Francis M. Hult

Educational Linguistics

Directions and Prospects for Educational Linguistics

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Educational Linguistics

Volume 11

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Directions and Prospects for Educational Linguistics

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ISBN 978-90-481-9135-2 e-ISBN 978-90-481-9136-9
DOI 10.1007/978-90-481-9136-9
Springer Dordrecht Heidelberg London New York

Library of Congress Control Number: 2010932002

Printed on acid-free paper

Springer is part of Springer Science+Business Media (www.springer.com)

Foreword

Nancy H. Hornberger

Some years ago, I reflected on the practice of educational linguistics in terms of its emphasis on the integration of linguistics and education, its problem-oriented research-theory-policy-practice basis, and the scope and depth of its focus on language learning and teaching (Hornberger 2001). As "the horizons of this burgeoning area of study continue to expand" (Warriner, this volume), these core features remain remarkably consistent over time in the field as a whole, inviting and accommodating the "theoretical and methodological considerations, innovative problem-oriented research, and emerging areas of inquiry" that Francis Hult and the contributing authors to this volume map out.

Ours is a transdisciplinary field (Hornberger and Hult 2006)—transcending disciplines, blurring boundaries. Importantly, the essays here demonstrate how critical, post-structuralist, social-constructivist, and sociocultural emphases recently permeating the social sciences also inform and are informed by work in educational linguistics. Concerns around discourse, power, ideology, identity, agency, access, and micro to macro scalar connections bring new conceptual lenses to the problem-based language learning and teaching questions of perennial interest to educational linguists. Yet, while we have always and increasingly drawn on "other relevant disciplines" (Spolsky 1978, p. 2) in seeking solutions to the educational problems and challenges we confront, linguistics remains the foundational discipline for our field and language in education the heart of our inquiry. Hence, we find in this volume deepening conceptual and innovative methodological exploration of long-term educational linguistics concerns around English as a second or additional language (ESL/EAL) policy and practice; cross-cultural pragmatics and miscommunication; complementary schooling and heritage language education; communicative competence and performance; cognitive noticing in language learning; bilingual education for the Deaf; and affordances of interactive media as potential spaces for language learning. These explorations fit well within the broad scope of content areas and topics in educational linguistics encompassing language ecology and education, language policy and management, linguistically and culturally responsive education, literacy development, second and foreign language learning, and language testing and assessment; while at the same time remaining centered on the field's core themes of learning and meaning-making, as elucidated by Hult (this volume).

The authors in this volume offer many new insights across educational linguistics' thematic domains of language learning, language teaching, language policy, and language diversity (Hornberger forthcoming), of which I mention here only a few. On language learning: Warriner uses ethnopoetic analysis of one adult ESL learner's oral narrative to illuminate how communicative competence might be defined, viewed, investigated, and represented in the situated experiences and educational trajectories of English language learners; while Smith uses eye-tracking technology to help determine what English language learners notice in computer-mediated task-based language learning environments. On language teaching: Sykes, Reinhardt, and Thorne highlight ways that "learning to play" multiuser digital games might be useful in language education both in and out of the formalized foreign language classroom; while Carlson, Morford, Shaffer, and Wilcox explore new possibilities for creating socially responsible learning environments for Deaf students in bilingual settings by bringing signed languages into schools and unpacking the implications of sign-text bilingualism.

On language policy: Leung argues, based on his many years of work in EAL pedagogy and assessment in schools, that educational linguistics "collectively as an intellectual enterprise has the potential to help conserve, inform, and/or transform" educational policy, provision and practice; and Boxer admonishes us, through the example of "a legal battle between the parents of a child and a public institution that made a deadly assumption about the communicative competence of a blood donor infected with West Nile Virus," that educational linguists' task of informing policy and educating the public about cross-cultural discourse and miscommunication is quite literally a matter of life and death. On language diversity: Creese not only recounts her team's educational linguistics research findings on the sophisticated and creative ways multilingual young people and their teachers in community language schools use linguistic resources to negotiate identity positions, but she also simultaneously illustrates the importance of research team diversity in investigating multilingualism and schooling, arguing that such diversity opens up "new possibilities through the different histories, identities, subjectivities, and disciplinary and methodological knowledge which team members bring in problem-based research." These are only some of the many rich insights these chapters offer on language learning, teaching, policy, and diversity.

In my own educational linguistics research and teaching trajectory, I have sought—drawing on various metaphors from creating successful contexts for biliteracy to bottom-up language planning, from unpeeling and slicing the language policy onion to opening up implementational and ideological spaces for multilingual education, from activating Indigenous voices to saving Indigenous languages—to foreground and theorize the fundamental importance of recognizing, incorporating, building on and extending the language repertoires learners bring to the classroom. I am convinced by my own and others' research that our language educational policies and practices are crucial in affirming or undermining the language and intellectual resources learners bring to the classroom, and thereby empowering or constraining them as future citizens of our global and multilingual world. For me, the fact of language-based discrimination in education around the world is both

educational linguistics' greatest reason for being and its most insurmountable challenge. This painful paradox weighs ever more heavily as language inequalities persist and abound across time and space despite educational linguists' unending efforts toward reversing those inequalities. And yet, I take heart from the vision and persistence of past and future educational linguists.

Hymes (1992) reminded us of the ways in which, despite the potential equality of all languages, differences in language and language use become a basis for social discrimination and actual inequality. Two decades earlier, Haugen had pointed out that "language is not a problem unless it is used as a basis for discrimination," going on to say that "it has in fact been so used as far back as we have records" (1973, p. 40). While educational linguists may take what we know for granted after decades of scholarship and centuries of language-based discrimination, we nevertheless still have our work cut out in raising critical language awareness in education and society more broadly. "We must never take for granted that what we take for granted is known to others" (Hymes 1992, p. 3; revised version in Hymes 1996).

The authors in this volume individually and collectively renew and intensify the call for educational linguists not only to inquire into matters of language in education, but to communicate what we know to a wider world, perhaps beginning closest to home with our own colleagues in education. It may be that the most distinguishing feature of our field is, after all, that we "belong in a school of education" (Creese, this volume). Whether what is at stake is the impact of digital technologies on learning and teaching, equal access to education for language minority and Deaf learners, or freedom from discrimination for immigrant and refugee children and adults, these authors make clear that educational linguists can, and *must*, be at the forefront in setting our educational research and policy agendas now and into the foreseeable future.

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Acknowledgements

I would like to acknowledge those who have been instrumental to the production of this volume. My deepest appreciation goes to Leo van Lier, editor of the Educational Linguistics book series, for his guidance and encouragement since the nascent stages of this project following the colloquium that inspired the collection. I am grateful to Irma Rosas, Ph.D. student in Culture, Literacy, and Language at the University of Texas at San Antonio, for her assistance with the formatting of the final manuscript. My thanks also go to Jolanda Voogd and Helen van der Stelt at Springer for their support in bringing the volume to press. Last, but certainly not least, I am indebted to the contributors for their thought provoking chapters.

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Introduction

As pressure builds on the educational systems of the world to serve the needs of increasingly diverse multilingual populations and at a time when multilingualism and multiliteracies are clearly socially and economically advantageous, the need to understand relationships between language and education is particularly acute. Since its formulation in the 1970s, educational linguistics has been developing specifically to address this need.

More than the application of concepts from the discipline of linguistics to the field of education, educational linguistics has taken shape as the transdisciplinary investigation of language issues in and around educational settings. Accordingly, it has emerged as an area of inquiry that is unified by its focus on education but diverse in both methodology and theoretical underpinnings. The papers in this collection exemplify the innovation and fruitful directions for research that come with this kind of focused intellectual diversity.

The volume has its origins in a colloquium that Nancy H. Hornberger and I organized together for the 2007 annual meeting of the American Association for Applied Linguistics in Costa Mesa, California. Its aim was to open dialogue about the nature of educational linguistics and its potential to contribute to education that is both linguistically appropriate and socially responsible. The contributions assembled here, which include papers by the original colloquium panelists as well as by other scholars with unique perspectives on cutting edge topics in educational linguistics, represent the manifestation of this dialogue. The issues and topics included in the volume are by no means meant to reflect the scope of educational linguistics comprehensively. Rather, they illustrate directions and prospects for the field along three major threads: theoretical and methodological considerations, innovative problem-oriented research, and emerging areas of inquiry.

Chapters in this Volume

The first three chapters offer perspectives on theoretical and methodological considerations for doing educational linguistics. **Constant Leung**, drawing on work in the area of Additional/Second Language pedagogy and assessment, considers

how the nature of educational linguistics as a 'cross-over field' engenders tensions among disciplinary foundations, sociopolitical constraints, and researcher values. As researchers in a field that seeks variously to understand social phenomena dispassionately as well as to change the *status quo* in order to improve education in multilingual settings, Leung suggests, we must inherently navigate issues of structure and agency as we come to terms with our work. **Francis Hult** focuses specifically on disciplinary tensions in educational linguistics. Building on Halliday's work on transdisciplinarity, Hult explores the benefits and challenges of conducting research that is thematic and problem-orientated rather than disciplinary-based. Such research, he argues, requires special training in transdisciplinary research design, lest it become a pale shadow of the work done in traditional academic disciplines. Next, drawing on two examples of research being conducted across disciplinary borders, **Angela Creese** shows the powerful contributions educational linguists can make as a result of the intellectual flexibility that comes from a training that transcends disciplines. She reports first on an example of nine different educational linguists with different backgrounds and training working together to investigate cases of multilingualism holistically and then on how an educational linguist formed part of a cross-disciplinary, university-based research development team. Together, these three chapters suggest that working beyond disciplines, as we must do in educational linguistics, is challenging but also feasible and fruitful when it is done with a clear thematic focus.

Educational linguistics is never done in a vacuum. As Spolsky (1978, p. 2) observed in his seminal monograph, we "start with a specific problem and then look to linguistics and other relevant disciplines for their contributions to its solution." The next three chapters demonstrate the innovative problem-solving nature of research in educational linguistics, as the contributors present ways in which they each draw upon established research traditions while at the same time extending them in order to address pressing problems related to current phenomena like globalization and computer technology.

Diana Boxer vividly illustrates that language learning and cross-cultural communication are matters of life and death. Drawing on cross-cultural pragmatics to analyze a case of miscommunication between a blood donor and a screener that resulted in the death of a child from tainted blood, Boxer demonstrates the imperative need for educational linguists to act as public intellectuals who raise awareness about the dangers of ethnocentric assumptions about meaning-making in a globalizing world. **Doris Warriner**, also addressing linguistic implications of globalization, offers a case study of the communicative competence of a refugee who had recently arrived in the United States. Using principles of ethnopoetics, Warriner is able to show that this second language user of English has much richer communicative competence than is revealed by standardized educational assessments. Ethnopoetic awareness, Warriner suggests, has the potential to contextualize meaning-making, for both teachers and students, in language classrooms that are comprised of ever increasingly diverse student populations from throughout the world. **Bryan Smith**, in turn, demonstrates the benefits of a transdisciplinary

approach to educational linguistics for methodological problem-solving. Smith draws upon a methodology with a disciplinary home in cognitive linguistics in order to examine psycholinguistic dimensions of language learning in new ways. Recognizing limitations in retrospective methods for investigating the noticing of recasts, he conducts an exploratory study to determine the potential of an eye tracker to serve as a useful tool for capturing noticing as it occurs during synchronous computer-mediated communication.

As the aforementioned six chapters show, educational linguistics is constantly evolving as a field in theory, method, and content. The problem-oriented nature of the field encourages educational linguists to keep an eye on the horizon. With the rapidly changing social circumstances in the word today, there is no shortage of language (in) education problems that are in need of attention. Bilingual deaf education and digital gaming are offered here as two examples of emerging areas of inquiry in educational linguistics that stand to spark innovative inquiry in the years to come.

Though Deaf education is certainly not a new issue, it is an area about which many educational linguists know very little. **Martina Carlson, Jill Morford, Barbara Shaffer, and Phyllis Perrin Wilcox** build on current work in the area of bilingual deaf education to point the way forward for future directions in educational linguistic research that will raise greater awareness about the unique educational needs of often misunderstood Deaf communities, both within our field and among educators more broadly, so that students who are deaf may have equitable learning opportunities. Moreover, they show, there is much insight to be gained into cognitive processes related to language acquisition and development from investigating the multilingualism and multimodality of signed language communication. Focusing on another area of research that has great potential to shed light on processes of language learning, **Julie Sykes, Jonathon Reinhardt, and Steven Thorne** present digital gaming environments as interactional contexts in which learners use and acquire rich language skills. These virtual contexts, they argue, provide very real environments for learners to co-construct meaning in ways that foster socially situated language and literacy development. Accordingly, Sykes, Reinhardt, and Thorne set forth ways in which digital gaming might play a more salient role in educational linguistic research as well as in the practice of language teaching and learning.

Finally, **Bernard Spolsky** offers an epilogue in which he comments on the other contributions to the volume and presents his own vision of directions and prospects for educational linguistics. He concludes on a note of social responsibility, suggesting that it is not enough to be satisfied with the evidence we amass and the knowledge we create as a field. Facts alone are not likely to change public sentiment or policy formulation. Values and attitudes must also be attended to. In the spirit of being open to a broad range of 'relevant disciplines' that might provide tools for solving language (in) education problems, Spolsky proffers that we would do well to turn to political science, social psychology, and advertising for ways of communicating not just the content knowledge of the field but also its spirit.

In the end, it is my hope that the papers in this volume, both individually and collectively, will inspire conversations about where educational linguistics is heading in the decades to come, as we consider what it means to engage in transdisciplinary inquiry in order to address twenty-first century problems.

December 2009 Francis M. Hult
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Chapter 1

Educational Linguistics: Working at a Crossroads

Constant Leung

1.1 Educational Linguistics as a Cross-Over Field

Academics with background training in a range of contiguous disciplines such as communication studies, humanities, linguistics, modern and/or classical languages, and social sciences often find themselves working in university education departments. Their intellectual output, particularly in terms of research, is often regarded as in some way associated with educational linguistics. Metaphorically speaking, educational linguistics is a confluence that draws from multiple tributaries. Applied linguistics, particularly in the English-speaking academy, undoubtedly has strong historic and on-going connections with education, particularly second/foreign language education.[1] Psycholinguistics is another discipline that can lay the same claim, as can the study of formal grammar. The list goes on. Spolsky's (1999, p. 1) opening statement for the *Concise Encyclopedia of Educational Linguistics* captures this well:

> The scope of this growing field is best defined as the intersection of language and education. From one perspective the task of educational linguistics is to define the set of knowledge from the many and varied branches of the scientific study of language that may be relevant to formal or informal education. From a second perspective, the term also includes those branches of formal or informal education that have direct concern with the language and linguistic proficiency of learners. There is an ambiguity here, perhaps captured by saying that *educational linguistics includes both the various branches of language education and the knowledge from linguistics and other fields relevant to language education*. (Emphasis added)

Linguistics, with its various branches, is a broad field in which scholars carry out the systematic study of language at different levels of conceptualisation and in

[1] Spolsky (2008) reminds us that the early efforts to establish educational linguistics as a distinct intellectual field were at least in part a reaction to the strong but conceptually restricted link between applied linguistics and second/foreign language education.

