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2. QUANTITATIVE AND QUALITATIVE APPROACHES TO DISCOURSE ANALYSIS

Anne Lazaraton

This chapter summarizes 16 empirical studies that employ quantitative and/or qualitative discourse analytic techniques published in applied linguistics journals over the last five years. These studies tend to analyze spoken discourse in formal contexts, produced by both adults and children who are native and nonnative speakers of English. Unfortunately, all studies focus only on English discourse, which suggests that analyses of discourse in other languages are clearly needed; moreover, it was extremely difficult to find published discourse analytic studies which employ only quantitative research methods. Although each of these discourse analytic studies presents segments of transcribed discourse, researchers collect data of the type and in the amount prescribed by the analytical tradition employed—those working within the conversation analytic tradition collect, transcribe, analyze, and present only recorded social interaction, while researchers who situate themselves in the ethnography of communication framework collect and present various forms of "triangulated" data to support their conclusions. The chapter concludes by mentioning the problem of evaluative criteria for qualitative research, and by suggesting that applied linguists need to address this issue and articulate some reasonable solutions, so that all published research is, in fact, *quality* research.

The applied linguist who is interested in learning about (or brushing up on) the many facets of discourse analysis has a number of sources from which to choose. For example, Cook (1989) covers a number of theories of discourse (discourse as structure, as dialogue, and as knowledge), as do Brown and Yule (1983), although they take a more linguistic perspective on issues such as context, information structure, reference, and coherence. Hatch (1992) illustrates a number of approaches to discourse analysis that she judges are important tools for the language teacher (e.g., system and ritual constraints, speech act and speech events,

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cohesion and coherence). McCarthy (1991) examines various models of discourse analysis and how they relate to the teaching of grammar, vocabulary, and phonology, as well as features of spoken and written language. Celce-Murcia and Olshtain (2000) discuss various fields of study that employ discourse analysis (cohesion and coherence analysis, information structure analysis, conversation analysis and critical discourse analysis). Finally, Schiffrin (1994) provides a very comprehensive overview of six approaches to discourse (speech acts, Gricean pragmatics, ethnography of communication, variation analysis, conversation analysis, and interactional sociolinguistics) with data illustrating how each approach works. It is also worth mentioning that discourse analysis is seen as an increasingly important tool for language teaching (e.g., Riggenbach, 1999), for second language acquisition research (e.g., Markee, 2000), and for language test development and validation (e.g., Lazaraton, in press).

What is unfortunate, though, when considering this set of resources, is that none deals with the broader methodological issues in quantitative and qualitative discourse analysis, as it is practiced by applied linguists, in any detail. From a larger disciplinary perspective, dichotomies like those shown in Figure 1 are often used to distinguish qualitative and quantitative research:

Qualitative Research	**Quantitative Research**
naturalistic	controlled
observational	experimental
subjective	objective
descriptive	inferential
process-oriented	outcome-oriented
valid	reliable
holistic	particularistic
'real', 'rich', 'deep' data	hard, replicable data
ungeneralizable single case analysis	generalizable aggregate analysis

Figure 1: Characteristics of qualitative and quantitative research (from Larsen-Freeman & Long 1991, p. 12. Used by permission of Sage Publications).

From this vantage point, very few empirical studies using discourse analysis seem to be aligned with the characteristics of quantitative research that Larsen-Freeman and Long mention. Perhaps the most basic consideration in distinguishing the two for the present purpose is whether the data are analyzed in numerical or nonnumerical form. Johnstone (2000) puts it this way: Are the research questions answered in mechanical ways (for example, counting instances, computing means, calculating statistics) or nonmechancial (asking about, watching, or listening to phenomena of interest)? In other words, quantitative discourse analysts seek to determine *how often* something happens, while *why* and *how* things happen are the focus of qualitative discourse analyses.

