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Abstract

This chapter describes a curricular innovation to an International Teaching Assistants' (ITA) language preparation course at a major research university. While ITAs are typically highly proficient in English for research purposes, many are challenged by the interactional and pragmalinguistic demands associated with American undergraduate expectations of language use in lectures, discussion sections, and office hour consultations. Using learner corpus analytic techniques, we have identified several high frequency features of the professional discourse of teachers that are problematic for many ITAs, for example the use of directives, hedges, and discourse markers. Drawing upon Vygotskian principles of mediation, objectification, and systemic-theoretical instruction (e.g., Negueruela, 2003; Lantolf & Thorne, 2006), we have developed corpus-informed learning objects that schematically display scaled and contrastive linguistic units to make explicit and visible grammatical formulations associated with expert speaker professional academic discourse. To maintain ecological validity with real-world language use, all examples informing the pedagogical materializations are drawn from the Michigan Corpus of Academic Spoken English (Simpson, Briggs, Ovens, & Swales, 2002) and from our own corpus of ITA learner English, *ITAcorp*.

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Gaining the ability to appropriately and successfully communicate in professional work contexts presents challenges for native/expert speakers as well as for second language (L2) learners at all levels. Nuances characterizing professional discourse contexts and competencies have been detailed in a number of settings, including specific activity types such as genetic counseling (Sarangi, 2000), physicians' opening questions as they affect patients' presentations of medical problems (Heritage & Robinson, 2006), and attempts to create collaboratively forged care solutions between physicians, medical administrators, and patients (Engeström, Engeström, & Kerosuo, 2003). Broader analyses of discourse have addressed professional talk in institutional workplaces (e.g., Drew & Heritage, 1992), language use across work, family, and social situations (e.g., Cameron, 2000), and intercultural pragmatics research describing interactions between native and non-native speakers of English in counseling, advising, and writing center contexts (Bardovi-Harlig & Hartford, 1990, 1993, 2005; Thonus, 1999; Weiyun He, 1993; Williams, 2005)

Drawing from descriptive, developmental, and praxiological traditions, this chapter addresses language use in the arena of higher education. Specifically, we present a corpus-informed assessment of professional academic discourse practices that forms the foundation for a Vygotsky-inspired curricular innovation to an International Teaching Assistants' (ITA) English language preparation course at a major research university. While there is a significant body of corpus-informed assessments of written learner English (Granger, 2002; Flowerdew, 2002), much less researched are the interactional and pragmalinguistic demands associated with American spoken academic discourse

genres. It is no wonder that ITAs, as well as native/expert¹ speakers new to university level teaching, experience difficulty negotiating the many spoken genres that comprise instructional activity. A non-comprehensive list of expected discourse competencies common to ITA duties include lecturing, leading discussion and/or lab sections, advising, holding office hours consultations, and providing tutorials and exam preparation sessions. In addition, ITAs face a complex of fluid and overlapping social and professional roles including those of instructor, disciplinarian, tutor, advisor, fellow student, confidante, researcher, adjudicator, and acting as the mediator between the lead professor and/or department and the course section students he or she is responsible for.

Based on learner corpus analysis (see Granger, 1998, 2002) of ITA language use, we have identified several high frequency features of professional academic discourse that are problematic for many ITAs. In response, we have developed pedagogical resources that highlight genre awareness and that include conceptual-theoretical materializations of language use associated with teaching and interpersonal interaction with students. We have based the content of these materializations on data from corpora of expert and native speaker academic language use and have structured them according to Vygotskian pedagogical principles (e.g., Arieviditch & Stetsenko, 2000; Negueruela, 2003; Lantolf & Thorne, 2006; Vygotsky, 1997), specifically the use of explicit and conceptually framed objectifications of the units of language that expert speakers utilize to achieve particular social actions in high frequency academic contexts. In this sense, the project is structured as a mediated corpus-informed approach to advanced ESL pedagogy, but one that qualitatively differs from earlier inductive methods of data-driven learning

¹ Following the debates within the applied linguistics literature regarding the difficulty of operationalizing the definition of ‘native speaker’, hereafter we will use ‘expert speaker’ to describe the professional discourse of experienced university instructors.

(see Johns, 1991; Seidlhofer, 2002; Chambers, 2005). Our method, described at length below, attempts to dialectically unite development and instruction by focusing on high-level conceptual aspects of grammar while concomitantly fostering conditions for communicative practice. For each of these interrelated enterprises, we rely upon corpus data that represent actual language use in the precise academic contexts that comprise the focal themes of the ITA training course.

Description of the political origins of the “ITA Problem” and *ITAcorp* Project

Since 1990, over 20 U.S. state legislatures, responding to student and parent complaints, have mandated that post-secondary institutions develop policy to certify oral English language proficiency of ITAs. The so-called “ITA problem”, despite widespread implementation of systematic language proficiency assessments and language courses, persists in public debate (see North Dakota bill HB1364 from 2005) and in research on speaker intelligibility and ITA effectiveness. Complaints concerning ITAs have been characterized as linguistic, cultural, and pedagogical (Jacobs & Friedman, 1988). The common undergraduate refrain is that ITAs speak “not a lick of English” (Fitch & Morgan, 2003). Undergraduates evaluate ITAs as distant, due to their inability to exploit American English tonal structure for referential and pragmatic functions (Pickering, 2001), and have also highlighted extralinguistic factors such as delivery and non-verbals (Orth, 1982) and teaching styles (Bailey, 1983) as limitations to ITA effectiveness.