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F.M. Hult (ed.), *Directions and Prospects for Educational Linguistics*,
Educational Linguistics 11, DOI 10.1007/978-90-481-9136-9_1,

different domains of use; some people study language as a formal system, others look at language in use. In practice, the areas of study range from pronunciation and intonation of words and phrases, to sentence grammar, to different types of texts (e.g. texts of legislation and operating instructions for domestic appliances), to classroom talk, to doctor–patient communication, to air-traffic controller speak. So, the 'linguistics' in 'educational linguistics' is concerned with every aspect of educational activity where language is involved (for a further discussion, see Hornberger 2001).

The picture is no less complex with education. Everyone, practically everyone, has a view on education. One can define education from the point of view of individual development, or one can see education in social terms, i.e. learning that takes place outside formal education; and recently some governments around the world have chosen to see education in economic, or at least economic efficiency, terms. A good example here would be the recurring debates surrounding the need for schools to teach pupils to use Standard English, with an emphasis on correct grammar, as a pre-requisite to upgrading the quality of the workforce.

For reasons of space and scope this discussion will focus on formal education. In this connection Halliday (1999, p. 2) states that:

> Education, I take it, means enabling people to learn; not just to learn in the natural, commonsense ways in which we learn in our daily lives, but to learn in an organized, progressive, and systematic manner according to some generally accepted principles about what people ought to know.

Even this neat formulation, however, does not provide a clear view on what constitutes a prototypical view of education. For instance, How far can we be confident that there is consensus on what would constitute "generally accepted principles about what people ought to know"? In a similar vein, Stenhouse (1967, p. 60), one of the most influential thinkers in curriculum development in the past 50 years in Britain, also appears to place a good deal of importance on social and ideological values: "Education is conscious, planned by someone who recognises his responsibility, and is persistently purposeful. This purpose in education implies choice and decision in the light of values."

Perhaps this is the rub. What goes on in school and university education is ultimately bound up with decisions and choices about what knowledge and skills individuals and society as a whole need to have and be able to use. Such decisions and choices also signal the possibility of change—education systems in many countries with neo-liberal economies such as the UK and USA, for instance, have in the past 15 years experienced changes associated with centrally engendered top-down curriculum prescription and evaluation using market success criteria (e.g. school league tables based on student examination results) (see e.g. Broadfoot 2001; Kennedy and Lee 2008; Menken 2008; Philips and Harper-Jones 2002).

In most contemporary societies these choices are made by governments, expressed as education policies, in the name of their citizens. This 'policy on behalf of the people' articulation is not meant to suggest that there is unison of views on purpose, responsibility and values between policy makers and the diverse

constituencies of education (which include students, teachers, members of local communities, academic researchers and so on). Nor is it suggested here that educational policies are outcomes of some kind of consensual representations of collective agreement. Indeed, the work in policy studies would suggest that educational policy-making, as Stenhouse (1967) recognises, involves the exercise of value judgements and ideological preferences over competing and often conflicting views on immediate objectives and wider social goals, on legitimate arguments and evidence, and on processes and practices that would support the 'delivery' of the preferred objectives and goals. (For fuller discussions from diverse perspectives, see Ball 1997, 2008; Hanushek 1995; Landry et al. 2003).

Seen in this light, educational linguistics is a cross-over field where a diverse range of expertise from linguistic disciplines engages with aspects of educational policy, provision and practice.[2] The significance of the diversity in this cross-field diversity for this discussion is that research and conceptual development in educational linguistics is not necessarily driven by discipline-internal paradigms within the different branches of linguistics or education. If it is accepted that work in educational linguistics does not necessarily spring from some discipline-internal intellectual issues (e.g. investigating subjunctive moods in English or turn-taking patterns in lingua franca contexts), nor is it entirely shaped by discipline-internal issues arising out of education (e.g. investigating different conceptualisations of classroom-based learning), then the question is: How do we account for what we do? Hult (2008) observes that there seems to be a shared understanding among researchers in the field that educational linguistics is problem-oriented. Hornberger (2001, p. 11) suggests that "educational linguistics takes as its starting point the practice of (language) education, addressing educational problems and challenges with a holistic approach which integrates theory and practice, research and policy." So, extra-disciplinary matters such as policy and practice are in this mix. The integration of theory, practice, research, and policy is, by definition, a dynamic process. Given that policies in any education system tend to vary over time, and each new and different policy tends to introduce new and different problems for practitioners to solve (Ball 1997), research in education has to take account of the situated nature of interactions between the four constituent parts involved. The main purpose of this discussion is to develop an ontologically minded reflexive account of educational linguistics in a specific context. The discussion will specifically draw on some aspects of research related to English as an Additional Language (EAL)[3] in the school system in England as an illustrative case. This is not intended as a gate-keeping attempt to define what counts as educational linguistics, nor

[2] Hult (2008) and Hornberger and Hult (2006) use the term 'transdisciplinary field' to highlight the emergent dimension of this cross-over field enterprise.

[3] In other educational systems the term English as a Second Language is used. In the USA increasingly the terms English Language Learning and English Language Learners are used. EAL is the preferred official term in England.

is it a mapping of all EAL-related work in educational linguistics. The basic assumption adopted in this discussion is that we can get closer to a theory-explicit approach to developing situated accounts of policy-practice-research-theory (in no particular order) relationships within educational linguistics.

In the next section, I will look at the concepts of structure and agency, and examine their usefulness for understanding specific research interests and focuses in educational linguistics against the backdrop of a wider educational context. Then, I will provide a brief sketch of the policy and provision regarding EAL in school education. After that, I will explore the focal interests of a sample of research in educational linguistics and their conceptual provenance in relation to curriculum policies and provision. In the final section, I will suggest that educational linguistics, like other areas of intellectual activity, can contribute to the enrichment of prevailing educational provision and practices, as well as offering alternative conceptualisations and approaches. The actual uptake of any particular piece of work in educational linguistics by policy is not, however, just a technical selection of the 'best' on offer; a good deal depends on, among other things, policy-makers' goals and ideological values, and researchers' epistemological stances and views on the relationship between educational policy and practice, the available stock of disciplinary knowledge, and the range of recognised epistemic positions in the prevailing intellectual environment.

1.2 Understanding Situated Endeavours

Neither the diverse nature of the linguistic disciplines nor the changeable priorities for public education can be said to have led to some arbitrary selection of topics for enquiry in educational linguistics. In education we do not value and teach everything and anything, not any more than we, as researchers, would investigate any and all linguistic phenomena. So, how do we account for our choices? One way of exploring this question is to look at our focuses and interests in relation to the context in which we work. Put differently, do researchers work with imposed agenda or do they choose on their own volition? To find an answer to these questions, perhaps we should turn to an enduring question in social science regarding the relationship between structure and agency, and the part played by ideological values in this relationship. Sealey and Carter (2004, p. 6) put the relationship between structure and agency in a simple but rhetorically helpful way: "Do people make society or does society make people?" I will now try to make more specific how 'society' and 'people' can be understood in the context of this discussion.

For the purposes of this discussion we can take society to comprise an organised and patterned system of human activities involving social interactions. Here I am referring mainly to those human activities in which participants have a sense of shared meaning. As Latour (1996) would suggest, such activities tend to be 'framed' or circumscribed in respect of shared interests, orientations and

established practices.[4] Examples of these human activities are co-residence, scholarly studies, legal practices, governmental processes and so on, each of which feeds on and, in turn, generates bodies of valued knowledge and patterns of its use, e.g. kinship, science and jurisprudence. Over time these human activities are often cemented into social institutions and practices such as family, education and professions (e.g. medicine and law). The valued bodies of knowledge and the patterns of their use underpinning these activities can now be called 'structures'. Following Giddens (1979, p. 64), structure has a dynamic and (re) productive quality:

> … "structure" refers to ... "structuring property" … providing the 'binding' of time and space in social systems. I argue that these properties can be understood as rules and resources, recursively implicated in the reproduction of social systems.

The present participle in 'structuring property' suggests that action is implicated in Giddens's formulation. On this view, structure does not exist as a thing-like phenomenon until and unless affiliated bodies of valued knowledge and practices (i.e. rules and resources) are enacted and reproduced in social interaction. Structure is produced and reproduced, i.e. brought about, through social interaction involving human participants. Thus, structure provides the rules and resources for its own production and reproduction. One may say that rules and resources in education and educational linguistics (in whatever actualised configuration) constitute the structures of these two domains respectively. (For further discussion see Manicas 2006: Chapter 3).

The idea of 'people' in the Sealey and Carter (2004) formulation can be understood in terms of agency. Agency refers to human beings' enactments of their needs, intentions, aspirations and desires in social action—"a continuous flow of conduct" (Giddens 1979, p. 54). Human agency carries with it properties and powers such as "self-consciousness, reflexivity, intentionality, cognition, emotionality and so on" (Sealey and Carter 2004, p. 11). As we have just seen, structure provides both facilities (resources) and constraints (rules) for human enactment. However, in so far as people are not completely subservient to structure, human enactment promises the possibility of modification of structure in the process of enactment and reproduction.

With these renderings of structure and agency, I can begin to explore how they might help us understand how some of the recent work in educational linguistics in England regarding EAL has come about.

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[4] Lemke's (2000) pan-anthropological use of the notion of heterochrony is relevant here. In human activities the here-and-now events can be influenced by long(er)-terms practices. Lemke's own classroom example is helpful: "... when a teacher asks a question, several students begin looking through their notebooks. The notes they look at now were written days and weeks ago. The answers they give are influenced in part by what they read and how they interpret it in relation to the question just asked.... At another juncture, the teacher reads aloud from the textbook, writes on the board, and asks a question that would not have been written or asked as it was without the influence of the textbook's words." (Lemke 2000, p. 281).

1.3 EAL and Educational Linguistics in Context

I will now focus on some aspects of EAL in schools in England and consider what educational linguistics has to offer to our understanding of this as an everyday practice and as a policy issue. First, I will offer a brief description of the general educational policy disposition regarding EAL. For the present purposes EAL is defined as the educational policy, provision and curriculum practices associated with language minority school students in England. For over 30 years now, EAL provision in school has been operating on a particular interpretation of 'inclusion'. The history of this is long and complex (for fuller accounts see Edwards and Redfern 1992; Leung 2001, 2005a, b, 2007). Suffice it to say here that 'inclusion' is currently taken to mean the integration of all pupils into the same mainstream curriculum. In practical terms, this means that linguistic minority pupils, some of whom are in the process of learning to use English for social and academic purposes, are placed in chronological year groups and they are expected to participate in the full range of learning of curriculum subjects, irrespective of their capacity to engage through the medium of English. The assumption is that participation in mainstream activities of schooling will facilitate the learning of English without a dedicated English language curriculum. This interpretation of inclusion would not support teaching arrangements organised around separate English language programmes outside the mainstream curriculum for any sustained length of time. Additional support for EAL students, where it is deemed necessary, is ideally to be provided in the ordinary subject lessons by either the subject teacher or an EAL specialist teacher, or both.

Perhaps it should be noted that in other English-speaking countries, EAL provision in school education can be conceptualised differently. In California, EAL (referred to as ELL—English Language Learning/Learners) students who are at an early stage of learning English are put through a 1-year intensive English language programme (called Structured English Immersion) before being integrated into the mainstream curriculum (e.g. California Secretary of State 1997; Crawford 2003; Cummins 2000: Chapter 6 in particular). In different parts of Australia, there are a variety of EAL (called ESL) responses, from an intensive English language programme for beginners to dedicated EAL curriculum specifications within the mainstream school curriculum (e.g. McKay 2007; South Australian Curriculum Standards and Accountability Framework [SACSA] undated). I am not commenting on the educational merits of these other approaches and practices. The point here is that what goes on in England is the consequence of a policy option, not some natural phenomenon. An interesting aside is that these different approaches and practices are all supported by some variant of the discourse of equality of opportunity and declared aspirations to high levels of academic achievement and inclusion.

To return to the description of EAL in school, the increasingly diverse school population in England means that practically all schools and teachers are involved

in teaching EAL students.[5] If the business of schooling education is, among other things, providing for and responding to individual and group learning needs (and not just the *performance* of the *delivery* of compulsory curriculum content), then the presence of large numbers of linguistically diverse pupils presents a particular set of pedagogic, curriculum and assessment issues for teachers—teachers of all subject areas and ages.

The logic of the current policy interpretation of 'inclusion' has led to, *inter alia*, the following assumptions and practices:

- Pupils of different English language proficiencies can benefit from participation in the mainstream curriculum activities through the medium of English.
- Teachers of all subject areas can adopt classroom communication strategies to make meaning transparent to those whose grasp of English is not firmly in place, e.g. using gestures, visual images, graphic representations and role play; the corollary of this is that specialist EAL teacher education and training is neither required nor necessary.
- The content specifications for the subject English is serviceable as the basis of organising EAL teaching/learning and assessment, despite the fact that it is primarily a mother tongue-normed subject, comprising age-related language development materials and English literature.
- The development of language minority pupils' first/home language is a local community/family issue, not the responsibility of the statutory curriculum.

We can now say the current structure for EAL education looks diagrammatically as shown in Fig. 1.1.

To return to the earlier rhetorical question: Do people make society or does society make people? If we go along with 'society makes people', then we will see total compliance with structure in civil society (via policy and statutory regulations).

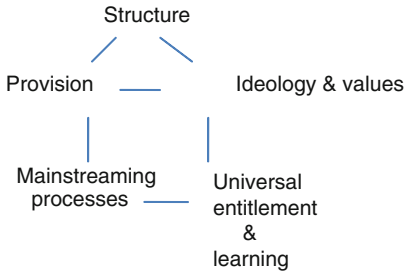

Fig. 1.1 EAL education

[5] Current official statistics indicate that approximately 22% of the 8.1 million school population in England is classified as ethnic minority; 13.5% of elementary and 10.5% of secondary students are classified as speakers/learners of EAL (National Statistics 2007).

Agency will be completely subjugated to structure; in other words, we would all be social dupes, shackled by policy sanctions and norms.

However, as suggested earlier, structure does not exist independently of human enactment. In a situation where structure has overwhelming influence on human action, human agency counts for very little in social interaction—people would follow the handed down script obediently. As people and as researchers, we would enact structure dutifully. This is represented on the left-hand side of Fig. 1.2. In circumstances where human agency enjoys freer reign, rules can be interpreted to a greater degree. In situations where this is the case, the hold of structure on human activities is much less secure. This is represented on the right-hand side of Fig. 1.2. The 'mirror reflections' below 'Agency' signal possibilities of interpretive and reflexive views. In so far as agency is not completely suppressed, and that there is at least a small amount of wriggle room for people to make society, structure itself is not an immovable force. In principle people can reconstitute structure. This is represented diagrammatically in Fig. 1.2.

