse markers (Jones & Carter, 2014) and flexible word order (Timmis, 2005).

Many spoken grammar features appear to be shared across languages, or at least those that have been studied, i.e. English and French. These include subject ellipsis (outside of pro-drop languages), implying shared knowledge of the subject and facilitating real-time interaction; and historical present, which adds animacy and emotional intensity to spoken narratives. Identifying the types of grammatical variation shared across languages ('sociolinguistic universals'), and the communicative or pragmatic functions they serve would be valuable in presenting students with grammatical choices (Larsen-Freeman, 2001).

Central to the issues we have described is the question of whether and how spoken grammar should be taught, given that it meets with resistance from L2 users. Important insights on this issue have come from Valdman's (2000) well-cited pedagogical norm for teaching sociolinguistically variable features, which describes most features of spoken grammar. Among his recommendations are to teach features that are widely used and valued in the community. Our research tasks aim to address the latter, in particular how aspects of spoken grammar are 'valued' as means of conveying social information and facilitating discourse. From a functionalist perspective, one might argue that spoken grammar, in particular forms that deviate from prescriptive norms, should be taught as communicative resources in the target language community, consistent with what Larsen-Freeman (2001) refers to as a 'grammar of choice'; that is, the idea that grammar consists of choices between two or more forms, each of which fulfills a different social or pragmatic purpose. Such an approach can address learners' reluctance to align with what they judge to be native-speaker norms, and the effect of native/nonnative

https://doi.org/10.1017/S0261444821000070 Published online by Cambridge University Press

speaker status on the perceived grammaticality of certain forms. This functional approach has been successfully implemented in a number of studies (e.g. Bardovi-Harlig, 2004; Izquierdo & Kihlstedt, 2019), but applications to spoken grammar (and the broader field of grammatical sociolinguistic variation) are scarce.

Research design

The two sets of studies we describe could be done independently, or in succession (with the first informing the second), as part of a larger research program.

The main question for the descriptive research task is which social functions are fulfilled by spoken grammar across languages. Spoken corpora are available for an increasing range of languages – a helpful list is maintained by the Extensible Markup Language for Discourse Annotation (EXMARaLDA, Schmidt & Wörner, 2009; https://exmaralda.org), a system for managing, transcribing, and analyzing spoken corpora. This study can be approached from three perspectives, which we outline below:

(1) Variationist: Friginal and Hardy (2014) suggest examining selected linguistic units (e.g. ellipsis, historical present) in relation to societal units (e.g. age, gender). Analysis can follow the variationist paradigm (Labov, 1967) by making statistical associations between these units. In keeping with a grammar of choice, factors must also take into account dynamic social functions such as the power dynamics of speech acts (e.g., conceding, challenging), self-presentation (formal, informal, casual, careful) and perceived relationship with interlocutors (friendly, professional).
(2) Dialectology: Alternatively, one can borrow from the field of dialectology by correlating preselected societal units with spoken grammar features, then using principal and hierarchal component analysis (e.g. Grieve, 2009) to identify clusters. This can be particularly helpful for geographically constrained, vernacular features that may be productive in a language but tend to be overlooked in the L2 literature (e.g. the informal question particle *-tu* in Quebec French, or the second-person address form *voseo* common in parts of Central and South America).
(3) Conversation analysis: CA methods may be useful for identifying the social functions of certain grammatical features that have not previously been documented in the literature. Ford and Mori's (1994) study of the use of causal connectors (e.g. *because*) to manage disagreement in English and Japanese is a good example of a CA-informed cross-linguistic grammatical investigation. Studies could undertake an analysis of NS-NNS interaction, which might reveal gaps in learners' (in)ability to use and adjust their grammar to express concepts such as uncertainty, authority, or social distance.