The institutional solution to the purported “ITA problem” has included university preparation courses and the production of a variety of pedagogical texts. A cursory review of textbooks used in ITA preparation classrooms demonstrates a focus on cultural

awareness and teaching skills (Byrd, Constantinides, & Pennington, 1989; Pica, Barnes, & Finger, 1990; Smith, Meyers, & Burkhalter, 1992). These texts in particular somewhat reductively emphasize pronunciation segmentals and suprasementals as the primary focus in developing ITA communication abilities. Furthermore, they present a prescriptivist version of grammar and vocabulary that generally does not draw from or adequately represent actual language use (e.g., corpus approaches to spoken language, see McCarthy, 1998). It is our belief that the characterization of ITAs as a “problem” and the orientation of attendant pedagogical materials are themselves problematic on a number of levels. For example, in a world of growing diaspora populations and wide dispersion of world Englishes, the reaction of North American students, parents, and legislatures can, in many instances, be typified as xenophobic. However, it is also the case that ITAs play a vital role in university education, with 50 percent of graduate students in engineering being foreign born and 41 percent in math and the physical sciences (NY Times, June 24, 2005). Additionally, ITAs’ professional development and future job prospects will hinge, in part, on their capacity to fully participate in spoken genres of communication comprising everyday teaching activity. Thus there is a compelling need to develop innovative pedagogical approaches specifically designed to enhance discourse awareness and to expand communicative repertoires that would enable ITAs, as well as expert speakers of English who are inexperienced teachers, to satisfactorily and satisfyingly perform complex professional roles and functions within higher education.

Our current project, ITAcorp, responds to this need by coupling contrastive corpus analysis research -- ITA language use contrasted with a genre-comparable benchmark corpus of spoken academic English -- with pedagogical innovation in the

domain of academic discourse competence. We should like to make clear at the outset that we are aware of past problems associated with contrastive and comparative approaches to language pedagogy and to challenges to the construct of the “native speaker” as the most appropriate and useful benchmark for second and foreign language learners (e.g., Kramsch, 1997; Rampton, 1990; Train, 2003). Our project is critically framed in that the contrastive analyses are not meant to suggest deficiency on the part of ITAs nor valorization of ‘expert’ language use – rather within a framework of grammar as choice (e.g., Larson-Freeman, 2003) and language use as a form of social action (Heritage, 1984; Thorne & Lantolf, 2006; Wittgenstein, 1958), we emphasize critical language awareness and the making visible of linguistic resources that may augment ITAs’ professional communication repertoires.

Description of the ITA preparation course and language corpora informing the project

The *ITAcorp* project², initiated in the Fall of 2005, involves the building of a corpus of advanced ESL use in role-play situations³ designed to mirror university instructional contexts. The corpus is comprised of the language production of advanced ESL learners in ITA language and skills development classes as they engage in a number of classroom and computer-mediated activities that include office hour role plays, brief lecture/concept presentations, and discussion leading role plays. The course (our intervention focuses on only one course within the series) emphasizes oral skills development, especially in the

² The *ITAcorp* project has received generous research assistant and technology support from the Center for Language Acquisition at Penn State.

³ Although we term these ‘role plays’, they are more accurately ‘teaching tasks’ as they are identical to the peer teaching tasks that may be found in many teacher preparation courses.

genres of advising and lecturing, for international graduate students who either advanced from an earlier ITA preparation course or received a score between 230 and 250 on our university's international student proficiency test, which following legislative mandate, all non-American graduate students at our university must pass in order to become teaching assistants. To meet course goals and prepare participants for the post-evaluation exam, the course activities include a face-to-face office hours role play and two lecturette presentations in front of the class, all three of which are recorded onto mini DVD-R discs for purposes of transcription.⁴ Currently, the corpus includes nearly 300,000 tokens produced by approximately 115 ITA preparation course participants.

The Michigan Corpus of Academic Spoken English (MICASE) (Simpson, Briggs, Ovens, & Swales, 2002) was utilized as baseline data for comparison with the learner data.⁵ MICASE is comprised of the transcriptions of 152 academic speech events from a variety of types⁶, e.g. advising, colloquia, discussion sections, lectures, office hours, and tutorials. Speech events of a particular type, for example the focus of our initial efforts reported here -- office hours interactions -- can be analyzed as a discrete subcorpus, allowing us to contrastively study ITA and expert speaker language use in functionally similar contexts. The speech events represent a balance of university academic disciplines and total approximately 1,695,540 tokens produced by 1571 individuals. According to the MICASE website (2006), corpus development began in 1997 and was completed in 2002. The purpose of the MICASE corpus is fourfold: (1), to fill a gap in available corpus resources, since no spoken academic corpus has existed previously; (2), to develop

⁴ The ITAcorp project received Penn State IRB approval as part of project #21429.

⁵ The database is free and publicly accessible on the WWW. The developers were informed of the current project and will be provided with a copy of the current project upon completion.

⁶ These could be considered 'genres' or 'registers'.

descriptions of language features that may diverge from current explanations of grammar and vocabulary, since those explanations may have been based on intuition and written language; (3), to analyze development of academic speech patterns over time; and (4), to allow for the development of more appropriate, corpus-informed ESL and EAP materials than are currently available. Participants include 160 faculty, 257 graduate students, and 782 undergraduates, and each is identified with the metadata categories of rank (senior faculty, graduate student, undergraduate student, etc.), age-group, gender, and native-speaker status (native, near-native, and non-native). MICASE can be accessed through its web interface, which allows searching for words or phrases and co-text with any combination of metadata parameters.

MICASE was chosen for the current project because of the overall genre compatibility and the similarity between its subcorpora and those being developed in ITAcorp. These subcorpora serve as the baseline data for the comparative analyses, as well as the source of the transcripts of actual language use that are part of the pedagogical materials forming the intervention.

Our corpus-informed intervention, which was motivated in part by the work of Reinhardt, focuses on the grammatical constructions associated with the use of directive modality by expert speakers represented in MICASE. Using contrastive corpus analysis (described in detail below), ITAcorp and MICASE together provide resources for the design, implementation, and evaluation of a corpus-informed curriculum of advanced ESL grammar within the context of an ITA professional development course.

THEORETICAL FRAMEWORKS

A number of research, pedagogical, and developmental theories have informed our work. These are introduced below and then briefly revisited in juxtaposition to the discussion of the pedagogical materializations.