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Nunan (1992), the only applied linguistics research methods text to discuss discourse analysis as a research tool, contends that the relevant question to ask in distinguishing qualitative from quantitative research is, "To what extent should I attempt to (a) prespecify (b) isolate and control the phenomena under investigation?" (p. 8). With respect to discourse analysis specifically, Nunan proposes four criteria that one may use for distinguishing among the various discourse analytic approaches:

- the method of generating data: Are the data invented, elicited, or naturalistic?
- the mode of communication: Are the data in the form of speech or writing?
- the units of analysis: Are the units analyzed linguistic or nonlinguistic?
- the type of analysis: Is the analysis primarily categorical or interpretive?

While gleaning answers to the first two questions is relatively straightforward for most empirical studies using discourse analysis, the line between categorical and interpretive data analysis is fuzzier, and research may strive to do both, as an analysis of published discourse analytic research over the last five years reveals. In perusing over seventy issues of *Applied Linguistics, Language Learning, Studies in Second Language Acquisition,* and *TESOL Quarterly*, it became clear that (1) discourse analytic studies are not prevalent, and (2) quantitative discourse analytic studies are rare. In this chapter, I describe 16 empirical research studies in applied linguistics that are representative of recent discourse analytic work; from this review, I hope that we can infer the current methodological preoccupations in this work. I begin by looking at two studies which employ a quantitative approach to understanding spoken language common in many SLA studies, then review a study which uses VARBRUL, a multivariate statistical procedure, as well as qualitative discourse to understand first and second language use in an immersion classroom. Then studies carried out using more qualitative approaches, including conversation analysis, ethnography of communication, and genre analysis are summarized. The chapter concludes with an appendix that summarizes the relevant methodological and analytic features of the research mentioned here, so that the interested reader can locate studies that meet certain criteria, and with a brief discussion of some persistent, unresolved methodological issues in carrying out discourse analysis.

Quantitative Approaches

Remarkably, it was impossible to locate a published applied linguistics study which claims to be both discourse analytic and quantitative in nature. While many published SLA studies analyze spoken language, this language is almost always elicited by some research task, rather than produced naturalistically. The audiotapes are generally transcribed using conventional spelling, with the resulting transcriptions coded for features of interest, which are then counted and analyzed

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using statistical procedures such as ANOVA. Transcripts, or data excerpts, if given at all, are usually presented in the articles' Method section as an example of a coding category, or in an appendix. That is, the data are not analyzed in their original, or more accurately, transcribed form, which is the case in every qualitative study summarized here. It is important to note that researchers who work in this way do not claim that their studies are discourse analytic, nor am I doing so. Still, two examples will suffice to show the methodological decisions made concerning the analysis of produced discourse in this sort of SLA research. On the more "interpretive" end (and I use this term loosely), Williams (1999) looked at 8 adult ESL learners representing four levels of proficiency in order to determine "attention to form" (how, when, what kinds). Sixty hours of IEP listening-speaking classes were audiorecorded while the learners were engaged in many different activities. Williams isolated cases of learner-learner interaction and then located "language-related episodes" (LREs), "discourse in which the learners talk or ask about language, or question, implicitly or explicitly, their own language use or that of others" (p. 595). She coded all 255 LREs in her data for numerous features, including requests to teacher or another learners, learner-learner negotiation, metatalk, and other correction. Descriptive statistics and bar charts are used to show the frequency of LREs by level, per session, and per 1000 words. Her results, which indicated that attention to form is influenced by proficiency level and activity type and is more often of a lexical rather than a syntactic nature, are several steps removed from the naturalistic classroom language data that were collected. Data fragments are presented as examples of different types of attention to form in the Methods section, but not as "results."

An example of more categorically-oriented SLA research can be found in Shehadeh's (1999) study of the "modified comprehensible output" of second language learners. Here, 16 dyads (8 NS-NNS, 8 NNS-NNS) engaged in two experimental elicitation tasks—a picture dictation and an opinion exchange, both of which were audiotaped. The researcher then selected 5-minute samples from the audiotapes to transcribe "in detail," and presented a few segments as examples of the many coding categories used (e.g., self- vs. other-initiation of clarification requests; responses to these; c-units). Frequencies, percentages, and results from ANOVA procedures are reported to support the conclusion that self-initiations are more frequent, and that the picture dictation task produced more modifications. Again, the discourse data themselves are not presented as results of the study.