Findings from the studies above would inform future directions for pedagogical design and research. This being said, it is also possible to conduct pedagogical studies that build on what we already currently know about spoken grammar. Notably, van Compernolle (2013) and van Compernolle and Henery (2014) report positive outcomes for concept-based instruction in university foreign-language settings. This approach promotes the teaching of concepts underlying grammatical choices, such as formality and social distance in the use of second-person address systems (e.g. French *tu* and *vous,* German *du* and *Sie*). Van Compernolle's work would benefit from replication in other contexts and using different L1-L2 pairings to see to what extent the benefits of such an approach can be generalizable. In addition, it would be interesting to see whether the outcomes of spoken grammar instruction are mediated by factors such as type of feature (e.g. salience, social markedness), learner proficiency, and learning context. Such a study would also require: (i) theoretically justified operationalizations of relevant constructs, such as Yuan and Zhang's (2018) use of a three-point scale to determine social distance and power differences; and (ii) new materials for concepts that have not been the subject of previous pedagogical studies. We recommend study designs other than experimental

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(pre-post-delayed post), as the type of knowledge targeted here may not be apparent within the typically short instructional period of pedagogical intervention studies. Longitudinal designs would be ideal to document the emergence of the target forms throughout instruction, but alternative designs that would be easier to implement include a time-series design (capturing behavior at different points in a one-semester intervention) or a micro-genetic design using audio or video recordings of classroom interaction to document changes in students' discourse during instruction (including their attention to and uptake of features).

There is also very little research on how teachers and learners respond to such instruction beyond small-scale studies (e.g. Jones & Carter, 2014; Soruç & Griffiths, 2015). Consequently, there is much to be learned from research that examines the feasibility of a focus on spoken grammar. To accomplish this goal, we suggest investigating learners' perceptions and teachers' responses to the pedagogy with participants representing a wider range of ages and goals for learning the L2 than have been studied to date. These can be obtained through interviews or stimulated recall, subjected to qualitative analysis, and, if resources permit, compared with performance outcomes. The findings would inform and refine current pedagogical approaches to address issues of social identity, learner agency, and other sociocultural challenges to teaching spoken grammar, which have only been hinted at in the pedagogical research to date.

Research Task 5:

Explore ways to make grammatically tagged corpora accessible for pedagogical purposes.

The goal of the research is to explore how grammatical information in a corpus could be presented to render it more appropriate for pedagogical purposes, thereby minimizing teacher involvement and promoting learner autonomy. In other words, how could grammatically tagged corpus tools be made more learner-friendly?

Background

Learners can independently explore linguistic data from corpora and concordancers, either by accessing corpora on their own or with items pre-selected and provided by the teacher in paper-based activities. Boulton and Cobb's (2017) meta-analysis showed overall positive learning outcomes for DDL in classrooms. Although much of the research they reviewed was on vocabulary acquisition, encouraging results have also been reported for grammar. In particular, DDL draws learners' attention to less salient forms in the input, allowing them to correct persistent errors such as overuse of *be* (e.g. **I am go to work*, Moon & Oh, 2018) and incorrect verb-preposition collocations (e.g. **participate to*, Ruivivar & Lapierre, 2018). Others have shown that DDL affords greater cognitive involvement and meaningful engagement with target forms, thereby increasing retention (e.g. English passive voice in Smart, 2014; and a range of lexicogrammar features in Boulton, 2010).

Most DDL researchers claim that the strength of such an approach lies in 'cutting out the middleman' (Johns, 1991, p. 30); in other words, students develop independent language learning strategies with minimal guidance from the teacher. This is particularly relevant for computer-based DDL, as learners are expected to explore language beyond the scope or the time frame of their language course. However, with regard to grammar, it is precisely in promoting independent use that DDL appears to pose challenges. One issue is that learners can be overwhelmed not only by the large numbers of concordance lines generated by the search, but also by the difficulty understanding the context in which a target feature is used (Geluso & Yamaguchi, 2014). Another issue is that many grammar-focused DDL studies make use of grammatically tagged corpora which may be better designed for research than for pedagogy. As such, DDL often requires a fair amount of metalinguistic knowledge, computer literacy, search skills, and teacher guidance, particularly for younger and lower-proficiency learners. In a study tracking learners' real-time behaviour during DDL activities using the British National Corpus (BNC), Pérez-Paredes, Sánchez-Tornel, Alcaraz Calero and Aguado Jiménez (2011) found that learners using