Using this analysis, we can see that research work in educational linguistics, like research in other fields, can be characterised as being supportive of structure, or *with* structure. At the same time research can also be non-conforming or oppositional to structure, or *against*-structure. *With*-structure work doesn't automatically mean that it is sycophantic, in support of the prevailing orthodoxy; such research may seek to explore the untapped scientific and intellectual potentialities and practical applications of apparently settled ideas and practices. Internationally, examples of *with*-structure work in educational linguistics would include the studies on French immersion education for Anglo-students in Canada (e.g. Lapkin 1998; Swain 2000; Johnson and Swain 1997). Indeed this body of work has in fact been absorbed into the structure of language education in some parts of Canada and other places. Work that is *against*-structure tends to seek to take issue with and contest

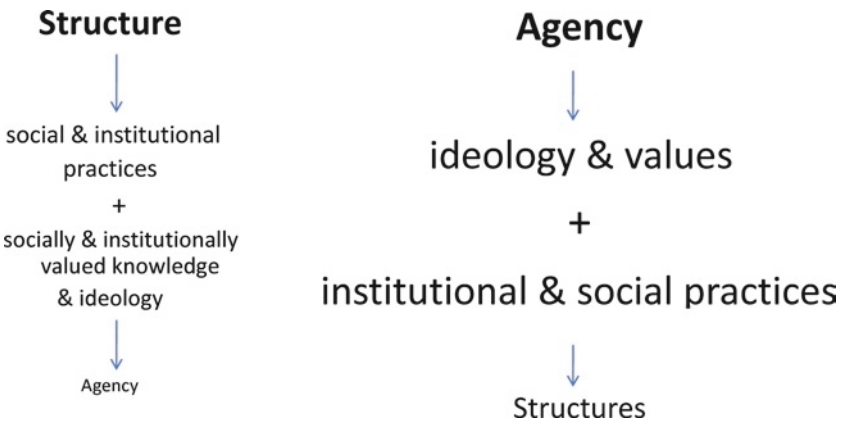

Fig. 1.2 Structure and agency in EAL education

the conceptual, empirical and/or practical claims made on behalf of the prevailing orthodoxy; often this kind of work seeks to challenge the prevailing orthodoxy. Again, internationally, examples of *against*-structure work in educational linguistics would include the work on bilingual education as a counter move against the growing trend towards English-only educational and social provision in many parts of the United States (e.g. Cummins 2000; EdResource 2008; Evans and Hornberger 2005; Menken 2008; Tórrez 2001). Some work goes beyond specific issues and takes a critical view on education more generally. For instance, in the field of additional language education, Auerbach (1995, p. 9) argues that

> ... although dynamics of power and domination may be invisible, they permeate the fabric of classroom life ... Pedagogic choices about curriculum development, content, materials, classroom processes, and language use, although appearing to be informed by apolitical professional considerations, are, in fact, inherently ideological in nature ... our choices as educators play a role on shaping students' choices.

Pennycook (2001, p.120), writing on critical applied linguistics, further suggests that

> (t)he challenge is to find a way to theorize human agency within structure of power and to theorize ways in which we may think, act, and behave that on the one hand acknowledge our locations within social, cultural, economic, ideological, discursive frameworks but on the other hand allow us at least some possibility of freedom of action and change.[6]

However, a good deal of work in educational linguistics does not fit easily into these mutually exclusive bipolar positions. Quite a lot of work is both *with*- and *against*-structure. With this kind of 'looking both ways' work the researchers involved are on the one hand in support of the broad aims or principles of a particular initiative or provision, but they are on the other hand interested in how particular issues or practices have been understood, and how far they may be different in terms of conceptualisation or practice and so on. Along the way, this kind of work may seek to critique false premises, inadequate analysis, misapprehension and/or misapplication. A good deal of the educational linguistics in England concerned with EAL is in this *with*- and *against*-structure position. Perhaps we should add immediately that the *with* and *against* status of any piece of research is not necessarily permanent; much depends on policy uptake which can change over time. The topics and publications cited in Fig. 1.3 can be seen as a small but illustrative sample of the research that is both *with*- and *against*-structure in relation to EAL. For reasons of focus, these publications are mainly drawn from the research with a focus on England, but not exclusively so. Some of the work addresses issues that span across different educational contexts and geographic locations. I will now gloss the categories shown under the Agency-active side of the figure.

The work under Curriculum and Pedagogy is largely concerned with examining the theoretical and pedagogic assumptions of the current interpretation 'inclusion',

[6] See Zentella (1997) for an example of this approach in relation to the boundary-breaking study of bilingualism in a specific community context.

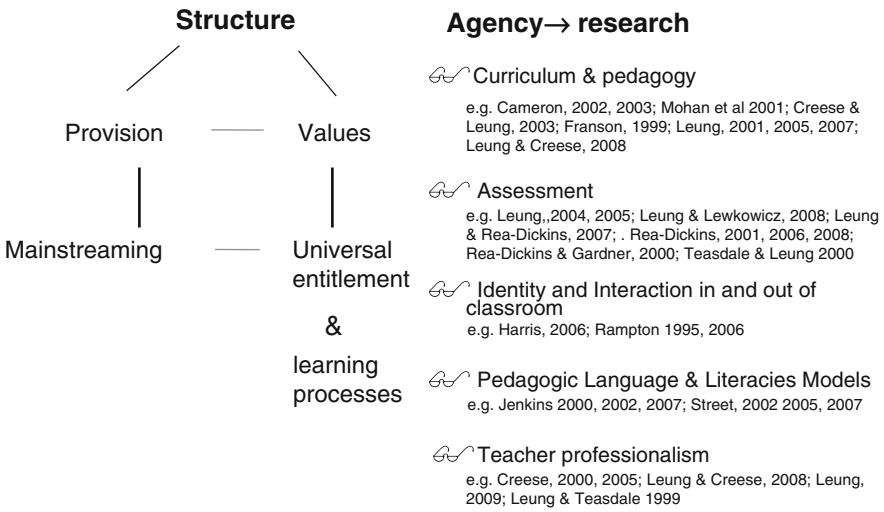

Fig. 1.3 Educational linguistics of EAL

language curriculum (including EAL and other languages), and language learning approaches associated with this particular approach. Some of the work, e.g. Mohan et al. (2001) and Leung (2007), explores alternative constructions of inclusive policies and develops pedagogic principles that take account of both language and curriculum content learning. This work is *with*-structure in so far as it accepts the broad social goal of inclusion; it is *against*-structure in that it is concerned with critically examining the merits of the policy assumptions and claims, and with exploring alternative conceptualisations and practices.

In relation to Assessment, a good deal of effort has gone into examining the validity claims of using a one-size-fits-all mother tongue normed model of English language development for EAL assessment. The basic argument is that EAL learners comprise a diverse range of background language, social and educational experiences. As a group of language learners, they are not all at the same level of proficiency or do not all have the same language development trajectories. So, any assessment regime that is premised on mother tongue assumptions in terms of maturational stage, social experience, and background language learning would not be valid. In that sense, it is *against*-structure. At the same time, a great deal of work has gone into exploring the pedagogic possibilities of formative assessment (also known as assessment for learning) for EAL students, and this is very much endorsed by current policy. In that connection, it is *with*-structure.

A main theme in the work related to Ethnicity, Identity and Interaction (in and out of school) is concerned with exploring the complex and dynamic ways in which school aged young people from diverse backgrounds enact aspects of culture and social values in social interaction. The analyses proceed from the premise that ethnic, cultural and linguistic diversity is a given fact in late modern societies; the task at hand is to understand it better. Accepting, and indeed celebrating, ethnic and

linguistic diversity has been a constant theme in policy rhetoric in England for the best part of 30 years. In that connection, this corpus of work is *with*-structure. However, this body of research has also shown that language, culture and ethnicity are not tightly bounded categories inherited by individuals which are then played out as fixed positions across social contexts. This kind of argument is *against*-structure in so far as a good deal of policy rhetoric is still permeated with essentialist assumptions.

The examples of work cited under the Pedagogic Language and Literacies Models heading refer to different ways of conceptualising language norms and language use for teaching and learning purposes. The work on a lingua franca phonological core, for instance, suggests that intelligibility in spoken English can be achieved without the learner (re-)producing norms representing a standard native speaker variety (e.g. Received Pronunciation in the UK). The pluralized and socially oriented view of literacy found in New Literacy Studies point to the importance of recognizing the multiple ways in which people use language to engage with reading and writing in different contexts. On this view, social practice constitutes an important dimension of literacy. These lines of enquiries signal the need to negotiate appropriate pedagogic models, which can be seen as *against*-structure in that the curriculum authorities have tended to be monotheistic about norms and standards in recent times. Their work is also *with*-structure in so far as there is a commitment to making curriculum and pedagogy more tuned to the actual learning needs of the students.

EAL teachers are expected to work in the subject classroom as a collaborating teacher alongside the subject teacher. This situation has generated quite complex professional issues related to the nature of EAL teacher expertise and professional role. The examples of work cited under Teacher Professionalism address issues such as what counts as EAL teacher knowledge in a situation where language learning–teaching is embedded in subject content teaching, how much subject content knowledge (e.g. mathematics) is needed by EAL teachers, and what happens when the EAL teacher and the subject content teacher negotiate lesson plans and division of labour in a collaborative partnership where differentials in institutional and expertise-based power come into play. This line of enquiry is *against*-structure in that it exposes some of the pedagogic uncertainties and conceptual lacunae in the way EAL is positioned. At the same time this body of work is *with*-structure because it supports the basic idea that EAL learning and teaching can take place in subject lessons, providing that the intellectual and professional issues are addressed.

1.4 Disciplinary Commitments and Ideological Values

So far, I have presented a picture of the researcher somehow conjuring up research work at will. Human agency appears to comprise open possibilities; and the researcher is engaged in some heroic struggle with ideas. But, in fact, there is at least one other significant structure in the picture—the established practices of the

research community concerned and the bodies of valued knowledge that constitute the academic disciplines in the related fields that we mentioned earlier at the beginning: education, various branches of linguistics, sociology, psychology and so on. If we accept this view we can see that agency itself is connected to at least another structure, the structure of the research community involved. Just as Auerbach (1995) suggests that pedagogic choices are 'invisibly' shaped by power and ideology, one can reasonably say that issues researchers in educational linguistics have chosen to investigate are themselves subject to the influence of, if not limited by, the prevailing disciplinary structure/s concerned. Thus the kind of educational linguistics research that has been described here is part of a complex interactive process of structures and agencies (Fig. 1.4).

The extent to which a researcher works *with* structure or *against* structure is a matter of their intellectual and ideological interests and orientations. This is clearly a complex question that would easily merit a separate discussion. Suffice it to say here that researchers in educational linguistics, just like everyone else, have value preferences and ideological dispositions. People *qua* researchers enact their needs, intentions, aspirations and desires in social and professional action. Researchers in educational linguistics engage with structure through the enactment of agency. Agency, in the analytic sense understood by Giddens, can be seen as a kind of disposition embodied in and reflected by 'a flow of conduct'. On the more everyday level, agency is actualised by making decisions and choices. The type of engagement, *with*- or *against*-structure, or both, is a question of value preferences and

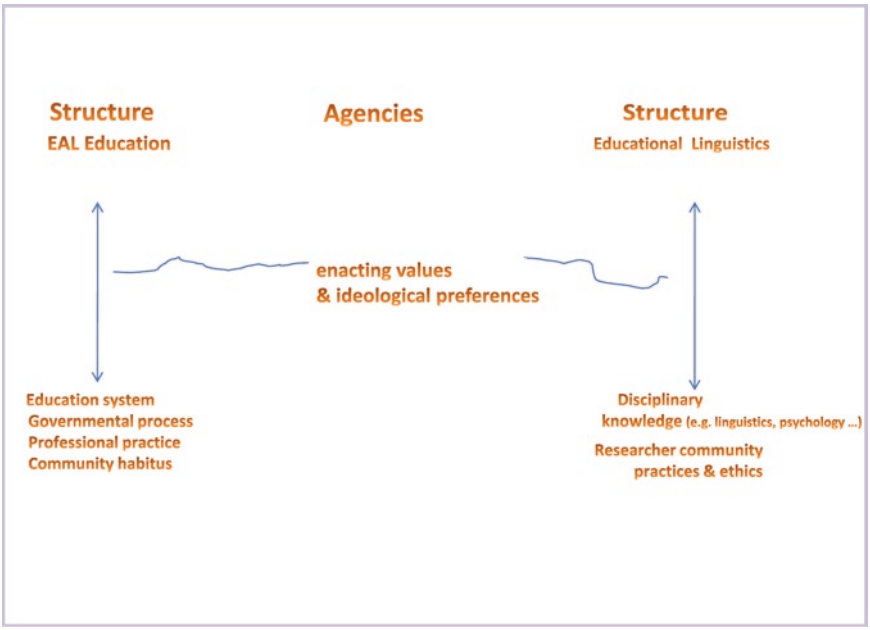

Fig. 1.4 Structures and agencies

ideological commitments as well as research traditions. For instance, a researcher who is interested in studying how people achieve understanding through interactional talk is likely to investigate classroom talk empirically. This kind of investigation may yield data that would show how curriculum-content related talk between teachers and students and among students themselves may help achieve understanding of the subject matter. This kind of research may or may not be in line with a prevailing curriculum policy position that downplays the role of interactional talk in teaching and learning. The extent to which a researcher would actively engage in and promote this kind of work would, all other things being more or less equal, depend on their views on the merits of presenting competing ideas, the role of research in education, and the right of researchers to conduct research that is inimical to prevailing policy dispositions.

1.5 Educational Linguistics of EAL: Academic Contribution or Resistance?

Work in educational linguistics can be incorporated into the schooling education structure, e.g. French immersion studies in Canada. The extent of incorporation of particular bodies of research work is of course an act of ideological selection enacted through the agencies of policy makers. It is possible that under certain conditions the process of policy incorporation can involve 'cherry picking' elements of a body of research because they appear to support policy. The work of Cummins is a good case in point. In general, his work has been critical of many aspects of schooling education from the point of view of promoting linguistic diversity and promoting high academic achievement through an additional language; however, in England EAL policy has publicly and enthusiastically incorporated his concepts of Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP) (e.g. Cummins 1992, 2000, 2008) because they are deemed to support the basic pedagogic assumptions underpinning the mainstreaming policy (Leung 2007).

Seen in this way, much of the work cited in the previous section has not been sufficiently compatible ideologically with prevailing curriculum and policy positions for acknowledged incorporation. But does this mean that all this work represents in some sense a wasted effort? There are at least two ways of understanding this question.

First, the research output of educational linguistics itself can form part of the disciplinary structure that influences further work.[7] It is itself potentially part of the structure of educational linguistics, the composition of which is ultimately shaped

[7] As argued earlier educational linguistics is a cross-field endeavour. It is therefore possible that research output in educational linguistics can be fed into other disciplines such as psychology, sociology and so on.

by the values and the ideologies of its practitioners, as well as by the body of valued knowledge built up by them.

Second, educational policies can and do change. After all, as part of structure, policies themselves do not have any independent existence; their existence requires human enactment. As we all know from everyday experience, educational policies do change with frequent regularity due to shifts in political values and ideological preferences, and force of circumstance. In so far as research in educational linguistics is not necessarily tied to any policy preference in a pre-ordained way, collectively as an intellectual enterprise it has the potential to help conserve, inform, and/or transform existing knowledge and educational practices. Spolsky (2008, p. 2) is of the view that educational linguistics can provide "the essential instruments for designing language education policy and for implementing language education management." In other words, research itself can contribute to change in policy and practice. And the intellectual, ideological and moral positions adopted by researchers, *qua* political and educational activists, may help push policy agendas in particular directions. (For a further discussion on political activism within educational linguistics and associated fields, see Charity 2008 and Hornberger 2002).