Vygotskian Developmental Theory and Gal'perin's Pedagogical Approach

In many of his writings, Vygotsky showed commitment to what in his professional lifetime (primarily the 1920 and early 1930s) was the nascent mass intervention of public education, an enterprise he hoped would provide a cognitively and socially progressive function in society (see Prawat, 2000). Key elements of formal education include mediating tools such as literacy and numeracy, and more concretely, texts, notation systems for math, music, and design, and a wide array of schematizations such as diagrams, figures, tables, annotated renderings and the like. Due in part to his truncated professional life (he died at the age of 38), Vygotsky was limited in his opportunity to experiment with pedagogical innovation. However, pedagogical extensions of his work have been elaborated upon by others within the cultural-historical tradition, one of the more prominent of whom was Piotr Gal'perin. Arievidtch and Haenen (2005) describe Gal'perin as focusing on three areas in his work, 1) the relationship of teaching and learning to development, 2) the use of concept-based materializations to foster efficient and specific lines of cognitive development, and 3) the overall importance of cultural tools and participation in culturally organized practices in development (2005: 155). Learning in well-structured educational contexts involves engagement with concepts, content, and processes that are in advance of participants' current abilities yet within their zone of proximal development. Note that Gal'perin, like Vygotsky, does not equate

learning with development. Rather, learning precedes and shapes what can be described as the staging ground for development.

At the heart of cultural-historical approaches to development is the notion that higher order mental functions are creatively transformed and internalized forms of initially inter-mental and socially enacted collective systems of activity. Called the ‘genetic law of cultural development’ (Vygotsky, 1978: 57), the principle idea, as stated by Vygotsky, is that “social relations or relations among people genetically underlie all higher functions and their relationships” (Vygotsky, 1981: 163). In this sense, internalization describes the developmental process whereby humans gain the capacity to perform complex cognitive and physical-motor functions with progressively decreasing reliance on overt social assistance, or mediation. In modern societies, specially engineered institutions have emerged to organize, facilitate, and also to normalize the progressive mastery of content knowledge and problem solving, the primary example of which is compulsory education.

Within Gal’perin’s approach, pedagogical materials are conceived of as cognitive-cultural tools and great emphasis is placed on their quality and the responsibility of educators to procedurally implement them in specific fashion. Arieviditch and Stetsenko note that many developmental researchers, both within and outside of the cultural-historical school, have emphasized “the forms and specifics of shared activity but not ... how what is taught ... affects development” (2000: 71). This is precisely the issue that Gal’perin addressed in his pedagogical research. In particular, Gal’perin emphasized the importance of orienting students to the rationality and systemic structuring of complex domains of knowledge and/or action, what has been translated as providing the ‘orienting

basis' (similar to planning or anticipatory preparation for action) which necessarily precedes guided exploration and practice (Arievitch & Stetsenko, 2000: 86). Gal'perin's model of human action proposes that without a proper orienting basis, learners are not able to plan their participation in pedagogical activities and thus their contributions to such activities as well as resultant development are not optimized and occur instead on a hit-or-miss basis. Examples of the consequences of this would include the partial or simply inaccurate understandings of the conceptual structure of domains of human practice (in L2 related to aspect in Spanish, see Negueruela, 2003).

In our efforts to combine corpus data, contrastive corpus analyses, and principles of language awareness (discussion of each below) with sociocultural theory, we draw upon select elements of Gal'perin's model of systemic-theoretical instruction⁷ to produce a three-stage process. Synoptically described, these are:

Phase 1: Orienting Basis --> Building upon an overview of genre theory and language as discourse, specific lexical-grammatical realizations are presented within functional contexts of use.

Phase 2: Use of high-level conceptual materializations --> Awareness that discrete choices in language use correlate to differing social actions (directness, politeness, enhancing or restricting student agency).

Phase 3: Individual and group verbalization activities to foster internalization of an expanded repertoire of linguistic resources associated with academic professional discourse in classroom contexts.

To describe these in more detail, phase one begins at the start of the ITA preparation course when we introduce the students to the framework of genre theory. As Hanks

⁷ Gal'perin has been criticized for the rigidity of his framework (see for example, van der Veer, 2000) and indeed, some aspects have seemed too constraining for our purposes. Thus, while we wish to acknowledge our debt to Gal'perin, our materializations, in-development implementation plan, and hybrid pedagogical model (including as it does language awareness and corpus-informed principles) are inspired by, do not fully conform to, the strictures of his formalized method.

describes them, “genres can be defined as the historically specific conventions and ideals according to which authors compose discourse and audiences receive it” (Hanks 1999:135). As our project is corpus-informed, we emphasize the most commonly used lexico-grammatical formulations that are associated with specific communicative purposes within instructional discourse.⁸ In regard to interaction with undergraduate students, we use the notion of genre to heighten awareness of instructional language use in the areas of style and register. We also emphasize that classroom discourse practices can be immensely diverse, but equally, that language in formal educational contexts is often predictable, recurrent, and systematic ways. In other words, for ITAs, the message of hope is that professional academic discourse associated with teaching situations is learnable. This phase builds from Gal’perin’s emphasis on orienting students through a systematic and conceptual treatment of the subject to be studied (Haenen, 2000).

The second phase is based on materializing the higher-level conceptual frameworks of genre and emphasizing the importance of the fact that discrete choices in language use correlate with constructing differing levels of directness, politeness, and opportunities for agency on the part of students being addressed. Gal’perin proposed that interaction with external, object-related materializations provide an efficient method for promoting internalization within educational contexts. As described by Arieviditch and van der Veer (1995: 124), Gal’perin’s non-dualistic view of the formation of the “internal plane of action”, or internalization, implies “the transformation of certain forms of human external activity (with certain possibilities for the individual) into other forms (with other

⁸ Genre suggests that language use is realized by means of a systematic relationship between cultural context, situational context, and linguistic features (known collectively within the Hallidayan framework as the text-context model, e.g., Halliday, 1978).

possibilities) [that] reflect a new level of flexibility in performing certain actions”

For our project, the materializations take the form of interrelated sets of flow charts inspired by a Gal’perin-based research and pedagogical project on the teaching of aspect in a Spanish foreign language course by Negueruela (2003) using a procedure he called “Schema for Complete Orienting Basis of Action”, or SCOBA. The materializations we describe in this chapter focus on directive language use in the context of holding office hours.