However, the most interesting quantitative discourse analytic study from a methodological point of view is Broner's (2000) dissertation (see also Broner 2001), a noteworthy example of a primarily quantitative investigation integrating data and insights from qualitative discourse analysis. Broner's study is rooted in *variation analysis*, a sociolinguistic approach to the analysis of language that views discourse as a reflection of one's speech community and looks to social and linguistic factors to understand patterns of language variation and change. She used a case study approach to look at first and second language use of three English-speaking fifth graders who attended a Spanish full immersion program.

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These three children were audiorecorded for 13 hours over a period of five months in order to get a detailed and measurable description of their language use in classroom interactions with their teacher and peers as well as in academic task work. As with the ethnographic studies mentioned later in this chapter, Broner also collected data in the form of observations, notebooks, interviews with children and their teachers, and a schoolwide survey. The verbal interactions were analyzed qualitatively, using a general discourse analytic technique based on transcribed data fragments, as well as descriptively with percentages and statistically with chi-square tests. The numerical analyses of the data allowed Broner to determine that "second language use is *not* independent of the variables of interlocutor, activity, content, and on/off task" (p. 206). These results are of limited use, though, in that no more than two factors could be examined at any one time, so there is no way "to account for the multiple and cross-cutting and intersecting factors that influence learner speech" (Young & Bayley, 1996, pp. 303–304).

In fact, Broner's study went much further, in that a third "layer" of analysis was used to construct a language use model for the three children using Variable Rule Analysis, or VARBRUL, so that she could "go beyond reporting data based on unsystematic observations of very few instances of language use and analysis of percentages" (p. 3). Specifically, VARBRUL was used to pinpoint the conditions (specifically, task and interlocutor, the two independent variables in the study) under which the three children used Spanish or English (the dependent variable). Broner maintains that VARBRUL is uniquely suited to this task, because the alternative, Analysis of Variance (ANOVA), perhaps the most widely used multivariate statistical procedure in published applied linguistics research (Lazaraton, 2000), requires a fairly even distribution of observations across represented (rather than empty) cells. An in-depth explanation of the details of VARBRUL (or Goldvarb for Macintosh) is beyond the scope of this chapter (though Young & Bayley, 1996, give an extremely detailed introduction to this statistical procedure); nevertheless, some general methodological points can be made:

1. It is based on the principles of quantitative modeling and multiple causes.
2. It tests multiple hypotheses that are motivated by a particular linguistic, social, and/or psychological theory.
3. It is based on the analysis of a large number of tokens of the variable form (500–3000 tokens are mentioned by Young and Bailey, 1996).
4. What counts as a token and what doesn't is a theory-based decision with analytical consequences, and accurate coding of hypothesized independent variables for each is crucial.
5. VARBRUL performs a regression analysis of the data to generate a statistical model of factor weights and probabilities, including the smallest list of contextual factors that significantly contribute to variation. It also approximates the overall probability that the rule

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being investigated will apply (input probability) and the weight of each factor group. VARBRUL usually requires several "runs" to achieve the best fitting model for the tested hypotheses.

6. There are conventional procedures for interpreting VARBRUL results and for determining whether the results confirm or disconfirm stated hypotheses.

In order to perform her analysis, Broner coded 4843 utterances from the children's classroom language use for both interlocutor (e.g., student, teacher, self, overhearers) and for task features (e.g., goal, content, on vs. off task). She also coded a number of linguistic contexts (e.g., clause type, style). Many interesting results emerged from this study, such as the finding that L1 (English) vs. L2 (Spanish) use was significantly affected when the teacher was the interlocutor (Spanish use was more likely). Spanish was also more likely to be used when the goal of the task required focusing on the L2.