Seen in this light, educational linguistics as a field is not itself inherently *with* or *against* schooling education structure. The way EAL is constructed and practised in school in England is a form of temporal objectification of the complex interactive process involving the (agency-mediated) EAL education structure.[8] The stability, or instability, of the current EAL education structure in the medium to long run would be influenced, among other things, by the kind of work we do in educational linguistics. As Berlin (1955/1979, p. 103) observes:

> There is no timeless, unalterable concept of justice or property or freedom or rights—these values alter as the social structure of which they are a part alters, and the objects created by mind and imagination in which these values embodied alter from phase to phase.

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[8] The notion of objectification is derived from Marx (1939/1993, p. 712): "When we consider bourgeois society in the long view and as a whole, then the final result of the process of social production always appears as the society itself, i.e. the human being itself in its social relations. Everything that has a fixed form, such as the product etc., appears as merely a moment, a vanishing moment, in this movement. The direct production process itself here appears only as a moment. The conditions and objectifications of the process are themselves equally moments of it, and its only subjects are the individuals, but individuals in mutual relationships, which they equally reproduce and produce anew. The constant process of their own movement, in which they renew themselves …".

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Chapter 2

Theme-Based Research in the Transdisciplinary Field of Educational Linguistics

Francis M. Hult

2.1 Introduction

Educational linguistics, like applied linguistics more broadly, is a field of inquiry that is not bound firmly to a discipline (Hornberger 2001; Spolsky 1990). Rather, it has long been an intellectual domain for cross-pollination among theoretical and methodological approaches from a broad spectrum of disciplines (Brumfit 1996). Accordingly, educational linguistics is, perhaps, best described as transdisciplinary (Martin 1993; Rothery 1996). This transdisciplinary nature lends itself to a certain intellectual freedom but also to practical and conceptual challenges to be considered along all phases of the research process.

In this chapter, I consider the intellectual benefits and challenges of transdisciplinarity for educational linguistics. Building on previous thinking about the nature of educational linguistics by Nancy Hornberger and myself (Hornberger 2001; Hornberger and Hult 2006; Hult 2008) as well as work by other educational linguists, I expand upon Halliday's (2001 [1990], 2007 [1990])[1] characterization of transdisciplinarity in order to reflect on its practical implications for doing educational linguistics. I focus, in particular, on his central tenet that the premise of transdisciplinarity is the need to move away from an intellectual emphasis on disciplines to a kind of inquiry that is thematic. Starting with the core principle that educational linguistics is a problem-oriented field (e.g., Hornberger 2001; Spolsky 1971), I discuss the ways in which it is fruitful to view Halliday's conceptualization of *theme* as a foundation for the nature of educational linguistics. I then explore how a thematic orientation serves to guide ways of approaching the topics encompassed by the field. Finally, I examine the practical implications of doing thematic research, identifying key benefits and potential pitfalls.

[1] These texts were originally published in 1990 and later re-printed. In the remainder of the chapter, I use only the dates of the re-prints, which are more easily accessible.

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F.M. Hult (ed.), *Directions and Prospects for Educational Linguistics*,
Educational Linguistics 11, DOI 10.1007/978-90-481-9136-9_2,

2.2 The Thematic Nature of Educational Linguistics

Since its inception, educational linguistics has been defined not by disciplinary dogma but by a shared focus on investigating "the practice of (language) education, addressing educational problems and challenges with a holistic approach which integrates theory and practice, research and policy" (Hornberger 2001, p. 11). There is no set of prescribed theories or methods that drive educational linguistic research. Its governing principle is its problem-oriented nature (Hult 2008, pp. 16–20). This orientation was fundamental to Spolsky's original formulation of the field, and it continues to be its cornerstone today (Hornberger 2001, pp. 9–11; cf. Spolsky 1971). Underlying this problem-oriented approach is a central element that Halliday identifies for transdisciplinary research: the *theme* (Hornberger and Hult 2006, p. 78; Hult 2008, p. 17). As Halliday explains:

> I say 'transdisciplinary' rather than 'inter-' or 'multidisciplinary' because the latter terms seem to me to imply that one still retains the disciplines as the locus of intellectual activity, while building bridges between them, or assembling them into a collection; whereas the real alternative is to supercede them, creating new forms of activity which are thematic rather than disciplinary in their orientation. (2001, p. 176)

Educational linguistics is a transdisciplinary field *par excellence*. It is neither the intersection of the disciplines of linguistics and education nor a sub-field of the discipline of linguistics (Halliday 2007, p. 358).

While there are, of course, many fruitful areas of overlap between linguistics and education (e.g., Heath 2000; Hudson 2008; Adger et al. 2002), linguistic theories and methods may not always be directly applicable to pedagogy—to wit the now largely obsolete audiolingual method, which drew heavily on structural theories of language (Spolsky 2003, p. 503). In addition, educational linguistics has long been a nexus point for knowledge, theories, and methods that emerge from a wide range of disciplinary foundations such as anthropology, linguistics, psychology, and sociology, among others (Brumfit 1996, p. 12; Spolsky 1978, pp. 2–6). At the same time, it has never been epistemologically fettered to any of these disciplines, even linguistics proper.

Educational linguistics, then, is a form of 'intellectual activity' that is held together as a field not by 'building bridges between' disciplines but by its focus on "(the role of) language (in) learning and teaching" (Hornberger 2001, p. 19). The work undertaken with this focus often transcends disciplines, drawing upon theoretical and methodological approaches in novel ways that are mindful of the intellectual roots from which those approaches stem yet are not subservient to any particular discipline. In this way, echoing Halliday, educational linguistic research is "thematic rather than disciplinary in [its] orientation."

Halliday defines 'theme' as "not an object under study; it is not a content but an angle, a way of looking at things and asking questions about them, where the same question might be raised with respect to a wide variety of different phenomena"

(2007, pp. 358–359).[2] He offers mathematics as an example of a quintessential theme, a way of understanding the world that is more about process than content. This kind of thematic orientation is latent also in Spolsky's original vision for educational linguistics, in which he observes that one of our primary 'angles' should be to consider children's communicative competence at the point in time when they begin their educational experiences; we should then go on to develop a holistic understanding of how to help them build communicative repertoires that will maximize their social opportunities (Spolsky 1978, p. viii; cf. Hornberger 2001, p. 17). On his part, Halliday (2007, p. 360) articulates this notion in terms of the two core themes that together provide the 'angle' for educational linguistics: understanding the relationship between "how people mean" and "how people learn."

Taken together, Halliday's and Spolsky's vantage points suggest that the purpose of educational linguistics as a transdisciplinary field falls within the scope of two poles of a continuum: (a) to understand the full range of social processes that relate to the intersection of learning and meaning-making and (b) to formulate interventions that might facilitate relationships between learning and meaning-making. This may be conceived of as a continuum from reflection to action (Halliday 2007, p. 355), non-intervention to intervention (van Lier 1988, pp. 56–57), or perhaps even basic to applied (Perry 2005, p. 72). The reciprocal relationship between research and practice, in turn, takes shape within the spaces between these poles (Hornberger 2001, p. 11; Hult 2008, pp. 20–21). For ease of reference, I will use 'language (in) education' as shorthand for this binary core theme.

In this sense, the cohesion of the field of educational linguistics comes from scholars being in orbit together around this shared thematic core rather than from the "idiosyncratic interests or biographical chance" of individual researchers (Spolsky 1978, p. vii). In other words, it is not the content we share as educational linguists, but the angle. Indeed, a rather broad range of content/topics can be approached from this angle, and the perspective taken on the angle may be different depending on the topic. I consider these issues in the following two sections.

2.3 Thematic Topics for Educational Linguistic Research

Teasing apart theme and content highlights the fact that educational linguistics is not just a patchwork quilt made from a loosely assembled collection of topics. Indeed, with the binary core theme in mind, it becomes crystal clear that while there is certainly a broad range of topics, they have a common center of gravity. While theme and content are different in this view, there is a connection between them in that the nature of the content is mediated by the core theme: the content of educational

[2] Halliday's definition of theme departs from the way the term is used traditionally, both colloquially and in research (see Corbin and Strauss 2008, pp. 104–105). It is also different from the way I have used it previously to describe topics in educational linguistics (e.g., Hult 2008).

linguistics is grounded in educational practice. This is where major topics and questions originate, and it is the domain that educational linguistic research seeks to inform (Hornberger 2001, p. 19; Hornberger and Hult 2006).

Its thematic focus is the major characteristic that sets educational linguistics apart from applied linguistics more broadly (Hornberger 2001; Spolsky 1978; *pace* Kaplan 2009). As Buckingham (1980, p. 6) proffers, "applied linguistics, even in a quite narrow sense, is far more than language teaching." The thematic focus of educational linguistics is narrower than applied linguistics, yet it maintains the breadth of transdisciplinarity. In this sense, educational linguistics, Hult and Hornberger (2006, p. 77) point out, is a field with "a broad scope and a narrow focus" (see also Hornberger 2001, p. 17). It is narrow in its focus on language (in) education, and broad in encouraging open-mindedness and creativity by allowing for the possibility of investigating the core theme in a wide range of potential contexts, using theories and methods that are most appropriate to research questions that arise in relation to those contexts. For example, while much educational linguistic research has taken place in schools (Halliday 2007, p. 356), attention is also paid to a wider range of (informal) educational settings (Hornberger 2001, pp. 13–18; Leap and Mesthrie 2000, p. 354; Sykes, Reinhardt and Thorne this volume; Warriner this volume).

The binary nature of the core theme for educational linguistics, reflection and action around the intersection of 'how people mean' and 'how people learn' as posited by Halliday (2007), brings to light what it really means to say that the starting point for educational linguistics is educational practice. We all seek to conduct research that addresses some issue or question on a topic that falls within the scope of the two poles identified above, whether it be more reflective or interventionist. We identify a 'problem' within this scope and then begin to address it. Some topics may focus more on one dimension while others may relate to the dynamic relationship between them (Halliday 2007, p. 362). In any case, the ultimate goal will be to understand the complexities of language in and around teaching and learning and/or to identify and evaluate best practices for language (use) in and around teaching and learning. Research along these lines, moreover, is ideally mutually informative such that reflection informs action and action serves as a guide for reflection. In this way, educational linguistics "combines the brazenness of claiming breadth and depth of influence with the humility of realizing the complexity of finding useful implications for knowledge" (Spolsky 1999, p. 1).

Myriad content areas fall within the breadth of the thematic orientation of educational linguistics. Nested within each content area, in turn, is an array of more specific topics that reflect the depth of the field. Many of these content areas and topics may also inter-relate. A review of the full constellation of content areas and related topics is beyond the scope of this chapter. It is useful, though, to pause and point out some major areas by way of illustration. Table 2.1 represents a synthesis of major content areas and topics, drawn from two recent summary works (Hornberger 2008; Spolsky and Hult 2008) and informed by Halliday's (2007) notion of the reflection ↔ action continuum.

Table 2.1 suggests the broad scope of content areas and topics from global to interpersonal scales of social organization as well as connections among them, both across

Table 2.1 Selected content areas and topics for educational linguistics

Reflection ←----------→Action	
Language ecology and education	
What are the languages and varieties of languages that co-exist in a particular social environment?	How can education influence relationships among languages and varieties of languages in a particular social environment?
Which languages or varieties of languages are needed to gain access to which domains?	What needs to be done in (language) education to facilitate a student's development of communicative competence in a broad linguistic repertoire?
What economic, political, and psychological factors contribute to threatening or marginalizing some languages and not others?	What educational practices should be put in place to support sustainable multilingualism?
Language education policy and management	
Do policies tend towards assimilation or pluralism, monolingualism or multilingualism?	What political actions are needed to create equitable educational opportunities for all students, regardless of linguistic background?
What 'implementational spaces' exist in policies for fostering sustainable multilingualism?	What curricular developments can be implemented to provide multilingual education within the constraints of existing policies?
How is current knowledge about second language acquisition reflected in policies about language learning?	What changes need to be made to existing policies to align them with best practices based on current research about language learning?
Linguistically and culturally responsive education	
How are individuals socialized in practices for meaning-making in their homes and communities?	How can students' practices for meaning-making be used as resources for learning in schools and classrooms?
What kinds of access to education do majority and minority students have? What social, economic, cultural, and political factors serve as barriers to educational access for linguistic minorities, in particular?	What needs to be done to facilitate equitable educational opportunities for both majority and minority students, in terms of both physical access and access to knowledge?
What beliefs do students and teachers have about different languages and varieties?	How can classrooms become spaces for encouraging positive views about linguistic diversity?
Literacy development	
What genres are used in what domains in a particular social environment?	How should teachers build bridges between community literacy practices and academic genres in ways that help students access a broad range of domains (and related social opportunities)?
What culturally and socially situated literacy practices do students engage with in their communities?	
What pedagogical practices facilitate the development of biliteracy?	How should a student's first language literacy skills be used as resources for developing literacy in additional languages?

(continued)

Table 2.1 (continued)

Reflection ←----------→Action	
What values are placed on different literacies in specific communities and social settings?	How should educators help students engage with dimensions of power associated with different literacy practices, particularly with respect to gender, ethnicity, economic status, and race?
Second and foreign language learning	
What are the social and cognitive conditions for optimal language learning and teaching?	What best pedagogical practices need to be put into place to facilitate language development?
What goals do students have for additional language learning? What goals do teachers have for their students' additional language learning?	What can teachers do to enhance a student's motivation to learn (an) additional language(s)?
What relationships exist between language use and language learning?	What kinds of opportunities for social interaction in the target language should be provided during instruction to facilitate language development?
What do teachers need to know about language, communication, and pedagogy in order to provide effective language instruction?	How should language teacher training curricula be structured so that prospective teachers gain the practical and theoretical knowledge needed to deliver effective language instruction?
Language testing and assessment	
How do current assessment instruments match (a) the language skills taught and (b) expectations for language use in specific social contexts?	What instruments should be used to evaluate the full range of a student's communicative competence?
How are assessment instruments used as gatekeeping mechanisms that hinder or allow access to different domains (and related social opportunities)?	How should critical awareness of language assessment instruments as gatekeeping mechanisms be raised for students, teachers, parents, administrators, and policymakers?
What factors are relevant to constructing instruments that are valid, reliable, and socially responsible measures of communicative competence?	What accommodations can be made without sacrificing validity and reliability when implementing an assessment instrument with populations who have different linguistic, cultural, ethnic, and socioeconomic backgrounds?

Synthesis of Spolsky and Hult (2008) and Hornberger (2009); informed by Halliday (2007, pp. 354–356)

scales and across the continuum from reflection to action. This list is, of course, not exhaustive. Each of the topics listed here is easily broken down into even more specific nested topics. The common thread across all of them is that they center on the core theme of language (in) education. Educational linguistic research, as this table indicates, relates to both the 'front end' and the 'back end' of pedagogical practice.