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the tool without teacher guidance made less effective use of corpus data than the guided learners. However, in BOTH guided and non-guided conditions, learners made no use of the part-of-speech tags they had been taught. Geluso and Yamaguchi (2014) had students use a different tagged corpus, the Corpus of Contemporary American English (COCA), and while the students found it useful overall, students felt discouraged by the time it took to learn the concordancing functions. To be sure, developing students' skills for autonomous corpus exploration is expected to take time and scaffolding (Cheng, Warren & Xun-feng, 2003), and teacher guidance is necessary for managing the size and number of concordance lines presented and providing questions to focus students' attention (Lin & Lee, 2015). However, minimizing teacher involvement would be more consistent with the goal of promoting independent learning. It is therefore worth exploring how corpora could be designed to address what appear to be the main obstacles: managing the amount of data that students encounter, and making search functions more intuitive and accessible.

Research design

Specific research questions would include what problems learners typically run into when using grammatical information in a corpus (for example, understanding codes for parts of speech, translating a grammar question into a search string, or processing too many concordance lines), how these problems might be addressed (e.g. more transparent codes or intuitive search commands, selecting the most useful concordances), and whether implementing these changes can address some of the problems documented in grammar-focused DDL research. Boulton (2010) has also noted that DDL studies tend to focus on learner preferences and impressions of DDL, with less attention paid to learning outcomes. Whether and how learners' grammar improves as a result of DDL would therefore also be worth investigating. A useful starting point might be the issues commonly encountered in automatic tagging, such as polysemous words (e.g. *set*, *let*) and distinguishing between gerunds and infinitives; and how learners might deal with such challenges in the absence of teacher intervention. Researchers may also target specific learner populations that typically require more teacher-guided forms of DDL, such as younger and lower-proficiency learners (e.g. Boulton, 2010, see also Allan's (2009) work with a graded reader corpus), or start by targeting one or two forms that are known to be challenging to learners in the L2 of interest (e.g. article use, particles, prepositions). These studies would initially be exploratory and might employ a user experience perspective, focusing on learners' usage behaviours to paint a clearer picture of the obstacles to independent usage, similar to Pérez-Paredes et al. (2011). Findings from such studies could then inform potential avenues for improving accessibility and minimizing the need for guidance.

An exploratory study could be followed by experimental or quasi-experimental work deploying more accessible corpus tools in classrooms. In keeping with Boulton and Cobb's (2017) recommendations, the pedagogical goal – in addition to specific grammatical knowledge – would ideally include transferrable skills that are not necessarily limited to grammar, such as inferring meaning from context and online search strategies. Further down the line, and in response to Flowerdew's (2015) call for large-scale, longitudinal studies on the benefits of DDL, these studies can inform future work on the specific affordances of DDL for grammar. For example, are there benefits for students struggling with different lexicogrammatical forms (e.g. *avoir* and *être* participles in French)? Are the benefits/challenges similar when the grammatical query involves form only (e.g. regular/irregular past tense marking in English) versus choosing the appropriate form for an intended meaning (e.g. tense/aspect contrasts)? A longitudinal perspective could also document whether any attested benefits extend to students' more autonomous use of DDL over time.

Envoi

Repetitive practice for learning grammar

We have explained our reasons for choosing these five areas for future research on grammar teaching and learning, but there are of course many others that also merit attention. We end with mention

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of one whose importance to language teaching was underscored during a graduate seminar on L2 pedagogical grammar taught by the first author while we were finalizing this article. One group of students had developed a set of materials for hearing students learning American Sign Language (ASL) as an L2. The target form was 'eyebrow raising', a non-manual feature which serves to distinguish a yes/no question from a declarative statement in ASL (the manual signs for both sentence types are the same). Their assessment of the impact of their multi-media, engaging, communicative materials (based on video-recordings of their lesson and interviews with the participants) was that they served to raise the students' awareness of this non-manual feature in the production of others. However, the challenges involved in getting students to USE it themselves, especially sustaining the raised eyebrows throughout the production of the manual sign, seemed to require more focused, repetitive practice, isolated from its communicative use—practice that would make the simultaneous use of the manual and non-manual features feel more natural; in other words, a 'drill'.