The third and final Gal’perin-informed implementation phase, still to be fully realized in our project, includes a series of individual as well as small group verbalization activities meant to assist in the internalization of the linguistic choices schematically represented in the materializations. It is important to note that in his work, Gal’perin stressed only the private speech function of verbalization as it related to internalization. We are interested in exploring the potential of both private speech through individual rehearsal as well as social speech through small group discussions of the materializations. For the latter, the rationale is that discussion with others may provoke opportunities for meta-cognitive problem solving and language awareness that align with what Swain and colleagues have described as “collaborative dialogue” (e.g., Swain, 2000; Swain & Lapkin, 2001; Swain et al., 2002). In addition to the reported benefits of peer assistance within the ZPD (Donato, 1994; see Lantolf & Thorne, 2006, for discussion), collaborative dialogue sparked by the materializations may, to paraphrase Swain, create conditions whereby the students’ performance will outstrip their competence (2000: 113). This scenario is a concrete example of the interactive process of learning (through “collaborative dialogue”) leading development, with development defined as progressive

internalization of linguistic repertoires that over time enhance self-regulation in the area of purposeful choices of directive language use.

In the sections to follow, we detail additional components of our pedagogical framework that synergistically unite Vygotskian developmental theory with principles of language awareness and contrastive corpus analysis.

Language as discourse and language awareness

Carter (1998) explains that language awareness is about “understanding of tendencies, variable rules, and choices according to context and interpersonal relations” (p. 52).

Language awareness has its roots in the U.K. in the 1970’s as part of a movement to introduce knowledge about language across the curriculum in response to a fall in literacy rates. Concurrent with this movement, in the U.S. the Chomsky-inspired mentalist models (e.g., 1965) and Krashen’s Monitor Model (e.g., 1982) were growing in popularity, both of which downplayed the role of higher cognitive functions in acquisition. This, along with misinterpretations within communicative language teaching principles that grammar did not need to be taught explicitly, may account for why language awareness did not establish itself among U.S. L2 researchers and educators.

Crucial to discourse awareness is an understanding of spoken genres, which have core yet negotiated structures and are highly contingent on participant goals and relationships (McCarthy, 1998: 47). A view of language as discourse “focuses, where appropriate, on complete spoken and written texts and on the social and cultural contexts in which such language operates” (McCarthy & Carter, 1994: 1). Translated into a pedagogical approach, this involves raising learner awareness of grammatical and lexical

choices available to realize different meanings at textual, interpersonal, and ideological levels. Within this composite systemic-theoretical instruction and language awareness framework, learners are provided with conceptual schemata and attendant exegesis, extended excerpts of actual language use, and are guided in their exploration of the relationships between features of spoken discourse, the social contexts in which they function (genre), and the social realities specific language choices will tend to instantiate. McCarthy & Carter (1994) offer several principles that aim to develop awareness of language-as-discourse. These include the contrastive principle, which focuses on differences within comparable text types and/or language used to achieve particular social actions; the continuum principle, involving exposure to a variety of texts in the same genre but produced by different authors; and the inferencing principle which teaches strategies for cultural and literary understanding, or interpretative skills.

Because of their focus on consciousness-raising and making explicit knowledge about interactive language use, language awareness principles are highly congruent to our use of corpus- and Gal'perin-informed materials development. Also crucial to remaking the ITA course curriculum is to acknowledge and explicitly differentiate spoken academic communication from its written counterpart at the level of concrete grammatical realizations (McCarthy, 1998). This has been particularly important in the pragmatically sensitive areas of deontics and directives, the focal point of our efforts reported here.

Research on contrastive learner corpus analysis and pedagogical mediation

A pioneer in corpus-driven language pedagogy, Johns (1991; 1994) describes a pedagogical application of concordance analysis he termed ‘data-driven learning’ (DDL), where the language learner is “essentially a research worker whose learning needs to be driven by access to linguistic data” (p. 2). In a DDL approach, learners examine concordances of data from expert speakers to discover language facts and rules inductively, developing metalinguistic awareness based on evidence from authentic language use (p. 3). As we discuss later, our approach differs from DDL in that we are using corpora as the empirical foundation for the materializations, but our focus is to highlight concepts structuring grammatical choice in relation to semantic and pragmatic function. In this sense, we present a theoretically mediated corpus informed approach that does not preclude learner exploration of corpus data, but that foregrounds the importance of conceptual understanding of the kind argued by Vygotsky and Gal’perin.

More recent corpus-informed pedagogy has had learners compare corpus data from expert speakers with that from learners, including their own production (what Seidlhofer, 2002 terms ‘learner-driven data’). Learner corpus analysis has been applied in combination with a variety of theoretical frameworks, including genre theory (Upton & Connor, 2001), cognitive linguistics (Waara, 2004), Relevance Theory (Hasselgren, 2002), developmental sequence theory (Housen, 2002), systemic-functional APPRAISAL theory (Flowerdew, 2003), and sociocultural theory (Belz, 2004). Meunier (2002) notes the benefits of exposing learners to both expert and learner corpora and corpora-based materials, including the opportunity to notice the differences between their own and expert production, and to negotiate and interact with other students, teachers, and experts

during the learning process. Recent corpus-based studies have demonstrated how learners were able to develop awareness of the pragmatic consequences of their own usage (Belz & Vyatkina, 2005) and to experience “technology-enhanced rhetorical consciousness raising” (Lee & Swales, 2006: 72). For research involving linguistic description and lexicography, large corpora are preferred. However, Flowerdew (2005) argues that small corpora are useful for pedagogic purposes, explaining that “the more the corpus draws on features from the students’ own socio-cultural environment, the easier it should be for the teacher to act as a kind of mediating specialist informant of the raw corpus data, thereby authenticating the data for classroom use to fit the students’ reality” (p. 329).

Emphasizing this point, Braun (2005) has argued, and we agree, that substantial ‘pedagogic mediation’ is required for teachers and learners to overcome the potential shortcomings of corpora.