Spolsky, for example, suggests that a central aim of the field of educational linguistics should be to inform educational policy (Spolsky 1974, p. 554). The

policy/practice connection is twofold: (1) conduct research about best practices that will inform sound (language) education policy; and (2) conduct research that will inform the implementation of effective (language) education as set forth in policy (Hult 2008, pp. 20–21). While not every educational linguist may share a focus on policy, this kind of attention to the evaluation and practice of language (in) education is central to the work of educational linguistics as a whole. It from this research–practice synergy that the core knowledge of the field emerges (e.g., Hornberger 2008; Spolsky and Hult 2008). Engaging with this thematic body of knowledge is a way for teachers, administrators, researchers, and policymakers to work together in order to find potential solutions to issues they face in classrooms and schools (Brumfit 1997; Hornberger 2009).

2.4 Doing Thematic Research in Educational Linguistics

Once one sees the theme as the core of the field, it is easy to understand why the focus of inquiry must transcend disciplines. The full investigation of the kinds of topics noted in Table 2.1 is likely not entirely possible from the vantage point of one discipline alone. Thematic inquiry goes hand in hand with a problem-oriented approach. To be truly problem-oriented one must place the problem, rather than disciplines, at the center of inquiry. Accordingly, the questions educational linguists attempt to examine are not anthropological, linguistic, psychological, or sociological—they are thematic questions related to language (in) education. This makes educational linguistic research somewhat different from what is done in traditional disciplines. There are unique benefits and challenges to working in this way.

2.4.1 The Practice of Transdisciplinary Research

The nature of disciplinary inquiry is to ask questions based on the epistemological foundations of a discipline. For example, psychologists ask certain fundamental questions about the human mind and cultural anthropologists ask certain fundamental questions about human society. A researcher operating in this manner is, in effect, conceptually blind to questions that fall outside of the given discipline.

Transdisciplinary inquiry, on the other hand, does not begin with a specific disciplinary foundation, but with a practical problem or issue related to its core theme (Hornberger and Hult 2006, p. 78). Transdisciplinary research, in this way, is also different from interdisciplinary research. Interdisciplinary approaches to inquiry, as Halliday suggests, retain the disciplines as the 'locus of inquiry' by focusing on potential research questions within a domain where there is overlap between two or more disciplines: for example, interdisciplinary work that integrates psychology and anthropology (Halliday 2001, p. 176; see Sapir 1993 for a well known example).

I am not suggesting that there is anything inherently wrong with an interdisciplinary orientation; however, it is not a truly problem-centered approach because

the very problem itself is identified from the perspective of disciplines. The transdisciplinary researcher begins with the problem and works outwards to identify the palette of theories and methods that are best suited to investigating it whereas disciplinary and interdisciplinary researchers build upon specific disciplinary foundations to identify questions for research and ways of investigating them (Hornberger and Hult 2006, p. 78; cf. Greene 2007).

Transdisciplinarity is certainly not without critics. Some suggest that it is simply not possible to view an issue from more than one vantage point; others argue that the result is a pale shadow of disciplinary work; and others still suggest that it may be epistemologically naïve (Benson 1982; Teddlie and Tashakkori 2003; Widdowson 2005; cf. Pavlenko 2008, pp. 169–171). Drawing together multiple methods and theories, however, is not *carte blanche* to operate without systematicity (Greene 2007). It might be better described as an eclectic yet principled approach (Blommaert 2005, p. 16). One must remain grounded in the problem to strike a balance between the two.

With a problem-oriented approach, the selection of methods is based, first and foremost, on what needs to be done in order to most usefully investigate the topic or problem rather than on disciplinary preconceptions about research. This is in contrast to disciplinary-based research, where there tends to be a limited range of methods that prescribe specific vantage points for inquiry (Greene 2007, pp. 20–30). Freeing methods from disciplines facilitates intellectual creativity and dialogue among different vantage points that might otherwise be stifled by disciplinary traditions about what can and cannot be done (Halliday 2007, p. 358).

Working in this way allows one to be guided by what Hornberger terms 'methodological rich points'. These are "points of research experience that make salient the differences between the researcher's perspective and mode of research and the world the researcher sets out to describe" (Hornberger 2006, p. 222). Deciding on the best method or combination of methods for examining a particular topic becomes a process of negotiation and reflection about what a researcher needs to see or understand and the limits and possibilities of different methods to facilitate that vision. The purpose of such negotiation is to craft a multi-faceted lens with which to view a topic rather than to build bridges across disciplines. In other words, it is a thematic rather than an interdisciplinary process (Halliday 2007, pp. 358–359; Hornberger 2006, pp. 229–232).

The notion of methodological rich points, moreover, highlights the critical thinking dimension of transdisciplinary inquiry. The process of on-going negotiation and reflection in which researchers engage may pinpoint ways in which "the conceptual tools they have for doing research are inadequate to understand the worlds they are researching. When we pay attention to those points and adjust our research accordingly, they become key opportunities to advance our research and our understandings" (Hornberger 2006, p. 222). By keeping one's gaze fixed on the problem, one becomes keenly aware when it begins to fall out of focus, and the methodological lens can be retooled accordingly. The transdisciplinary researcher, then, constantly (re-)evaluates the efficacy of the methods being used and their suitability for the problem at hand.

2.4.2 Transdisciplinary Challenges

Conducting transdisciplinary educational research in educational linguistics is easier said than done. The greatest strengths of the field also give rise to its major challenges—scope and focus. The scope of theories and methods that might be applicable to educational linguistics is unquestionably broad (Brumfit 1996, p. 12). Even its 'narrow focus' on language (in) education is deceptively vast (Hornberger and Hult 2006, p. 77). Educational linguistics is an open system (cf. van Lier 2004, pp. 193–219). As a whole, the body of educational linguistic knowledge is pluricentric, and, as individuals, educational linguists are nexus points for multiple methodologies (Hornberger and Hult 2006, p. 77; Hult 2008, p. 17; Spolsky 2003, p. 503). As such, the field is difficult to characterize. The fundamental challenge both for educational linguistics as a field and for individual researchers, then, centers on articulating an academic identity amidst fluid disciplinary borders, creative combinations of theories and methods, and transdisciplinary training.

2.4.2.1 Fluid Disciplinary Borders

With transdisciplinarity comes open borders, which may be both a curse and a blessing. It has certainly contributed to an identity crisis for educational linguistics, which we share with applied linguistics more broadly (Hult 2008, p. 11). For example, are we linguists or not? Is educational linguistics a field unto itself? Is it a sub-field? If so, is it a sub-field of linguistics proper or of the transdiscipline of *applied* linguistics? These issues have long been a point of debate and concern in both applied and educational linguistics (Hult 2008; van Lier 1994; Spolsky 2003; Hornberger 2001).

On the one hand, the nomenclature might not be as important as *what* we do thematically. On the other hand, the seemingly amorphous nature of educational linguistics raises questions about what educational linguistics is. Within the community of applied linguistics, for example, skepticism over the need to delineate educational linguistics remains (e.g., Davies 2005; Kaplan 2009; Markee 1990). In addition, as an open system, how do we conceptualize the relationship between educational linguistics and other disciplines? Educational linguists do not 'police the borders' of the field. Rather we draw freely from other disciplines and contribute knowledge in return (Shuy 1981, pp. 457–458; see also Leung, this volume).

This freedom may be beneficial for creativity and innovation since it provides a 'poetic license' to use theories and methods in the grey areas between disciplines and therefore with less baggage; however, it becomes potentially problematic when attempting to articulate academic legitimacy as a field. With no clear borders, how do we know where educational linguistics ends and anthropology, cognitive science, linguistics, psychology, sociology, *et cetera* begin? Are we borrowing our research tools from these disciplines or are we redeveloping them for our own purposes?

2.4.2.2 Theoretical and Methodological Creativity

With its open borders, educational linguistics does not claim ownership of any particular theory or method. Although there may be tendencies among educational linguists to use certain approaches for particular types of problems (e.g., Norris and Ortega 2003; Benson et al. 2009; Kasper and Dahl 1991; Richards 2009), there are no prescribed ways of doing research. Each educational linguist or research team is free to draw upon the constellation of approaches that best fits the problem being investigated, as noted earlier. While this does present freedom and the possibility for creativity, a potential pitfall is that researchers may be tempted to employ methods with which they are only superficially familiar.

In practice, then, a fundamental challenge with a problem-oriented approach is that the choice of possible theories and methods that can be integrated in the investigation of a problem will be limited to the scope of an individual researcher's training. Part of the negotiation of methodological rich points must be to strike a balance between the approaches in which one is trained and what is needed to holistically understand a problem. A potential risk to bear in mind is that the inquiry may become a process of convenience rather than truly problem-oriented or that the identification of the very problem itself may come to be determined by the limits of the researcher's current knowledge rather than by educational practice.

The negotiation of methodological rich points can serve as a safeguard by allowing the researcher to identify gaps between her/his current training and the needs presented by the problem to be investigated. With an understanding of this gap, the research plan may be adjusted by seeking additional training. Negotiating methodological rich points around complex problems, or topics with multiple related problems, may even bring to light the need for a team of scholars with complementary training (see Creese this volume for an example).

2.4.2.3 Transdisciplinary Training

Transdisciplinary inquiry involves a great deal of responsibility on the part of individual researchers to make decisions about the process of inquiry, both in terms of identifying problems and determining the specific combination of approaches to investigating them. Accordingly, one's training becomes especially important. Here, too, there are potential challenges, especially for novice scholars.

Without strong disciplinary traditions to fall back upon, such as one might find in linguistics proper or anthropology for instance, new researchers, especially doctoral students, are often faced with the double-edged sword of an open field of research possibilities and a dizzying array of options. A central challenge for the field of educational linguistics is to train new researchers in the art of critical thinking that will allow them to identify practical problems related to language (in) education, to put together the combination of theoretical and methodological approaches that are most useful for investigating them, and then to use those approaches in actual inquiry (see Hornberger 2001, 2004 for examples).

Developing such critical thinking skills calls for training in *transdisciplinary* research design. As a starting point, it would be useful to recognize that novice scholars, who may have prior undergraduate or graduate training in a specific discipline, may have difficulty with the manner of identifying a problem-oriented research topic. As such, a key component of learning transdisciplinary research design must involve developing an understanding of the dialectic process of identifying a problem that emerges jointly from what is meaningful for the researcher as well as from what emerges as salient in educational practice (Li Wei 2007; Halliday 2007, pp. 361–362; Hornberger 2001, p. 19).

Special attention to learning to negotiate methodological rich points, in turn, is needed to help the novice researcher learn to figure out what combination of theories and methods is most useful for investigating a problem. Without specific training in this kind of negotiation, it is easy to fall into the trap, noted above, where one's work becomes a study of convenience based on the approaches in which one happens to have received training. Ideally, a budding educational linguist should use their problem-oriented research topic as a starting point for seeking out advanced training in the theories and methods that are needed to investigate it.

Learning to use theories and methods in ways that transcend disciplines also requires special training. As Pavlenko (2008, pp. 170–171) has noted in her discussion of language and gender research, there is often a tendency to focus heavily on the nuts and bolts of data gathering without strong attention to theoretical underpinnings and techniques for analysis. Just as skillful code-switching requires command of both languages so, too, does synthesizing different theories and methods require thorough knowledge of their epistemological foundations. Such a foundation must be provided as part of research training alongside the aforementioned critical thinking skills needed to bring together different approaches. Transdisciplinary work is not a license to proceed in ignorance. In the absence of foundational knowledge about the tools we need to use, we run the risk of being (perceived as) second-rate linguists, anthropologists, or sociologists instead of first-rate educational linguists.

2.5 Conclusion

Despite the potential challenges and pitfalls discussed here, the transdisciplinary nature of inquiry inherent in educational linguistics since its inception has provided a strong legacy on which to build. The problem-oriented, theme-based approach is particularly well suited to the kinds of practical research problems that emerge in a multilingual and transnational world (Hornberger and Hult 2006, pp. 79–80). The issues we face in and around the practice of (language) education do not always fit neatly into disciplinary boxes.

Writing about language policy, Phillipson (2003, p. 17) points out that social science is "messy in the sense that it is difficult to do justice to the complexity of an on-going, dynamic scene and to identify a multi-faceted, shifting object unambiguously." Nearly 20 years ago, Halliday (2007 [1990], p. 362) predicted

that one of the major challenges we would face in educational linguistics for the twenty-first century is balancing "synoptic and dynamic perspectives." It is useful, he suggests, both to capture a phenomenon *qua* object at a particular moment in time (synoptic) as well as to tease out the processes through which a phenomenon unfolds (dynamic).

There is certainly a growing interest among educational linguists in capturing the dynamism that is taking place in educational settings today, particularly through processes of globalization but also in other ways (e.g., Block and Cameron 2002; García et al. 2006; Kumaravadivelu 2008; Leather and van Dam 2003; van Lier 2004). This interest follows the long tradition among language researchers of seeking to describe relationships along the continuum of macro-micro scales of social organization (e.g., Blommaert 2007; Fishman 1972; Hult 2010; Ricento 2000). Juggling this dual focus, close analysis of specific details and characteristics while also attending to contextualization in and impact on a larger social system, requires creativity in one's use of methods for data collection and analysis that may appear rather messy at first blush. Such creativity, though, must be tempered with rigor. For transdisciplinary areas of inquiry like educational linguistics, rigor may not manifest itself through dogmatic adherence to rigid disciplinary practices but through the disciplined critical thinking called for by thematic, problem-oriented research.

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Chapter 3

Methodology and Pedagogy in Educational Sociolinguistics: Researching and Teaching in Linguistically Diverse Schools

Angela Creese

3.1 Introduction

In 1990, I was taking a sociolinguistics class given by Dr. Nancy Hornberger, at the Graduate School of Education, University of Pennsylvania and at the end of the semester was asked to answer the examination question 'What should educators know about the relationship between language and schooling?' This class was a first year module on a Ph.D. program in educational linguistics and the question it set to students was mirrored across the different modules which made up this degree. Twenty years on, the question has no less relevance. In this chapter, I take the opportunity to reconsider it and suggest that for educational linguistics to contribute to answering this question, it must be both distinct and hybrid; both disciplinary and interdisciplinary. I explore below how dialogue in schools of education can lead to the 'transdisciplinarity' envisaged by Hornberger and Hult (2006, p. 77) and illustrate this through hybridity in team work.

I present two examples of how this happens. The first example describes a 'core' case of educational linguistics. The discussion in this section focuses on the importance of bringing nine individual perspectives to the research and shows how as educational linguists we bring our different histories, social experiences and backgrounds to interpreting linguistically and socially diverse contexts. I illustrate how educational linguistics is used to investigate multilingualism and argue for the importance of team diversity. The second example describes another team-based approach but one which sees educational linguistics contribute as an equal partner in wider discussion with other disciplines in a school of education. Here, the emphasis is on how different theoretical, methodological and disciplinary perspectives can contribute to aiding researchers to write research proposals seeking external funding.

In this chapter, I focus on these two teams as a way of illustrating transdisciplinary processes in which dialogue creates new 'hybrid' knowledges and skills.

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F.M. Hult (ed.), *Directions and Prospects for Educational Linguistics*,
Educational Linguistics 11, DOI 10.1007/978-90-481-9136-9_3,

I argue that these team processes both retain knowledge expertise while opening up new possibilities through the different histories, identities, subjectivities, and disciplinary and methodological knowledge which team members bring to problem-based research. I illustrate how educational linguistics can play its part in the multidisciplinary enterprise of educational research.