Perhaps the real value of the study, however, is shows what is possible using this technique of "top-down" data analysis, one based primarily on theory, rather than data. As Young and Yandell (1999) observe, "the tools [VARBRUL] help us to answer questions that a theory has helped us to ask. Bottom-up analyses of interlanguage, no matter how sophisticated the tools of analysis, produce facts without a context in which those facts can be interpreted" (p. 485). Or, as Preston notes, "many a good study seems foolishly criticized by the post-hoc recriminations the investigators have directed towards their own work when they note that other variables may have confounded the one they set out to study. Of course they have! Why not deal realistically with this inevitable variety, while focusing on how the factor one delights most in does (or does not) influence the data" (1996, p. 31).

Qualitative Approaches

The majority of discourse analytic studies in our field are apt to employ one of two qualitative research methodologies: conversation analysis or ethnography of communication. *Conversation analysis* (or CA), which views discourse as a local construction of social order, is a sociological approach that attempts to uncover the systematic properties of the sequential organization of talk and the social practices displayed by and embodied in talk-in-interaction. CA employs inductive methods to search for recurring patterns across many cases without appeal to intuitive judgments of what speakers "think" or "mean." The analyst attempts to model the procedures and expectations employed by the participants by proceeding as the talk does: on a turn-by-turn basis. Briefly (see Schegloff, Koshik, Jacoby, and Olsher's chapter in this volume, and Pomerantz and Fehr, 1997, for an explication of some analytic "tools" for doing CA), the conversation analyst generally subscribes to the following methodological tenets:

1. using authentic, recorded data which are carefully transcribed;

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2. using "unmotivated looking" rather than pre-stated research questions;
3. employing the "turn" as the unit of analysis;
4. analyzing single cases, deviant cases, and collections thereof;
5. disregarding ethnographic and demographic particulars of the context and participants;
7. eschewing the coding and quantification of data.

Conversation analytic studies have only recently begun to appear in applied linguistics journals, a fact which is somewhat remarkable given that conversation analysis has been going strong for nearly forty years now. In reading such studies, one is struck by the similarities in how the researchers describe their databases, transcribe their data into turns at talk using conventional notation (as in Atkinson & Heritage, 1984), analyze exemplar cases which are neither tallied nor coded, and suggest ways in which the interactional practices displayed are implicative of certain identities. For example, Wong (2000a), working within the CA framework, begins with the assumption that initiations of repair on some problem in hearing or understanding are overwhelmingly initiated in the next turn following the trouble source (as in Schegloff, Jefferson, & Sacks, 1977). She then analyzes some potentially contrary data taken from a database of 12 transcribed native speaker-nonnative speaker (Mandarin L1) telephone conversations. Wong shows that the NNSs do not always initiate and do repair "as early as possible," in fact, other-initiation of repair is often delayed within the next turn of these speakers. These delayed other-initiations "aim at averting, avoiding, or correcting miscommunication and misunderstanding in the talk" (p. 244.) Using the same database, Wong (2000b) also examined the use of "yeah" in the speech of these same learners. Although this token appears in the same-turn repair environment, it functions as means by which a speaker can present him or herself as "competently managing throughout disfluency and repair" (p. 39). Wong proposes that interactional practices such as these are ways in which the learners can construct and display an identity of 'nonnative speaker.'

Seedhouse (1997) also used conversation analysis to make sense of how repair is accomplished in numerous published and unpublished extracts taken from many second language classrooms. This work is consistent with recent CA studies on "institutional talk" (e.g., Drew & Heritage, 1992), where the analyst tries to understand how everyday conversational practices are employed, or modified to achieve certain institutional goals. In this article, Seedhouse uses many data fragments to show how the pedagogical goals of the second language classroom (i.e., promoting second language acquisition) may, in fact, be at odds with the interactional practices of repair (i.e., hearers rarely correct speakers overtly) in this particular context. His findings document that repair done by the teachers he studied was accomplished without direct, negative evaluation using "no" for language related problems, although procedural issues in classroom management were repaired directly.