The limitations of mechanical drilling for learning language are well-documented theoretically (e.g. Dekeyser, 1998; Wong & VanPatten, 2003) and empirically (e.g. Savignon, 1972; Lightbown, 1983) including evidence of students disengaging during what they perceive as boring, mindless practice (Toth, 2004). However, there are also theoretical arguments for the benefits of repetitive/iterative practice, from complex dynamic systems (Larsen-Freeman, 2012), usage-based (Ellis, 2002), and skill acquisition (DeKeyser, 1998) perspectives. The caveat is that such practice, in contrast to mechanical drills, should be meaningful (Gatbonton & Segalowitz, 2005; Ortega, 2007).

But does all repetitive practice really need to be meaningful? What about morphology with little communicative value (Dekeyser, 1998; Aski, 2005) or L1-L2 differences that make features of morpho-syntax feel awkward (such as word order or non-manual features of sign languages), and that may require isolated 'mechanical' practice to develop something akin to muscle memory needed for a new motor skill?

Research tasks (space does not permit us to fully develop them) would complement the focus on communicatively meaningful practice to investigate PURPOSEFUL repetitive practice (Ortega, 2007; Toth & Moranski, 2018), where students know what forms they are practicing and why – arguably what was missing from the audiolingual pattern practice drill syllabus (Dekeyser, 1998; Lightbown, 2019). Of particular interest may be features that students themselves identify for focused practice.

Moreover, there are technological tools and software applications that render this kind of practice possible outside of class time, supervised by the teacher through classroom management tools such as Moodle, aided by collaborative authoring tools such as H5P. Students can also make use of freely available applications to practice on their own, such as automatic speech recognition (ASR) (e.g. de Vries, Cucchiarini, Bodnar, Strik & Van Hout, 2015), which allows students to repeat and adjust their utterances to get the appropriate responses. The value of self-paced repetition, to complement in-class practice with language, is an under-studied aspect of learning L2 grammar. Research exploring these issues would also provide insights into those aspects of grammar practice that may require direct in-class guidance from the teacher.

Conclusion

The research tasks outlined in this paper all have concrete consequences for language pedagogy and describe methodologies that would capture both the PRODUCT (learning outcomes) and PROCESS of learning (including teachers and learners' perspectives on their learning). The findings have potential to advance our understanding of: (i) the teacher role in providing rich practice opportunities for learning different aspects of grammar; (ii) the learning contexts and tasks that favor attention to grammar among young L2 students; (iii) the unique properties of spoken grammar and effective approaches for its teaching and learning; and (iv) the design and use of corpus-based tools for enhancing the student experience learning grammar.

We would also encourage researchers to consider collaborating on an agreed-upon design to be carried out across different contexts, ideally involving under-represented populations in the current

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research literature. The over-reliance on university-educated students in SLA (including language teaching research) is well-documented (e.g. Plonsky, 2017). One way to address this problem is through collaborative research focused on multi-site replications with participants from more diverse education and literacy backgrounds (see, for example, Andringa & Godfroid's (2020) initiative currently underway: https://osf.io/mp47b/wiki/home/). In addition, some of the tasks we propose will require the development of new instruments for assessing learning, protocols for interviewing participants, novel pedagogical materials, and methods for eliciting and interpreting participants' comments on their experiences. Making these instruments, protocols, materials and methods available to other researchers, facilitated through the use of open resources such as IRIS, would further contribute to broadening our understanding of grammar teaching and learning in the L2 classroom.

Acknowledgements. We thank the anonymous reviewers and the editor of *Language Teaching* for their careful read of earlier versions of this manuscript. Taking into account many of their insights and suggestions allowed us to express our intended meanings more clearly and coherently.

Note

[1] Conceptual replications partially replicate the original study; extensions typically introduce new concepts and variables to the original design. See Marsden, Morgan-Short, Thompson, & Abugaber (2018) and Porte & McManus (2019) for terminology discussion and guidance conducting replication studies.

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Cite this article: Collins, L., & Ruivivar, J. (2021). Research agenda: Researching grammar teaching and learning in the second language classroom. *Language Teaching*, *54*(3), 407–423. https://doi.org/10.1017/S0261444821000070

https://doi.org/10.1017/S0261444821000070 Published online by Cambridge University Press