3.2 Mapping and Scoping Educational Linguistics

Spolsky (1978, p. vii) defines the scope of educational linguistics as the "interaction of language and formal education; it is concerned with describing and analyzing language education in all its aspects." Spolsky (1978) explains the purpose of his seminal book as setting out the basic principles which should inform those who choose to study educational linguistics and he acknowledges that practitioners of educational linguistics are likely to have received their 'prime training' (p. 2) in linguistics. However, he also argues for a broad remit, showing how the "knowledge (theoretical and practical) that we gain from linguistics... can be blended with knowledge from other areas to help deal with the many and varied problems of the language educator and planner" (Spolsky 1978, p. 6). Gumperz (1986, p. 67) sees socio- (educational) linguistics as the "uncovering of daily communication in school settings to show how these processes relate to the wider systems of knowledge creation." Michael Stubbs (1986, p. 4) argues that unless teachers and pupils have an understanding of the way language operates as a system of signs to create meaning, "they cannot analyse many of the ways in which language is manipulated, for example, by the media. And important kinds of cultural analysis are closed to them."

Running across these three scholars are some shared issues: first, the necessity of teachers and students to understand the role language plays in social and institutional life so that they might be more critical consumers and producers of knowledge; second, the necessity of understanding the local and situated use of language, in order to provide evidence to counter ideological hegemonies in education which fail particular groups of students; third, a socially constituted view of linguistics is put forward which emphasizes meaning making rather than purely "formalistic models of language which are out-of-date in theoretical linguistics" (Stubbs 1986, p. 5).

Many of the debates in applied linguistics are relevant to this discussion of educational linguistics. Hult (2008, p. 10) points out "The history of educational linguistics is inextricably linked to applied linguistics, with which it continues to have a symbiotic relationship." Recent writings on educational and applied linguistics see arguments for definitions to be kept open, with Rampton arguing for a relatively "'open space' where a large variety of practical interest groups, research programmes and development projects can meet" (1997, p. 11). Like others, Rampton evokes Hymes' notion of a socially constituted and practical linguistics. He also emphasises Bernstein's work on agency and structure and suggests it is Hymes and Berstein together who offer promising avenues for transcending dichotomies which too narrowly define the territory of applied linguistics. Although Rampton's discussion is on the 'broader'

(Hornberger and Hult 2006, p. 76) and 'less focused' (Spolsky 2008, p. 2) territory of applied linguistics, he also highlights 'learning' in applied linguistics which he argues is an interactional socially constructed process. Hornberger (2001), too, focuses on the role of language in learning and teaching and argues this is the particular niche of educational linguistics (see also Hult 2008). Hornberger and Hult (2006, p. 77) describe educational linguistics as "a field with a dynamic relationship to a range of disciplines which takes a problem-oriented approach to issues focused squarely on language in or around education, yielding analytical scope with depth on these issues. Accordingly, educational linguistics has a broad scope and narrow focus."

Hornberger and Hult (2006) argue that educational linguistics is transdisciplinary rather than interdisciplinary. For them the distinction comes from the new knowledge base which results from different disciplines coming together in pursuit of problem solving. They use a quote from Halliday in making this argument,

> I say 'transdisciplinary' rather than 'inter-' or 'multidisciplinary' because the latter terms seem to me to imply that one still retains the disciplines as the locus of intellectual activity, while building bridges between them, or assembling them into a collection; whereas the real alternative is to supercede them, creating new forms of activity which are thematic rather than disciplinary in their orientation. (Halliday 2001, p. 176 in Hornberger and Hult 2006, p. 78)

Hornberger and Hult show how these arguments lead to theme-based research which sees different researchers bring their distinct expertise and methodologies in pursuit of answers and solutions. This results in researchers coming together to offer new perspectives which build 'bridges across disciplinary content areas' (Hornberger and Hult 2006, p. 78) using a variety of tools to investigate a particular theme or issue.

The discussion about inter-, multi- and transdisciplinary research outlined above is linked to other discussions about generalist and distinctive contributions in the pursuit of the sociology of knowledge. Whereas van Lier adopts a generalist approach which suggests that "diversity is an inevitable and desirable consequence of an interdisciplinary applied linguistics" (1997, p. 95), Rampton argues that we need to be "specialised enough to make a distinctive contribution" of our own (1997, p. 12). Van Lier's generalist position (1997) foregrounds hybridization of interests, hyphenation, diversity of expertise, collaboration and heterogeneity, a sharing of platforms, interconnections and developing 'a forum of common discourse' (p. 102). His is a balance between homogeneity on the one hand and diversity on the other. According to van Lier, in order to contribute through educational linguistics we need to be "knowledgeable about educational theories, practices, traditions and innovations" (1997, p. 96), and he argues that training in linguistics is not sufficient to carry out the tasks of educational linguistics. Van Lier argues, "The situated nature of Applied Linguistics work requires a diversity of expertise, if not in one single researcher, at least across the members of the AL community" (1997, p. 97). He goes on to argue that expertise is only useful if it can link to 'a forum of common discourse' (Van Lier 1997, p. 102). I will return to this point later in the chapter. Rampton's perspective counters this. He argues that a generalist position would result in losing the productive and coherent body of research which has been developed in applied linguistics. According to Rampton, applied linguistics

is already 'a relatively open space' (1997, p. 11) which allows for dialogue and so there is already sufficient "outward-looking connections to connect up with the discussions elsewhere" (1997, p. 12). What I understand Rampton to argue for is that dialogue be taken seriously without sacrificing our particular expertise in the relationship between language and social life. Thus, Rampton is not arguing against the interdisciplinarity of applied and educational linguistics but rather for retaining specialist knowledge in discussion with others.

My own view is that both positions are valuable and both are represented in the notion of educational linguistics as 'transdisciplinary'. As described above, this term suggests that we need to retain our specialism, our core focus areas, our niche while developing an opportunity for dialogue in creating a forum of common discourse. Hult (2008) makes a similar point when he suggests that transdisciplinarity has both an individual and a collective component. This happens best, in my view, in schools of education. The emphasis on transdisciplinarity views knowledge creation as bringing to the table different voices, perspectives, research identities, disciplines and histories. Educational linguistics in a school of education must be one of the disciplines contributing to theme-based problem-oriented research. By focusing on a theme or a problem and in dialogue with others, schools of education collect together resources for tackling social issues in education. In this endeavour, it is necessary to retain expertise while engaging in dialogue. Clearly this process is not without its contestation and conflict and indeed such conflictions and contestation are important in the development of new frameworks (Erickson and Stull 1998; Creese et al. 2008a).

In the remainder of this chapter, two illustrations of transdisciplinary, dialogic and hybrid research processes are illustrated. The first describes the use of teams in researching linguistic diversity and describes how a team of researchers contribute to understanding the theme of multilingualism in a particular context of community language schools. This account describes how teams with differing backgrounds in linguistics and education, but essentially educational linguistic 'insiders,' produce dynamic, varied and alternative accounts through team activities. The second illustration describes a particular initiative known within my own university as the *Research Proposal Development Forum* (RPDF) in a school of education. The forum brings together colleagues across different disciplines within the school of education to support researchers seeking external funding. It differs from the team research described above in the sense that forum members bring different disciplinary expertise to the theme under discussion with educational linguistics represented as only one strand in the discussion. Both the multilingual team research and the RPDF (hereafter referred to as the research forum) are used to exemplify how educational linguistics might contribute and operate in the multidisciplinary environment of schools of education.

3.3 Educational Linguistics in Teams

Debates regarding transdisciplinary, interdisciplinary and multidisciplinary approaches are part of larger debates in the social sciences and humanities. Here, too, the tensions between coherent disciplinary discussion and inter-disciplinary

theme-based approaches are evident. For example, many universities in the UK are undergoing restructuring. This entails moving away from 'centralised systems' to devolved colleges using simultaneous and often seemingly contradictory arguments for both cohesion and diversity; homogeneity and heterogeneity; distinctive and generalist approaches. The University of Birmingham, for example, in its proposals for the reorganisation of the University, on the one hand requires 'coherent cognate disciplines,' while simultaneously arguing for "effective structures and mechanisms to encourage and foster inter-disciplinary activity promoting and enhancing major, established, thematic activities" (University of Birmingham 2009). We see a similar debate articulated in the research funding bodies. In the UK, there is increased emphasis on interdisciplinary research which has resulted in new streams of funding (for example, 'interdisciplinary early career research fellowships' and 'knowledge transfer schemes'). In addition, a change on grant application forms places increased emphasis on "potential impacts, pathways to achieving those impacts, and the adoption of interdisciplinary and innovative approaches" (ESRC 2009a). While, on the other hand there is similar endorsement for specialist disciplinary capacity building through such schemes as the Research Development Initiative (ESRC 2009b). Here the Research Councils stress 'advanced and *specific* training' rather than interdisciplinary skills (my emphasis).

Many of us in schools of education are increasingly involved in externally funded research teams. Indeed, funding agencies, as we see above, overtly encourage diverse and multidisciplinary teams to collaborate on social science research. Describing the US context, Mitteness and Barker (2004) show how North American research councils explicitly require collaborative research through their funding arrangements and the desire to see research meaningfully applied. Mitteness and Barker suggest that the research problems of today demand the varied expertises and skills which only collaborative and multidisciplinary teams can bring. More recently, the issue of team approaches to research has begun to be addressed and such publications tend to highlight the overriding benefits of team research as well as acknowledging some of the pitfalls and difficulties (Emerson et al. 1995; Erickson and Stull 1998). I have argued elsewhere for the importance of knowledge creation in teams, particularly ethnographic teams, and have described how team processes shape what is noticed in the field and what is reported on in final research articles regarding classroom practice (Creese 2010; Creese et al. 2008a, 2010).

Eisenhart (2001a) notes that collaborative teams are increasingly being used to involve different kinds of people in designing the research process and creating final accounts. This collaboration requires the researchers to disclose more about their own views, commitments, and social positions (Eisenhart 2001b). As Eisenhart (2001a) suggests, we are all seeking new ways of adjusting our conceptual orientations to take account of changing human experiences, priorities and features of contemporary life. She argues,

> If postmodernism has taught anthropologists anything definitive, it is that we can no longer conceive of social groups of people with a culture that is clearly bounded and determined, internally coherent, and uniformly meaningful. (Eisenhart 2001a, p. 117)

Old categories, marked boundaries and fixed views of identity and culture are now unhelpful. Research teams are held to offer more divergent voices in ethnographic accounts and this is seen as positive. Eisenhart (2001a, p. 19) notes, "Increasingly, collaborative teams are being used to broaden the scope of work to, for example, include more settings and provide different perspectives." According to Eisenhart (2001b, p. 219), collaborative approaches involve "more different kinds of people in designing the research process and creating the final product, which requires researchers to disclose more about their own views, commitments, and social positions" (2001b, p. 219). Such approaches make clearer "the social position, cultural perspective and political stance" (Eisenhart 2001b, p. 219) of the researcher and how these influence subsequent actions. Rampton argues that "Researchers can't help being socially located, with biographies and subjectivities that are brought to bear at every stage of the research process, influencing in some form or other the questions they ask and they way they try to find answers" (1997, p. 12). With such diversity comes a 'pluralisation of authority' (Rampton 1997, p. 23). This term is useful, and it suggests what is to be gained from different perspectives which can be brought to research. Rampton goes on to suggest that this authority in applied linguistics must come from researchers having increased interaction with professionals and non-academics. I take up this argument below when I show how different researcher backgrounds bring different possibilities into researching multilingualism in four urban English cities.

3.4 Team Research and Educational Linguistics

The research team I describe below was made up of individuals with different ethnic, race, gender, nationality, linguistic and class backgrounds who worked in a four interlocking case study research design. This study investigated multilingualism in voluntary and community-run community language schools. In the UK, these schools are often known as complementary or supplementary schools. Elsewhere, they are also known as heritage, community or 'Saturday' schools. Our main findings from the overall research project can be found in Creese et al. (2007a, b, c, d) and in Creese et al. (2008b) and cannot be reported fully here. Briefly, our findings are that complementary schools:

- Counter monolingualism in English institutional life and offer a multilingual space for flexible language use
- Constitute multilingual institutions where a range of linguistic practices and literacies can be used and heard for the negotiation of varied identity positions
- Provide young people with an opportunity to resist ethnic categories and social stereotypes associated with static identity markers
- Support a positive and successful student learner identity
- Provide a community resource for young people, parents and teachers to network and develop community practices

Broadly we found that multilingual young people and their teachers used linguistic resources in sophisticated, sometimes contradictory, but creative ways to negotiate identity positions and that the teaching and the learning of community languages were enacted in sites in which values could be transmitted, accepted, contested, subverted, appropriated, and otherwise negotiated (Hornberger 2005). Each of the four individual case studies was central in producing detailed and nuanced accounts of two schools in each case study. They allowed, and indeed required, each two-researcher team to bring their particular linguistic and social knowledge to their interpretation of social action in each community. In each of the case studies, at least one of the researchers was bilingual in the community language and English, and in some cases both researchers spoke the community language but may have had different levels of proficiency. The four case study pairings are shown below.

Gujarati case study Arvind Bhatt and Peter Martin
Chinese case study Li Wei and Chao-Jung Wu
Bengali case study Adrian Blackledge and Shahela Hamid
Turkish case study Vally Lytra and Dilek Yağcıoğlu-Ali
Project coordination and oversight of the four case studies Angela Creese

In this chapter, I focus on the Chinese case study and the research pair, Chao-Jung Wu (CJW) and Li Wei (LW). There is no particular rationale for choosing this pair rather than any of the other three. Each is of interest. I have written about other case study pairings elsewhere (Blackledge and Creese 2010; Creese 2010; Creese et al. 2010) where my focus has been on the different contributions of individuals in case study research. I have also demonstrated the importance of fieldnotes in knowledge construction in socially and linguistically diverse teams (Creese et al. 2008a). In the case of the two researchers here, both spoke English and Mandarin with some working knowledge of Cantonese. The vignettes we see below are accounts of the two researchers' reflections from a larger pool of nine individual researcher vignettes by each member of the team. The vignettes were written to meet one of the research project's aims, which was explicitly methodological. This aim was "to develop innovative ethnographic team methodologies using interlocking case studies across diverse social, cultural, religious and linguistic contexts" (Creese et al. 2008a). One way we attempted to meet this objective was an agreement amongst researchers to write a one-page vignette at the time of data collection on two themes settled on by the team as of interest to them:

- Relationship to research participants
- Negotiating a researcher identity within the team

No further structure was given to the arrangement and the production of these vignettes. However, many of the first drafts produced accounts over two or three pages long. These were circulated around the full team. Researchers agreed that second and final draft outputs would be no longer than one page of a single-spaced A4 sheet. The two researcher accounts are from two scholars both with a background in linguistics and education. Chao-Jung Wu was employed on a short term

contract typical of this kind of funded research for the duration of the 18 month project. Her doctorate is in applied linguistics and is focused on Chinese complementary schools (Wu 2001, 2006). Li Wei, an experienced and well known researcher in the field of bilingualism and multilingualism, has published widely on the Chinese community in the UK and has many years experience in researching complementary schools (Li Wei 1994, 2006; Li Wei and Wu 2009). In the two vignettes that follow, we see the significance of the researchers' professional and personal identities in investigating the educational and linguistic context of complementary schools. We start with Chao-Jung Wu's vignette.