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The potential for miscommunication in cross-cultural encounters is one that second language educators and researchers are quite aware of (see Boxer, this volume). What is unique about Cameron and Williams's (1997) study of the interactions among a NNS student nurse from Thailand, her supervisor, and two patients at a U.S. psychiatric hospital is how, despite the "daunting odds" against successful communication when medicine, culture, and language interact, the tasks at hand are competently co-achieved by the participants. The nurse in question not only used non-targetlike pronunciation (shown in the data fragments through using phonetic transcription); she rarely marked verbs for past tense. Yet, Cameron and Williams demonstrate how participants in the interactions are able to use inferences and communication strategies to ensure that interpretations they make are relevant ones. The authors also argue that the displayed professional knowledge of the nurse was a crucial element in the successful interactions that occurred.

A final representative conversation analysis study is Boyle's (2000) examination of implicit compliments in a third institutional context, that of broadcast radio interviews. Boyle's study was motivated by what he sees as the limitations of our current understanding of explicit compliments (i.e., Manes & Wolfson, 1981). He explicates how interactants employ various interpretive procedures to understand both the constitution and the effect of these implicit compliments. Drawing on a database of transcribed radio programs in the United Kingdom, Boyle demonstrates in the data extracts how the person being complimented (and the hearing audience) can infer that when an assessment of an achievement is noted or a comparison to someone notable is made, these are, in fact, implicit compliments, to which recipients respond appropriately. Unlike much of the existing research on explicit compliments, which seeks to count and classify this speech act, Boyle, in the CA tradition, shows "the skillful ways in which individuals constitute them" (p. 43).

The second major qualitative approach to discourse analysis in applied linguistics research can be found in the *ethnography of communication*, an anthropological approach to language and culture which views discourse as a reflection of cultural and social reality and seeks to find holistic explanations for cultural conceptions and constructions of meaning and behavior. Ethnographers generally subscribe to the following methodological tenets (Davis & Henze, 1998, p. 401):

1. understanding that realities are multiple, constructed, and holistic;
2. overtly recognizing the researcher's own positionality;
3. documenting variation and cultural change across a community;
4. ensuring prolonged engagement and persistent observation;
5. triangulating data sources;
6. generating working hypotheses;
7. giving a thick description of participants and context;
8. applying research findings to social issues.

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Obviously, there is both overlap and some clear differences between ethnography and conversation analysis; space limitations preclude a discussion of this topic here (but see, for example, Moerman, 1988). The most salient difference that emerges from reviewing the following studies, though, is that transcribed interactional data are just *one* (and not necessarily the most important) source of information that should be considered in documenting cultural practices.

One fruitful strand of ethnographic discourse analysis in applied linguistics is an examination of the language socialization of second language speakers, especially children. For example, Toohey's (2001) study followed six nonnative speaker elementary school children in the second grade to understand the nature of "disputes" in this context. Her triangulated data, consisting of observations, field notes, and audiotaped and videotaped interactions among the children, yielded evidence of three kinds of disputes: material disputes about places or resources in the classroom; opinion disputes about the worth of produced work; and disputes about the nature of play. Each of these is illustrated with a transcribed data fragment of actual talk. One of the children she followed seemed to be frequently marginalized in this educational setting, suggesting that the findings are relative to issues of language use and power, and racism, and further suggest that "recognizing the expertise of children might assist them in speaking from powerful and desirable positions with other children" (p. 275).