As briefly described above, the project addresses the criticism that DDL and concordance-based materials decontextualize language use (Widdowson, 2003) by building upon what McCarthy (1998) describes as a ‘corpus-informed’ approach that emphasizes the careful pedagogical framing of corpus-rendered language data into purposeful and contextualized illustrations of actual communicative activity. The incorporation of Vygotskian principles, specifically the use of explicit and conceptually framed objectifications of the units of language that expert speakers utilize to achieve particular social actions, reconciles corpus-informed pedagogy with the goal of enhancing discourse awareness. Our development of **conceptual materializations** also address Gal’perin’s emphasis on efficiency and establishing a systemic “orienting basis” as necessary elements for generating qualitative shifts to new forms of cognitive, and in

this case, communicative functioning (Arievitch & Stetsenko, 2000). In this sense, the current project develops a mediated corpus-informed approach to advanced ESL pedagogy that is more theoretically and developmentally informed than both straight corpus-driven materials development and the pedagogical use of corpus as a mere data source facilitating inductive learning.

Processes of Intervention: Contrastive Corpus Analysis of Directive Language Use

Before we could know precisely how to begin reforming the ITA training course curriculum and materials, we needed to know how ITA language use differed from expert/native language use in comparable professional activity settings. Fundamental to learner corpus analysis is the comparison of learner data to expert or other learner data, using techniques such as Granger's (1998, 2002) contrastive interlanguage analysis, which combines elements of contrastive and error analysis. In this approach, corpus techniques mostly involving frequency analyses are applied to two corpora sharing a genre and speech event context and the results are compared for relative over- and under-use by the two groups. Our ITA course innovations are built upon such contrastive analyses comparing ITA language use and expert MICASE corpora. The contrastive corpus analyses that inform the focal intervention reported in this chapter is specifically based on aggregative and individual use of directives in office hours contexts, and example of which is excerpted below (drawn from Reinhardt, forthcoming).

modal or p-modal construction	Learner Office Hours		Expert Office Hours		log-l LOHvEOH*
	total	freq/10K	total	freq/10K	
you can (undiff.)	536	52.137	340	27.126	+91.67*
you had better	29	2.918	0	0.000	+46.24*
you should	103	10.019	46	3.670	+35.13*
I want you to	9	0.875	6	0.479	+1.35
you don't need to	17	1.654	16	1.276	+0.14
you have to	55	5.350	87	6.941	-2.32
you need to	41	3.988	76	6.063	-4.84*
you could	9	0.875	59	4.707	-31.87*
I would	1	0.095	38	3.032	-45.52*
you want to (wanna)	12	1.167	173	13.802	-137.51*

In this table, the Learner Office Hours (LOH, from ITAcorp) and Expert Office Hours (EOH, from MICASE) corpora are contrasted with one another in the area of modal and periphrastic modal (or p-modal) constructions. The table empirically demonstrates that learners and experts are using directive language in strikingly different ways. Of particular interest to us are the upper-most and lower-most rows of the table. The upper rows indicate that the LOH corpus shows higher frequencies of two strongly deontic constructions, 1) “you had better” and 2) “you should.” The lower three rows show that the EOH corpus includes high frequencies of three different constructions, 1) “you could”, 2) “I would”, and 3) “you want to.” A number of such contrastive analyses were used to ascertain areas of lexical and construction divergence between the two corpora and to generate the lexico-grammatical and conceptual content of the materializations.

Directives Defined

Directives can be generally described as speech situations “where we try to get others to do things” (Searle, 1983). Reinhardt (forthcoming) operationalizes such language as

‘directive constructions’, which he defines as “a social-functional device comprised of one or more discrete, lexico-grammatical units which index directive illocutionary force.” In a recent monograph, Biber (2006) describes “university” language from a largely textual metafunction perspective while our project, in complementary contrast, focuses on directives from the vantage point of the interpersonal metafunction. Hence while directive constructions may correspond to formulaic sequences (e.g., Schmitt, 2004) and lexical bundles (e.g., Biber, Conrad, & Cortez, 2004), we emphasize the social-functional role of directive constructions rather than their frequency or distribution alone.

As expressed in the choice of directive vocabulary, pronouns, and adjuncts (or “small words”) that act as mitigators and intensifiers, Reinhardt found that learners generally made less use of directive constructions illustrating independence (or negative politeness (Brown & Levinson, 1987), expressing the understanding that you are imposing on your interlocutor) and involvement (positive politeness, emphasizing reciprocity and a friendly relationship (Brown & Levinson, 1987)) strategies than did experts in comparable office hours situations. Learners preferred constructions that directly appealed to the listener’s dependence, e.g. ‘you should’ and ‘you had better’ over forms that may indirectly appeal to the listener’s involvement, e.g. ‘you want to’, ‘I would’, and ‘let’s’. Learners made greater use than experts of directive vocabulary constructions that restrict listener choice such as ‘students are required’ and ‘I suggest’, while making less use of directives like ‘you could’ that index choice and mitigators that appeal to negative politeness. As part of the language awareness intervention, select findings from the ITA and MICASE contrastive corpus analyses were presented to participants in the ITA training course (see Table 3, below).

Examples of mediated corpus-informed materials development

In this section, we describe the pedagogical materials we have developed illustrating elements of directive language use in the context of office hours consultations. Due to space limitations, we present selective examples that represent the balance of systemic-theoretical materializations, functional explanations of directive constructions with examples, corpus analyses of usage frequencies, and activities that draw attention to directive constructions within extended excerpts of expert language use from MICASE.

The materials below are used in the latter half of the semester. Leading up to this point, the ITA participants will have engaged in discussion and activities addressing the concept of genre, been introduced to public and undergraduate perspectives on ITAs through newspaper articles and activities utilizing ratemyprofessor.com, and practiced monologic presentation skills (e.g., lectures and explanations) and dialogic situations such as question and answer sessions. The intervention on directive language use specifically addresses office hours scenarios and begins with an excerpt of an office hours encounter in an Anthropology course drawn from MICASE. The purpose of the opening exercise is to expose ITAs to spoken data from an actual office hours interaction. The excerpt exhibits the messy nature of spoken interaction and focuses on directives used by the teacher (T). Basic questions are then posed that are meant to heighten the learners' awareness of directive language within a context that is relevant to their past experience as students and future careers as teaching assistants and faculty/instructors.