Chao-Jung Wu, Chinese Case Study

Relationship to participants: I was happily surprised when one of our key participants from the Cantonese school asked me to interview her in English as 'it is easier' and 'you are easy to talk to.' There are many interesting issues behind that statement alone, but I felt at the time really accepted as an 'insider' in the research context. At both research sites, I could feel I was getting closer to the participants towards the end of the research. From the beginning of the research, both schools were welcoming, yet with some reservations. I was asked to produce detailed information sheets to distribute to potential participants' parents before being allowed access to classrooms. A comment I overheard at an early stage also made me acutely aware that I had to produce the information sheets in both traditional and simplified Chinese characters for the Cantonese and Mandarin schools respectively, as this meant a lot to the readers. I made a habit of discussing my planned activities with the head administrators of each school. In the beginning they preferred to accompany me to the class, or required me to be very specific about which class I was going to observe, although by end of the field work period they indicated that I could go to any class I chose, and carry out what was necessary. The acceptance of the researcher(s) by teachers and pupils was also evident—by the time other researchers from our team visited the schools, the participants did not appear to question their presence, but just went about their normal routine. Their acceptance also facilitated any change of key participant children to audio-record, and made video recording easy to carry out. At the beginning of the field work it was clear that some teachers felt that they might be 'assessed' by us, despite our reassurances and detailed explanations about the focus of the research. It was through the actual data collection, talking through the research process while collecting data, and sharing sections of raw data with interested participants, that participants became more aware of what we were attempting to do, and became more relaxed with my presence. I could feel the transition from 'a stranger' to the schools, to a position where teachers and head administrators invited me to staff

meetings, and involved me in discussions about research and teaching relating to complementary schooling. However there was also a linguistic barrier, as I was not able to fully understand Cantonese, and I sometimes still felt slightly distant from participants at the Cantonese school.

Negotiating a researcher identity: I feel very privileged to be working in this large team, with several very experienced researchers and scholars. Maybe it was due to the very intensive data collection period right from the word go, I did not feel that I had to do much negotiation as regards to my researcher identity. At the end of the data collection period, I concentrated my efforts on collecting data and tidying up data, feeding back the Chinese schools' points to the research team when it was necessary. I also took advantage of the fact that there were other sites working on the same project. I was able to look at other sites' data, think about how I could better present data that I collected, and pick out interesting aspects of the data which I would not have thought much about had I not looked at other sites' comments. I also looked at this period of time as one to develop close working relationships, to get to know each other in the team. As we look more closely at our data and discuss themes emerging in the next stage, I am sure we will develop each of our identities within the team, and I look forward to that opportunity to develop.

CJW is a Mandarin speaker and writes of how English allowed her to feel like an insider with some participants in the Cantonese school. Her awareness of the different varieties of Chinese and English were important to her in negotiating different relations with her research participants. She is aware of the importance of negotiating a place for herself in the Mandarin and Cantonese schools. She knows she needs to break down barriers and looks for ways of being accepted into the school communities. Her account of working in the fuller research team is of new possibilities and development. CJW speaks less of the need to negotiate a place for herself as a researcher in the university, describing it as a place to learn and develop close relationships.

Li Wei, Chinese Case Study

Relationship to participants: The two Chinese schools we are studying were chosen by our research assistant, Chao-Jung Wu. I was not directly involved in contacting the schools, although I was in constant discussion with Chao-Jung about which schools should be used. From my previous experience with Chinese schools in Newcastle, I was aware that 'official' introduction was of little use. We tried to avoid the formal approach. Personally, I am

(continued)

Li Wei, Chinese Case Study (continued)

particularly concerned that my status as a university professor and, as it happens, head of a university's School of Education, might cause more barriers. When I finally visited the schools, Chao-Jung had already evidently established very good rapport with the staff and pupils at both schools. The schools knew I was coming to visit. Some of the Mandarin school teachers, including the head teacher, knew of me and my work. They called me 'Professor Li'. I knew one of the governors of the Cantonese school, whom I interviewed, informally. As I had researched Chinese schools before, I tried not to impose any of my prior knowledge or prejudice on my visits. This is hard, because the set up of Chinese schools is very similar across the UK. I was struck by the political awareness of the Mandarin school. I felt very comfortable talking to all the teachers. They didn't treat me as a stranger. We all queued for tea during break time and chatted about various things. I felt that the pupils in both schools paid very little attention to my presence. By the time I visited, they were very much used to the presence of Chao-Jung. I immediately noted the similarities between the schools I worked with in Newcastle some time ago and the schools we are studying now. I spent time talking to some pupils and they seemed to respond easily and naturally. The pupils in the Mandarin school spoke to me in Mandarin. The pupils in the Cantonese school spoke some Cantonese and some English to me. I didn't have much time talking to parents. I spoke to two parents at the Mandarin schools, who spoke highly of the school. They both felt the need to send their children to the school because they wanted their children 'not to forget Chinese'. I spoke to one parent in the Cantonese school, who said everybody else sent their children to the Chinese school and he thought it was a good idea to send his child too. The Mandarin school parents were interested in the fact that we were studying the school as a research project. They asked for details of the project.

Negotiating a researcher identity: Teachers from both schools felt that our project could potentially help their schools to raise their profiles. The head teacher of the Mandarin school was particularly 'politically aware'. She repeated the word 'voice' and really believed that the Chinese community as a whole needed to have a strong voice in society. She was keen to have my support for her ideas and plans for the school. She also sought advice on how to teach very young children who are British-born and who have limited exposure to Chinese. The teachers at the Cantonese school spoke to me mainly in Mandarin. They could detect that my Cantonese was limited. Our exchange was mainly about Manchester and the school generally, not about how to teach children.

LW speaks of his reliance on CJW for negotiating access informally to the two case study schools. He is aware that his status will structure relations with the research participants in ways which potentially make data collection problematic. He views the rapport and solidarity building achieved by CJW as crucial in the negotiation of research access and as a way of ameliorating status hierarchies. He speaks of the need to play down his own university status as professor as well as his previous experience in researching complementary schools, as he feels this may create barriers. He is aware of the political project of multilingualism and also acknowledges how the schools themselves see the possibilities of becoming the subject of research. Like CJW, he is aware of how his lack of Cantonese positions him in one of the school communities. Teaching, learning and language are all topics which LW is questioned on by teachers at the schools and his 'expert' advice on these topics is sought by research participants.

CJW speaks of the transition from stranger to confidante. She mentions the importance of the university meetings as a place to be critically reflective, listen to others and hear new interpretations. The researchers' accounts also show that language as cultural capital is not straightforwardly agreed upon, and does not guarantee insider or outsider status (Creese et al. 2008a, b). Their languages and linguistic varieties were crucial in gaining access, building trust and collecting and analysing data. The vignettes from CJW and LW make this point well. CJW and LW, both Mandarin speakers with limited Cantonese, describe how different varieties of Chinese played their part in developing relations with participants in the field. Knowledge of language choice and linguistic variety is skilfully used to negotiate insider status in the Cantonese school. CJW's account shows research participants' initiation of English as a sign of developing trust and inclusion between researcher and researched in the Cantonese complementary school. The use of English appears to have allowed a closer researcher/researched relationship which the use of Mandarin with the Cantonese speaking teachers possibly did not. CJW's vignette also shows the researcher's awareness of orthography in developing the trust and respect of those she was researching, as different writing systems index different political and socio-historical traditions. Bilingualism and multilingualism were important researcher resources across all four case studies of the research project. Access to different varieties of languages allowed the researchers to form relationships of trust. However, as with other identity markers (gender, sexual orientation, class, race, age), language choice and use could sometimes open up new conceptual spaces but also sometimes silence them (Pratt and Hanson 1995). Our multilingual study shows the importance of language as a resource in the research process, but it also shows the importance of other indexicals in positioning oneself in the field and the team.

A multilingual team offers rich descriptions of how languages and cultures play a part in the construction of meanings and knowledge in the everyday practices of the field, and the university. The different perspectives of the diverse team bring different voices into the research process through the researchers' reflexive accounts

as well as through their noticings and representations of research participants in the field. Teams increase the number of voices brought into the frame. Understanding how a multilingual research team builds relations with those they are researching in multilingual settings opens up opportunities for dialogue and understanding between teacher, learner, parent and researcher and provides a process of knowledge exchange and construction in multilingual research sites. Our perspective is richly informed by the voices, experiences, knowledges and noticings of a diverse yet coherent team of educational linguistic researchers brought together from four different university schools of education to investigate the context of multilingualism in community based education. Without this team diversity and the debriefing research meetings, data collection procedures, our pairings and cross case study collaborations (see Creese et al. 2008a), we would have been unable to achieve both the coherence and the diversity necessary in this four case study educational linguistic research design.

In the next section, I illustrate a different kind of team which sees researchers from across different departments in a school of education brought together to support colleagues around theme-based research. This represents a very different process of knowledge building and constitutes an example of transdisciplinary dialogue as educational linguistics contributes to discussions about broader educational themes.

3.5 Educational Linguistics in a School of Education

The Research Proposal Development Forum (RPDF) is a monthly forum which attempts to provide encouragement and support for the development of research ideas into proposals for submission to funding bodies. It aims to be an open, inclusive and collaborative forum to talk through research ideas however fledgling these ideas are. It attempts to draw out and develop 'rough ideas' rather than filtering out or discounting ideas. It offers peer support outside of line management systems and provides cross disciplinary and methodological perspectives.

Since January 2007 the Research Proposal Development Forum has met 16 times. The Forum was set up by the school's Directors of Research to support staff in submitting research proposals to external research bodies who fund research. I was asked to chair this group. The forum consists of six academics from across different departments of a large school of education consisting of 110 full time equivalent staff members. The forum members can broadly be characterised as coming from the following disciplines: sociology, educational psychology, educational linguistics, history, cultural studies and educational leadership and management. All Forum contributors and members are faculty of the school of education. Some of the themes/issues/problems brought for discussion to forum are listed below:

- Using narrative methods to work with 'low grade' racism in schools
- Researching developmental pathways to obesity

- Grammatical analysis of language samples of young children
- Tools for supporting mentoring of trainee teachers in schools
- Language socialisation in bilingual families with children with communication disorders
- The developments of personal social networks as a space for professional learning
- Super-hero comics and representations of disability

Each member of the team, along with the visiting speaker, brings a different disciplinary and methodological perspective to the theme under discussion. For example, in the discussion of super-hero comics and the representations of disability the discussion was wide reaching with further reflection on the raced, gendered, classed aspects of super-heroes; visual representations of disability and what counted as disability at different points of history; whether historical periods in comic representations of super-heroes lined up with phases of disability politics and educational provision; multimodality of image and spoken word in speech bubbles and narration; psychology of comic readers and the methodological implications for focusing on particular groups; methodological groupings and the measurement of impact of comics on children's perceptions of disability; methodological implications of discourse and visual analysis; technicalities of funding bodies and their likely interest in the topic, comments on writing and style of writing.

Each forum meeting lasts for 45 min. At each meeting we discuss whatever is brought along in an open and non judgemental way. Mostly this means listening and supporting ideas as the speaker describes emergent themes for research, articulates questions in search of an answer and outlines the issues. The forum has received positive feedback from colleagues who attend but also from those who constitute its members. The discussion of a research theme from different angles always brings new and interesting perspectives which allow us all to reflect on the issue in a wider more hybrid way. As forum contributors, we are expected to contribute from our different personal and professional knowledge bases to create new understandings as well as assist in producing clearer proposals. In the forum, we work from the knowledge that funding bodies also engage in critical peer review themselves and, as described earlier, increasingly expect an interdisciplinary perspective.

The research forum is one example of how educational linguistics might both retain its particular expertise while contributing to wider discussions in the multidisciplinary field which education is. It shows the strengths of schools of education to bring together colleagues who can engage in multidisciplinary research resulting in possible transdisciplinary understandings of educational issues through dialogue and hybridity.

3.6 Conclusion

This chapter has dealt with the theme of transdisciplinarity within educational linguistics and has investigated how dialogue with colleagues in schools of education might allow us to better address often long term and seemingly intractable

problems in education. Two types of teams have been described as ways to tackle issues. I have tried to illustrate how team research focused on the core 'educational linguistic' theme of language learning and bilingual pedagogy handled by a team of educational linguists can contribute to important hybrid and dynamic accounts of multilingualism which further our understanding of our specialist area of education. In addition, a description has been provided of how educational linguistics can contribute to broader education themes which are not usually seen as the core remit of educational linguistics. Shared processes of knowledge-making are common in both teams.

In educational linguistics, we share the tensions and dynamics expressed by our colleagues in our universities and their funding councils. We balance out the nuanced and detailed possibilities of our disciplinary expertise alongside the creativity which comes from the collaboration (and contestation) of working interdisciplinarily. In educational linguistics, we have an expertise and knowledge which we bring to furthering our understanding of our core research areas. However, because language is at the centre of any educational enterprise, we also have a contribution to make to other disciplines within education. In these coming-togethers in schools of education, we can address the problem of how we might "do a better job of putting what we know in linguistics into practice in schools" (Hornberger and Hult 2006, p. 79; Gee 2001). In order to develop a 'forum of common discourse' (van Lier 1997), we need to develop 'dialogue' (Rampton 1997) with our peers. In conclusion, although both educational linguistics and applied linguistics share many of the debates and issues outlined in this chapter, we might end with something which distinguishes them. Whereas applied linguistics does not necessarily belong in a school of education, educational linguistics probably does.

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Chapter 4

Discourse Issues in Cross-Cultural Pragmatics: Educating the Community

Diana Boxer

4.1 Introduction

Since the birth of the field of educational linguistics more than 30 years ago, the world has been transformed into a very different place. Indeed, this time span in history has been one of exponential growth in transnationalism and globalization. As early as 1974, Spolsky wrote that the impetus for creating this new field of inquiry was "to show how linguistics and its various fields can help define and solve problems that reflect the centrality of language in the educational process" (1974a, p. 2024). The concentration of focus has by and large been on issues of second language learning, bilingual education, and language planning and policy (Hornberger 2001; Spolsky and Hult 2008). One of the often neglected areas reflecting this centrality of language is the dearth of effort concentrating on community education. The "problem orientation" advocated for the discipline of educational linguistics (Spolsky 1974b) has by and large overlooked the need to educate the public about linguistic and cultural pluralism. To be sure, educating the community about language issues has indeed been a focus insofar as involving community members in educational processes (e.g. Benton 1989 for indigenous languages; Hernandez-Chavez 1993 for language revitalization; García and Bartlett 2007 for immigrant bilingualism).

Many of the chapters in this volume deal with the call for our discipline to disseminate our collective knowledge into the public arena. For example, Hult discusses the need for problem-oriented research in educational linguistics practice; Leung advocates for the field to act upon the world; Creese proposes that the field must share with others. Now more than ever before in its brief history, it is high time for educational linguistics to educate ordinary members of communities, in the US and elsewhere, on what it means to be a citizen of a world characterized by multilingualism, globalization and transnationalism.