Another educational ethnographic study of elementary classroom language use can be found in Klingner and Vaughn (2000), who were interested in both how and how often the children they followed (nearly all L1 speakers of Spanish) helped each other in group work on "collaborative strategic reading" in a fifth grade English language classroom. Again, their triangulated data come from multiple sources: audiorecordings of group discourse, a pretest/posttest vocabulary measure, and a researcher log. Unlike the other studies summarized so far, these researchers actually counted the number of utterances of various types (e.g., reading aloud, using reading strategies). Both discourse samples and frequency counts are presented to illustrate the types and frequencies of helping behaviors (such as comprehension checks or feedback) in which the students engaged, as well as how students responded to unknown vocabulary. Students made significant gains on the vocabulary measure, as indicated by *t*-test results. They concluded that peer assistance in learning groups can be successful if students are given specific instruction in how and when to help classmates.

Morita's (2000) ethnographic study of the language socialization of adults is also notable for its focus on oral practices and academic discourse socialization. She analyzed the academic culture of two TESL courses at a Canadian university taught by two instructors and attended by 21 graduate students, 15 native speakers of English and 6 nonnative speakers. Her triangulated data consisted of classroom observations, class session videotapes and transcriptions, interviews with participants, questionnaires, and relevant documents, which led her to choose the Oral Academic Presentation (OAP) as her unit of analysis. Morita found that oral

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presenters learned how to (a) indicate an "epistemic stance," either as relative experts or relative novices, towards the material in question, and (b) engage the audience by showing a personal connection to the material. The NNS participants reported various unique difficulties with the task at hand, for example, an unfamiliarity with the form of classroom interaction in the Canadian university, a (perceived) lack of ability in critical thinking, and a (perceived) lack of confidence. Perhaps the most interesting empirical finding, clearly evident from the data transcripts she presents, is that Oral Academic Presentation performance is "socially and collaboratively constructed by the presenter, audience, backup, and instructor" (Morita, 2000, p. 292).

Parks and Maguire (1999) analyzed a very specific form of written language from a constructivist-discourse perspective, namely, the ways in which francophone nurses learned to write nursing notes in English. Their triangulated data consisted of on-site observations (which were recorded and transcribed) of clinical educators and the 11 nurses who took part in the study; drafts of written notes and medical charts; and oral interviews with each nurse. The results are reported in the form of copies of notes and transcribed interactions; their analysis of both the micro- and macro-levels of text production and the overt and covert processes of collaboration in producing the notes are used to support their conclusions about how L2 writers succeed or fail at becoming members of communities of practice, and how workplace practices and institutional culture affect this process.

One recent study of identity construction is reported by Nelson (1999), who examined how sexual identity is discussed in university ESL classes. She observed two such classes, collected classwork, conducted interviews, and recorded class discussions. The focus of her analysis is a 3-minute transcript from one grammar class lesson for which she provides retrospective commentary. The lesson, which was based on a modals practice worksheet containing the prompt "Those two women are walking arm in arm," began with a grammar discussion, but then moved on to the word 'lesbian' after one student speculated "they could be lesbians." Nelson then documents how the task itself, which was based on speculation, encouraged the discussion, and how the discussion revealed the participants' own positioning with respect to sexual identity.

Lin (1999) reports on a critical ethnographic study of four Hong Kong middle school classrooms representing a range of socioeconomic levels using data collected from surveys, interviews with students, and an audiorecording of a reading lesson in order to understand the students' use of and views about English. Lin claims that, for example, the use of the L1 or the L2 in the classroom matters less than "how a teacher uses either language to connect with students and help them transform their attitudes, disposition, skills, and self-image—their habitus or social world" (p. 410). Lin maintains that an understanding of existing classroom practices provided by ethnographic studies such as this provide is a vital first step in this transformative process.

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Using a narrative inquiry approach to analyze 16 full-length language learning memoirs and 7 additional essays, Pavlenko (2001) believes that viewing such memoirs as a *genre*, rather than just a source of ethnographic data with a certain informational value, allows us to understand the larger "social and rhetorical forces that shape them" (p. 218). Pavlenko was particularly interested in the cultural construction of gender in the 23 written texts published between 1975 and 2000. Her analysis identified references to gender relations and gendered subjects; she also counted the references which contained links between gender and language learning for both male and female narrators. The numerous extracts from the texts demonstrate how the writers construct gendered voices in their stories.