Table 1: MICASE excerpt: Anthropology Office Hours

T: um, okay that's good, okay here you go... okay this is a very awkward sentence. <LAUGH>

S: yeah it is <SS LAUGH>

T: right. okay, i um... okay i want you to... well maybe i should see how you, do this okay. um...it seems to me like in this paragraph there are lots of totally different things going on. um, and in general you should do this throughout the paper too. you need to go through and ask yourself what the point of each paragraph is, right? um and make sure it has a point, and make sure it says what its point is, okay? um, cuz here we've got, okay. the first sentence which is to me a really important point that you should talk more about, right?

1. Who are the participants? What do you think is their relationship?
2. Where do you think the session could be taking place?
3. What is the teacher (T) trying to get the student (S) to do?
4. What language does the T use to accomplish this?

At this point in a true data-driven approach, the learners would be encouraged to analyze the data (although most likely more data samples than this, including concordances) and to hypothesize the function and collocational patterns of the target elements. In contrast, our corpus-informed concept-based instruction approach provides explicit descriptions of directive language use to aid conceptual understanding. The first explanation is titled ‘What is a directive?’ in which the following bullet points are presented:

- A directive is a phrase or a group of words that we use to tell or suggest to others what we want them to do
- Directives can be statements and indirect requests
- The addressee of the directive is usually the listener (‘you’)
- In educational environments, teachers and advisors usually give directives to students

Learners are then instructed to identify directives in the first excerpt (Table 1) and to reflect on their purpose in office hours contexts. To make visible available linguistic resources, a paradigm of forms is presented according to three primary elements of directive language use: 1) pronoun/subject choice, which is presented in terms of appealing to or restricting a listener’s sense of involvement, 2) main directive element, emphasizing choice of grammatical form, and 3) modifier choice, explained as either appealing toward or restricting a listener’s sense of agency and independence.

1. Pronoun /subject
 - neutral
 - **You** should go to the library.
 - **I** recommend you go to the library.
 - appeal to listener's sense of involvement
 - **We** should go to the library.
 - **I** would go to the library.
 - restrict listener's sense of involvement
 - **We** recommend you go the library.
 - **It** is recommended that you go the library.

2. The main element, containing the main action
 - simple imperative
 - **Go** to the library.
 - modal or semi-modal
 - You **should go** to the library.
 - You **need to go** to the library.
 - directive vocabulary
 - I **recommend** you **go** the library.
 - hypothetical situation
 - I **would go** to the library.

3. Modifier
 - appeal to listener's sense of independence (hedge)
 - **I think** you should **maybe** go to the library.
 - restrict listener's sense of independence (intensifier)
 - **Wow**, you **definitely** need to go to the library.

This is followed by a discussion of politeness to introduce the learners to the aforementioned concepts of involvement (i.e. rapport, or positive politeness) and independence (i.e. respect, or negative politeness) and to encourage them to draw from their own experience to help recognize both the universality of the concepts and the different ways that they are enacted and linguistically expressed cross-linguistically.

The remaining materials present several activities for each of the three areas, pronoun/subject, main element, and modifier. For each, a linear outline of questions focusing on the role of speaker choice is presented first. This is followed by conceptual materialization flow charts to aid conceptual understanding, guide subsequent performance, and ultimately lead to the internalization of the conceptual choices instantiated in specific directive constructions (see also Neguereula, 2003). Each of the

choices in the chart is then explicitly described with exemplar uses and questions are posed focused on building actionable understanding of the information in the chart, descriptions, and examples. An application activity using an excerpt from MICASE follows, with instructions to identify the context and directives, while paying attention to the target elements of directive constructions (pronoun/subject, main element, and modifier). Because of space limitations, we present below representative materials for pronoun choice and the concept of building listener involvement and then include only the materialization flow charts from the main element and modifier materials. In the complete intervention, the organization and structure of the activities for main directive element and modifiers mirror the pronoun materials presented below.

Pronoun/Subject Choice Materials

The section begins with a list of questions that focuses the learner on the notion of speaker choice, implying that choice of pronoun/subject is dependent on a variety of factors. Moreover, we emphasize that this choice can dynamically shift in response to changes in speaker intent along the clines of involvement and dependence-independence and in conjunction with use of the other directive construction elements.

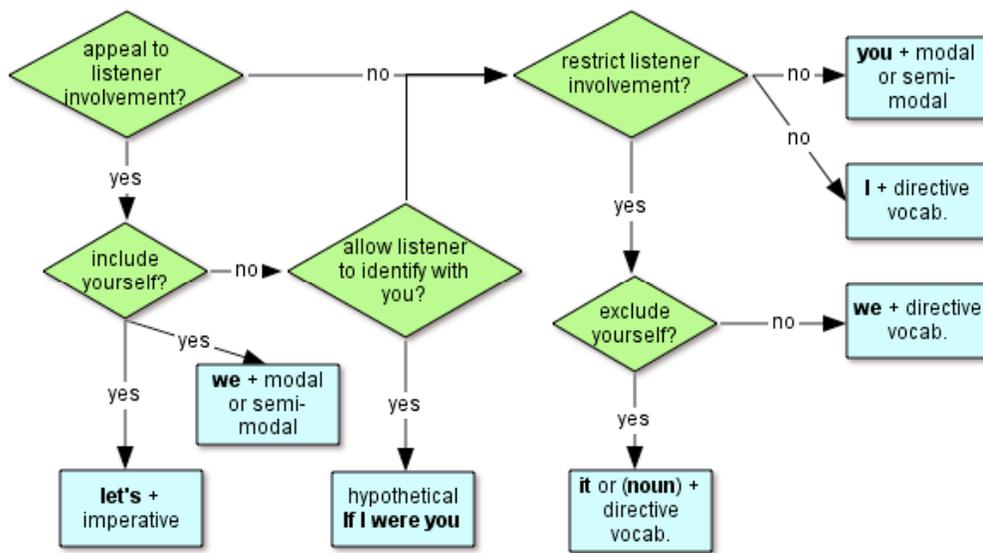
Pronoun/Subject Choice:

One way of building solidarity with your listener, or giving them a sense of involvement, is to make strategic use of pronouns that you use in directives. The choice of a pronoun (or subject):

- happens in conjunction with choice of main element and modifier
- may change during conversation depending on the reaction of the listener
- depends on speaker choices:
 - Do you want to appeal to listener involvement?
 - Do you want to include yourself in the directive?
 - Do you want to allow the listener to identify with you?
 - Do you want to restrict listener involvement?
 - Do you want to exclude yourself from the directive?