To conclude this section on qualitative approaches to discourse analysis, one final study that merits attention is the *genre analysis* of the social services oral intake interview reported by Tarone and Kuehn (2000), where genre is defined as a "class of oral communicative events that share a set of communicative purposes, which in turn determine the structure of the genre" (p. 101). Their goal was to determine the structure of this form of institutional talk, which they accomplished by collecting four sorts of data: an intuitive representation of the interview format; three actual audiotaped social services interviews which were later transcribed; the written application form used in the interview; and follow-up interviews with the two financial workers themselves. They established that the written application form structures, but is not identical to, the actual interview. Furthermore, the one NNS applicant responded differently than the two NS applicants did, which Tarone and Kuehn view as potentially problematic if misunderstandings result in, for example, welfare fraud. They conclude by noting that their study "demonstrates the usefulness of genre analysis as a tool for describing important speech events in the social life of nonnative-English-speaking immigrants and refugees in U.S. society" (p. 124).

Conclusion

A summary of these studies (see Appendix) indicates that recent published discourse analytic research (1) focuses more on formal contexts, such as classrooms or medical settings, than on informal conversation; (2) with few exceptions, uses spoken, rather than written discourse for data; and (3) considers such data produced by both adults and children who are both native speakers and learners of English. All of the qualitative studies present segments from the transcribed discourse as results, although the two SLA studies reviewed do not. Both the amounts and types of data collected and presented reflect the epistemological commitments of the particular research tradition in which the analyst works.

Other methodological decisions in discourse analysis are still debated, including the need (and the justification) for quantification and coding discourse data (cf. Schegloff, 1993, who presents a cogent argument against quantification of conversational data); the most appropriate way(s) to transcribe discourse data and

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present them as results (see Edwards & Lambert, 1993, on this issue; Green, Franquiz, & Dixon, 1997, and Roberts, 1997, discuss some philosophical and ideological issues in transcription), the appropriate unit of analysis for discourse research—the turn, the utterance, or another unit altogether (e.g., Crookes, 1990; Foster, Tonkyn, & Wigglesworth, 2000); and perhaps most fundamentally, the nature of context in discourse (e.g., Fitch, 1998). Also, all of the research cited in this chapter is based on analysis of English discourse; studies of the discourse of other languages are clearly lacking (although Young & He, 1998, contains several studies of discourse in other languages).

A final pressing problem for those engaged in qualitative research is determining a standard, or standards, that should be used in evaluating this research (Lazaraton, 2001). While quantitative research has a number of conventional numerical criteria for evaluating the "soundness" of a study (via probability levels, interrater reliability estimates, and the like), qualitative research has no such neat and tidy correlates. It is imperative for those of us working within "interpretive" research traditions to address these issues and to explicate some reasonable solutions, so that we can ensure that all published research, both qualitative and quantitative, is truly *quality* research.

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This shorter version of Broner's dissertation is available through CARLA at the University of Minnesota (http://carla.acad.umn.edu; 8/15/01).

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This lengthy, clearly written appendix to Bayley and Preston's edited collection explains the steps in using VARBRUL in its DOS and Macintosh platforms by using data from their own research and other variation studies of L1 and L2 interlanguage.

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Although this edited collection deals with talk in only one setting—the oral proficiency interview—the studies included represent a wide range of analytic approaches (conversation analysis, ethnography of communication, interactional sociolinguistics, knowledge structure analysis, topical structure analysis) and analyze data in languages other than English, including Spanish, German, and Korean.

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APPENDIX

Methodological/Analytic Features of 16 Summarized Studies

Author (date)	Context	Participants	Data	Transcription System	Analytic Method	Code/ Counts Provided	Data given in results section
Boyle (2000)	UK radio programs	NS British English	audiotapes	CA system	CA of implicit compliments	No	4 fragments
Broner (2000)	Spanish immersion classes in US	3 5th graders	audiotapes, observations, notebook, interviews, survey	CA system	Discourse analysis	No	30 fragments of talk 4 interview fragments percentages χ^2 statistics
					VARBRUL model to predict L1/L2 use	Yes	VARBRUL statistics
Cameron & Williams (1997)	U.S. psychiatric hospital	1 NNS nurse (Thai L1) 2 NS patients 1 NS supervisor	audiotapes	rough (some phonetic)	CA of participants' understanding despite nurse's NNS speech	No	12 fragments

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Author (date)	Context	Participants	Data	Transcription System	Analytic Method	Code/ Counts Provided	Data given in results section
Klingner & Vaughn (2000)	5th grade reading class in US	37 Ss; all but 2 NSs of Spanish	audiotapes, vocabulary test, research log	rough	ethnography of helping behaviors	Yes	8 fragments
					t-test of vocabulary gains	Yes	*t*-test results
Lin (1999)	Hong Kong middle school classrooms	4 classes, different socioeconomic backgrounds	audiotapes, survey, interviews	detailed	critical ethnography of English use and students' perception of value	No	3 class fragments 1 interview fragment
Morita (2000)	TESL courses in Canada	2 instructors, 21 graduate students (5 NNSs)	observations, CA-like audiotapes, videotapes, interviews, questionnaire, course documents		ethnography of oral academic presentations	No	fragments of 6 presentations; responses from 5 questionnaires
Nelson (1999)	ESL grammar class in US	26 Ss, 1 instructor	observations, worksheets, interviews	rough (some symbols given)	queer-informed inquiry of sexual identity discussion	No	3-minute transcript with retrospective commentary

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Author (date)	Context	Participants	Data	Transcription System	Analytic Method	Code/ Counts Provided	Data given in results section
Parks & Maguire (1999)	English hospital in Quebec	11 nurses, all French L1	audiotapes, videotapes nursing notes and charts interviews	rough	constructivist-semiotic analysis of nursing notes	No	fragments of nursing notes, researcher notes, interviews
Pavlenko (2001)	published language learning memoirs	15 female, 7 male writers	written texts	N/A	narrative inquiry of gendered voice	No/Yes	22 text excerpts
Seedhouse (1997)	multiple SL classrooms	NS teachers, L2 learners	audiotapes, videotapes	rough	CA of teachers' repair initiations	No	30+ fragments
Shehadeh (1999)	experiment	16 dyads: 8 NS-NNS, 8 NNS-NNS	audiotapes of picture dictation and opinion tasks	'detailed'	ANOVA of repair initiations by task and partner	Yes	percentages ANOVA results

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Author (date)	Context	Participants	Data	Transcription System	Analytic Method	Code/ Counts Provided	Data given in results section
Tarone & Kuehn (2000)	social services intake interview in US	2 NS workers; 2 NS, 1 NNS applicants	audiotapes written application form intuitions about interview structure interviews	rough	genre analysis of interview	No No	43 fragments outline of interview structure
Toohey (2001)	2nd grade class in Canada	2 female NNSs and NS peers	audiotapes, videotapes	rough	ethnography of disputes	Yes	6 fragments
Williams (1999)	IEP oral skills class	8 adult NNS students	audiotapes of classroom language use	rough	numerical analysis of language-related episodes (LREs)	Yes	means, standard deviations of LREs bar charts

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Author (date)	Context	Participants	Data	Transcription System	Analytic Method	Code/ Counts Provided	Data given in results section
Wong (2000a)	telephone conversations	12 NS-NNS dyads; all NNSs had Mandarin L1	audiotapes	CA	CA of delayed other iniations	No	7 fragments
Wong (2000b)	telephone conversations	12 NS-NNS dyads, all NNSs had Mandarin L1	audiotapes	CA	Use of "yeah" by NNSs	No	17 fragments