The materialization flow chart is then presented, which graphically represents the implications of pronoun choice. In the materialization, diamonds represent choices, while rectangles represent outcomes. The purpose of the materialization is to act as a conceptual heuristic that will ultimately assist with the internalization of pronoun use within directive constructions in the context of real time communication. As a heuristic, the materialization is not meant to represent ‘right’ and ‘wrong’, but rather to act as a conceptual tool with the potential to raise awareness of the possible effects of pronoun choice and to imbue learners with sense of agency.

Materialization 1: Dynamic system of pronoun choice in directives



Each of the choices in the materialization is then explicitly described with cases of actual use. For example, the description of the ‘yes’ branch from the first, upper-left ‘appeal towards listener involvement’ is as follows:

Appealing to listener involvement:

‘Let’s’ and ‘inclusive we’ can appeal towards listener involvement if the speaker is part of the directive

a. let’s + imperative

- **Let's** see what you have here.

b. we + modal/semi-modal

- So **we** need to multiply this quantity by this fraction.

c. Allowing listener to identify with speaker:

a. hypothetical 'if I were you'-like statement

- can appeal towards listener involvement by putting the speaker in the listener's place
 - **I** would first check with the registrar.

Moving between materializations and examples of usage, between conceptual understanding and real-time application is a critically important method we are employing to heighten awareness of available linguistic choices and implications of their use in academic speech situations (see Vygotsky, 1987). With this in mind, learners are then presented with another MICASE office hours excerpt and are asked to utilize the text explanations and conceptual schematic as diagnostic aids.

Table 2: MICASE excerpt: Statistics Office Hours

T: mokay negative-two-point-five-seven, is good? [S1: how do yo-] mhm, negative-two-point-five-seven, is your test statistic. you wanna still find the P-values you normally would, and then, point-O-five is a good rule of thumb to use in general. what i would do though is check the answer with both one five and ten percent all three, because then you might say well if i make the decision that it's the same for all three of those then i pretty much know what my decision should be, okay? if your P-value turns out to be so small that you'd reject for all those levels then go ahead and say so. if it's in between, for some alphas you'd reject for some you wouldn't, then say you know for alpha point-O-five we would reject H-naught however, if alpha were one percent we would not quite reject H-naught, and then you're recording your results you're telling me you know how to do a test if alpha were given, [S7: mhm.] in an exam we generally will give you the specified alpha cuz in any clinical study or anything there is a determined alpha that is set ahead of time.

1. What is the teacher (T) trying to get the student (S) to do?
2. Identify the directives. What different pronoun choices does the teacher make? What are the effects of these choices?

Sharing real data: Contrastive corpus analyses as awareness objects

As part of our move toward transparent pedagogy, we share with students the same contrastive corpus analyses that have informed the design of the materializations. We

have had significant support⁹ from participating ITAs for the use of contrastive corpus analysis that numerically illustrate the differences between ITA language use (based on our growing ITA corpus) and the expert/native usage represented in MICASE. Learner enthusiasm for exposure to actual corpus analyses may be because many of them were graduate students in quantitative and data-oriented fields like math, science, and engineering. Table 3, below, illustrates an example of one of contrastive corpus analyses we used in the course. Note that frequency counts from ITA corpus and MICASE are contrasted in both raw numbers and relativized to show frequency of occurrence per ten thousand words.

Table 3: Pronoun use in the ITA corpus vs. MICASE corpus

Directive construction word/phrase	ITA corpus	rate per 10K	MICASE	rate per 10K	ratio of over/underuse
I suggest OR my suggestion	30	3.35	5	0.28	12.0314
you should	94	10.50	83	4.63	2.2710
let's	41	4.58	118	6.58	0.6967
we	146	16.31	881	49.1	0.3308
I would	0	0.00	64	3.57	---
total words	89489		179446		

Discuss the observations below. Can you offer any explanation of the data? What other observations can you make of the data?

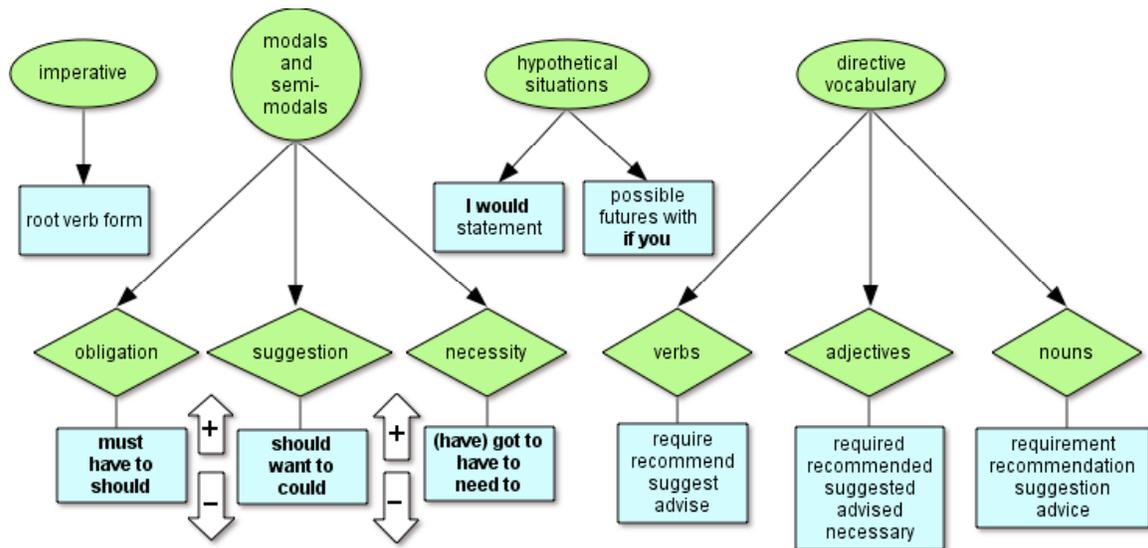
1. The ESL 118 students used 'I + directive vocab' in the case of 'suggest' 7 times more frequently than the experts in MICASE.
2. The MICASE expert speakers (including non-native speakers) used 'I would' much more frequently than the ESL 118 students.
3. Your observation:

As explained above, the mediated corpus-informed materials for the main directive element and modifier choice in the directive constructions office hours unit mirror these

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activities in structure and organization and were designed to help raise awareness of the role of choice in language use as it relates to different meanings, interlocutor relationships, degree of social distance, and potentials for social-pragmatic effects. Below, we present a materialization outlining main directive elements. The design goal of the materialization is to create a high-level conceptual map that illustrates the linguistic choices available and possible outcomes and interpretations of each lexico-grammatical realization.

Flow Chart 2: Schematic of main directive elements



Preliminary assessment

In a pilot study that formed the starting point for the current revision of the ITA preparation course curriculum, an alpha-version of the mediated corpus-informed materials were presented (see Reinhardt, forthcoming). Two experimental sections (N = 20 students), taught by different instructors, were presented with the directives office hours alpha-materials and an additional section (N=13), taught by one of the

experimental section instructors, used the conventional materials. In the experimental section, students were exposed to MICASE transcripts of office hours consultations and were asked to identify directive constructions, discuss how instructors made suggestions, and to identify patterns in the discourse. Experimental section students were then presented with a graphical representation of elements comprising directives (alpha-versions of the pronoun choice, main directive element, and modifier materializations described above) and were engaged in a discussion about how specific directive constructions convey differences in source of authority (e.g., speaker/ITA, lead professor, department/institution), vary in intensity, and constitute different sorts of social actions. Students were also presented with concordances of high-frequency directive constructions drawn from MICASE. To take one example, the experimental section learners were presented with a contrastive corpus analysis showing the high frequency of expert speaker (MICASE) use of the directive construction: you [+ hedge] want to / wanna [+ hedge], MICASE examples of which are:

- You just wanna get a ...
- You may wanna think about ...
- You might wanna sort of ...
- You wanna just ...

None of the ITA participants in any of the sections had used this construction in the earlier semester office hours role-plays. However, in the final high-stakes office hours role-play exit exam that followed the course, ten of the ITAs in the experimental sections, and none in the control group, used the “you [+ hedge] want to / wanna [+ hedge]” construction in varied and accurate ways, examples of which included the following:

you	also	wanna	say,	what,
-----	------	-------	------	-------

you	also	want to	i	mean
you	just	wanna	get	a
you	just	wanna	draw	out
you	just	wanna	think	about
you	may	wanna	think	about
you	maybe	wanna	highlight,	why
you	might	wanna	summarize	here
you	do	wanna	make,	but
you	might	wanna	think	about

Additionally, in comparison to the control group, the experimental groups made significantly more use of other high frequency target constructions presented from MICASE, such as ‘you had better’ and ‘you have to,’ and produced fewer MICASE low frequency constructions such as ‘I suggest’, ‘I recommend’, and ‘you can.’

Within the limited scope of the data presented here, the directives used in late-semester role play activities represent visible shifts in experimental section ITA language use that are traceable to the mediated corpus-informed materials. It is an encouraging indication that a concerted focus on developing awareness of high frequency constructions across various materials, including actual spoken language extracts from MICASE, explicit linguistic and pragmatic descriptions of constructions, conceptual flow chart materializations mapping functionally specific linguistic choices, and contrastive corpus analyses presenting evidence of differences between ITA and expert-MICASE language use, holds promise as an instructional framework. A primary hypothesis is that propagating high frequency and high utility constructions across divergent representational media helps to make linguistic resources more salient (or noticeable in the sense of Schmitt, 1993), and ultimately, more readily internalizable. This sequence is not unique to Vygotskian pedagogical and developmental theory and aligns with other research on language awareness and frequency effects in second language acquisition, for

example that of N. Ellis. When challenged about his argument for frequency effects in implicit adult second language acquisition (see Gass & Mackey, 2002), Ellis noted that frequency notwithstanding, explicit instruction may play an important role in second language development. As Ellis pithily states, “what you seize is what you get” (2002: 297). Drawing from cultural-historical developmental theory, our emphasis has been to provide explicit conceptual knowledge representations in tandem with contextualized examples of use, opportunities for private rehearsal and public performance, to the end of aiding internalization of a larger repertoire of professional academic discourse. In turn, greater linguistic resources should assist ITAs in their movement toward self-regulation in the many speech situations expected in academic professional life.

Future developments

As a next step we will develop learning modules for our ITA training course classroom teachers that will include orientations for how the ITA should and could use the materializations, for example silently verbalizing the materializations to oneself, having students talk through the materializations independently and in groups (e.g., Swain, 2000), using the materializations as heuristics to help analyze the linguistic choices made by expert/native speakers in the MICASE examples, and utilizing the materializations to examine collected examples of professional academic discourse that arise in the ITAs’ own experiences.

We will create sets of materials that include high-level conceptual materializations of grammatical and lexical choices in the areas of lecturing, classroom management, and interactive classroom discussion and question-and-answer sessions. In

each case, the conceptual materializations will be informed by attested language use and accompanied by transcripts of actual instructional discourse (drawn from MICASE and ITA corpus data). The materializations will assist with the internalization of new repertoires of purpose-specific, pragmatically attuned, and consciously chosen language use within professional academic teaching situations. In our estimation, the combination of conceptual flow chart materializations and selected examples of messy actual usage will reinforce the movement from the level of conscious reflective action to procedural knowledge and eventually to automatized performance (following Leont'ev, 1981; see also DeKeyser, 2007). In design and application, the ITAcorp project attempts to combine the strengths of Vygotskian developmental theory with the attributes of a mediated corpus-based approach and genre and situationally sensitive perspectives provided by discourse- and usage-based approaches to grammar.

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