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F.M. Hult (ed.), *Directions and Prospects for Educational Linguistics*,
Educational Linguistics 11, DOI 10.1007/978-90-481-9136-9_4,

Transnationalism has had as its main consequence the loosening of national borders. This has been principally seen in continents outside of North America. Notwithstanding, immigration (albeit undocumented, to a large extent) has burgeoned in North America as well. As we well know, this phenomenon has had monumental impact on cross-cultural understanding. What many in the US have not come to terms with is, as Rampton (1997) termed it, the need for the acceptance of "marginality" across societal boundaries. In the US, dominant groups tend to approach marginality as something far from acceptable. In fact, little effort is made to understand messages of community members who may not share the linguistic and cultural backgrounds of the majority. Even regarding transnationals, the outmoded assumption persists that "if you are like us in appearance, language, and culture, you are one of us. If not, you are against us."

Globalization is merely a phenomenon of the world's evolution, leading all to an interdependence never heretofore experienced (see Pennycook 2006). The interdependence is not only economic, even though economics is where we see the most glaring evidence. It entails a need for increased fluidity in knowledge of what the "others" mean by what they say. With this new fluidity come new challenges:

- Avoiding cross-cultural misfires when multiple norms of interaction come into contact
- Knowing that "When in Rome, do as the Romans do," is obfuscated in a shrinking planet

At least a dozen years ago, a debate was begun at The International Association of Applied Linguistics (AILA) meeting in Jyväskylä, Finland. Allan Firth and Johannes Wagner brought together scholars to debate some important concepts which, at that time, were widely taken for granted in the field. Not the least important was our view of Second Language Acquisition (SLA). The researchers formed two camps. Michael Long, Susan Gass, Gabriele Kasper and others took the perspective that SLA is a psycholinguistic process. Others (e.g. Ben Rampton, Joan Kelly Hall), like Firth and Wagner, advocated a more social, contextualized view of what it means to use an L2 in today's world. They urged that we eschew concepts such as a *target*, *learner*, and *interlanguage*. These constructs, they argued, lead to the restrictive perspective that L2 acquisition is merely a process of moving along an interlanguage continuum toward some idealized native speaker competence. The papers were published in a special edition of the *Modern Language Journal* in 1997 (volume 81, number 3).

From the perspective of cross-cultural language use so prevalent in late modernity (Rampton 1997), it is no longer appropriate nor is it practical to hold the outdated views that the acquisition of communicative competence is on a continuum of interlanguage involving a single target. Questioning these ethnolinguistic/ethnocentric views is of critical importance. More and more, L2 language use is a two-way phenomenon. That is to say, it is not only the responsibility of the "learner" to approximate the "target." In today's multilingual world, more than ever before, we need to examine our assumptions about what people mean by what they say and how they say it.

I illustrate this pressing need with one recent example of a second language discourse misfire that resulted in a national health issue and ultimately the death of a child. The case was a legal battle between the parents of the child and a public institution that made a deadly assumption about the communicative competence of a blood donor infected with West Nile Virus. The case, for which I was called on to offer expert testimony as an educational linguist, illuminates the urgency of taking a critical new perspective on educating the public about cross-cultural language use in the modern world.

4.2 Background: Discourse Issues in Cross Cultural Language Use

The dangers of false assumptions in cross-cultural interactions stem from both linguistic and pragmatic meaning. In a globalized and transnational world, it is important to make the distinction between interlanguage pragmatics (ILP) and cross cultural pragmatics (CCP) (Boxer 2002). These differ from each other in essential ways: ILP focuses on SLA along an interlanguage continuum which has as a target native-speaker competence. In contrast, CCP does not assume a target insofar as language users' progress toward an idealized norm. Rather, it views cross cultural communication from a two-way perspective: it is not the responsibility of one party but of all parties to ensure clarity in what they say and in how they understand the other's contributions to an interaction. Thus, with CCP, it is incumbent on all participants in a conversation to ensure that they have clearly negotiated jointly-shared meaning.

In critical language interactions it is imperative to interpret grammatical and pragmatic meaning as it is intended by speakers. For some time now, lingua franca speakers (of English primarily) have contested the issue that only "native speakers" own a language's norms of interaction. In a transnational situation, the same challenges occur in interactions where one speaker uses the language as a first language and another as an additional language.

Regarding interlanguage as one of the hallmarks of SLA (e.g. Selinker 1972), the lion's share of research over this period has concerned the acquisition of English language grammatical and pragmatic competence. As such, we have operated on the belief that native speakers possess the competence to know what is acceptable and appropriate language use in various contexts of interaction. However, native speakers interacting with non-native speakers in a transnational world must beware of assumptions about linguistic or pragmatic competence. In the current state of the world, our concern has broadened within the area of cross cultural communication. Since it now necessitates viewing language *use* as primary rather than language *acquisition*, the issue of native speaker communicative competence has changed. We no longer have the luxury of viewing second language use as one in which a native speaker owns the norms to which the second language user aspires. Thus, ILP is less and less a useful focus of study. We need to turn to CCP.

CCP is a two-way phenomenon because each party in the interaction brings her own norms, and neither one can be right. The pressing problem is a lag between what native English speakers see as their responsibility in cross cultural interactions and what ought to be their responsibility. Community members, in North America particularly, must become cognizant of the fact that in CCP, even when interlocutors employ one *linguistic* code, the *cultural* codes may often be very different. Moreover, interactants ought to proceed with caution regarding their assumptions about the extent to which a speaker in CCP possesses "communicative competence" (Hymes 1971). Here is where the dangers lie. We cannot hope to completely understand the cultural values and belief systems of all of our interlocutors in this new arena of lingua franca use. Indeed, we can only begin to develop an awareness of what might be construed as politic (Watts 2003) or even offense, rudeness, or obfuscation (see Erickson 1984).

The problem lies in the lag between what we as educational linguists know to be true, and what the wider public still thinks about the learning and using of English. Because of this situation, it is incumbent upon us to educate the public. If we do not take up this charge, the consequences are potentially dire. If we assume comprehension without taking into account potential pitfalls, we run a great risk. In international trade the consequences are monetary; in diplomacy the consequences are judgments that can affect world peace. In the arena of public health, the repercussions are potential harm and threat to life.

4.3 The Study: An Issue of Public Health

We all know that the US is a nation that has historically eschewed knowledge of other languages and cultures. The myth that the US is a melting pot is persistent and enduring in most US speech communities, even in large urban areas where multiculturalism and multilingualism abound. The widespread sentiment among average citizens is that we are an English-speaking country (see, for example Crawford 2000; Gonzalez and Melis 2001). However, the reality is that cultural pluralism is increasing to the point that, according to the 2005 US census predictions, Spanish will be the primary language of more than 25% of US residents by the year 2050. Whether we like it or not, this issue makes salient the urgent need to become aware of the potential pitfalls of CCP.

The case in point of this chapter illustrates such a pitfall. It stems from false assumptions made about bilingual comprehension. A little boy was suffering from a rare blood disorder necessitating a bone-marrow transplant. As is common in such treatment, the child needed frequent blood transfusions. He was recovering nicely from the transplant, and as part of the typical protocol was undergoing medication to ward off Graft versus Host disease. Unexpectedly, he contracted West Nile Virus. As a result of this complication, medical personnel were forced to take him off of the Graft versus Host treatment so that he could fend off the virus. The West Nile Virus and the Graft versus Host disease led to his death a short time later, at the age of 7.

Analysis of the data for this court case makes clear the pressing need for educating the public. The issues involve (1) WHERE and WHY: what aspects of context need to be taken into account in critical language interactions, and why is this important? (2) WHO: who should screen and who should be allowed to donate blood? and (3) HOW: how should a screening interview proceed? The answers to all of the above involve critical language issues.

Data for the analysis include: (1) a 2-h videotaped deposition of the donor in which attorneys for both sides questioned him and (2) written documents of release forms signed by the donor when he was screened for this blood donation. Since we have no taped recordings of the screening process, linguistic analysis cannot rest on evidence of understanding, misunderstanding, and assumptions made by both donor and screeners when the screening process actually occurred. Thus, the most important part of the data that served as evidence for the present analysis is the donor's deposition. Several sequences in the deposition lend insight into how the donor expressed misunderstandings.

4.3.1 Where and Why: Bloodmobiles and Businesses

Most of us count on the fact that we will be given blood to save our lives if we need it. We also know that, as good citizens, giving blood is our duty. We wear blood bank shirts that advertise the fact that we have answered the call. Blood donors tend to be people who want to give back to their fellow citizens in need. Often they are motivated to give blood at their place of work. The employer of this donor, a car detailer, was one of the really responsible businesses in the town. They offered incentives to their employees every 2 months when the Bloodmobile came around. Each employee was given $10 and a free lunch (and, of course, a t-shirt).

In this case the donor had an outdoor job in an area of the southern US where the temperature soars for a good part of the year. As an employee of the car detailer, he did not have to leave his workplace to donate, nor did he have to give up much, other than some time away from cleaning cars. As for where and why, he had external motivation from his employer. But it was also an opportunity for him to get out of the heat. These factors, combined with being a good citizen, were incentives to be a blood donor.

4.3.2 Who

The Centers for Disease Control, from all possible donors for the transfusion in question, traced the donors back to one individual who had indeed been a carrier of West Nile Virus. A migrant from Puerto Rico, at the time of the blood donation in 2002, he was 27 years old. Even though his first donation was in 1998, 4 years earlier, his English, years later, continued to be so minimal as to be unable to understand many of the questions asked of him during the deposition. We can only

infer that this must have been the case years earlier, during the screening process for the blood donation. This was no doubt due to the fact that he lived and worked in a largely Spanish-speaking community. Thus, he was able to function almost entirely in Spanish. He spoke only Spanish among family and friends; he did not need to use much English in his work at the car detailer; in fact, his co-workers were mostly Spanish-speaking as well.

The donor made an effort to communicate in English during the deposition process; however, as we will see, he did not understand much of what was asked. As for the blood screening, when the donor first gave blood in 1998 he asked for a translator. There was none available. He then asked if they had the screening questionnaire in Spanish. Again, he was told, no. The donor cried during his deposition when he was told a child had died from his infected blood.

During the donor's deposition, the attorney representing the Blood Bank made several attempts to show that the donor was indeed proficient enough in English to have qualified as a blood donor. Consider the following exchange in which the defense attorney questions the donor about having read relevant material during the screening process:

Attorney: Did you ever read this card?
Donor: Yeah
Attorney: What does it say?
Donor: Well, I have to read again, you know.
Attorney: Okay, you can read it. Can you read it out loud for the record please?
Donor: [reading the card] If at any time in the near future you contact any—I don't know that—or remember any information which you feel is relevant to safe transfusion of your blood, please contact the LifeSouth Blood Center. All information will remain confidential. LifeSouth communication—Community Blood Centers' locations are listed on the opposite side of this card. Thank you for your donation.

In reading the release form aloud, the donor was clearly able to read it, pronouncing the words in Spanish. As educational linguists, we are all aware that the ability to read aloud does not necessarily entail reading comprehension. However, we cannot assume that this is widely understood in the larger community of language users. Apparently, for the lawyers and the Bloodmobile screener, it seemed that if the donor could read the release form in English, it meant that he understood what it contained.

Aware of his own linguistic deficiencies in English, the donor had his wife come to the deposition and asked if she could serve as his translator. There are several places where his wife served in this capacity. These demonstrate his lack of comprehension of what seem to be fairly simple questions, which, on further linguistic analysis, yield grammatical structures that were difficult for this donor. For example, the attorney asked the following question of the donor:

Attorney: After you gave blood did you have anything to do with the blood being tested?
Donor: No comprendo. [I don't understand] [he immediately turned to his wife for clarification].

My analysis of the donor's comprehension difficulty here and elsewhere indicated that he did not understand the time reference, "after". These types of expressions would be important for comprehending the screening questions.

Another example reveals a related problem in grammatical clarity:

Attorney: If they had given you this form, would you have read it?
Donor: My English not so well.

The donor again asked for a translation from his wife. The pragmatic analysis of the donor's reply indicates that he was making a plea not to be challenged in English. From a grammatical standpoint, the attorney's question contains a hypothetical conditional. It is no wonder the donor needed help understanding the question. After receiving the translation he was able to answer, and his answer is revelatory. It indicates that if they had given him the form, he would not have sufficiently understood it. From the videotaped data, we are able to see him gesture that he just signed the form without understanding. He was clearly trying to send the message that his English is insufficient for participating in an interview—whether it is a blood screening or a deposition. In both cases the speech event is formal, and an adequate level of communicative competence, both grammatical and pragmatic, are needed to carry out this role successfully.

Another example from the deposition illustrates a similar problem:

Attorney: Did you have to sign a form every time you donated?

At this point the donor's wife translated without her husband requesting it specifically.

She apparently understood her husband's difficulty with time expressions and translated in anticipation of this problem. In an elaboration of how the screening process had proceeded, the donor offered revealing information about it. He spoke in Spanish with his wife translating accordingly:

Wife's translation: Lady read the questionnaire really quickly
Donor: Just "no, no, no"…[gestures checking off the no boxes in the questionnaire].

According to the donor (with the help of his wife's translation) he perceived the screening process as perfunctory. His answers to the questions did not emanate from a clear understanding of what the questions were asking. First, the fact that the donor needed his wife to help him understand the attorney's questions implies that he would have needed a translator for the screener's questions as well. His gestures are particularly noteworthy. They represent his view that the screener was not even listening to his answers, perhaps because it was obvious to her that he did not fully understand the questions. She just ticked off the box for "no" for each question asked.[1]

Most serious of all was the donor's admission later in the deposition that one time when he donated blood he felt "real bad." The attorney proceeded to ask if he felt bad before or after giving blood. He did not understand the question until his

[1] The deposition of the screener was not available for this analysis.

wife, once again, explained the meaning to him. This is yet another indication that he had difficulty with time expressions such as "before" and "after." Indeed, the donor at this point told the attorneys that even though he felt bad and had a fever on the particular day under discussion, the Blood Bank took his blood regardless. What we do not know is whether or not the donor told the screener that he did not feel well that day. Recall that he was motivated by several factors to donate, not the least of which was the ability to earn an easy $10.

The lawyer for the prosecution also asked the donor questions at this point of the deposition. This was an important part of the testimony, since taking blood of someone who is known to have a fever would be strictly against the rules. I will call this attorney "lawyer," to differentiate him from the attorney for the defense.

Lawyer: Did you have a headache or swollen glands at that time?
Donor: [turns to his wife for help in understanding the question]
The evidence here that the donor did not understand "headache" or "swollen glands" points to the probability that he would not have understood these medical expressions 4 years prior to the deposition, when the tainted blood was taken. Another question from the prosecution lawyer's was the following:
Lawyer: Did anyone tell you when you gave blood to call if you got sick?
Donor: No.

After the donor answered in the negative, his wife translated the question to be sure her husband understood. The donor said, in Spanish, "*yo no sé*." (I don't know). This indicates that he most likely would not have understood to call, even if they had told him to during the screening process.

The donor asserted, at the time of his deposition in 2006, that his English was better than it had been back in 2002, when he donated the infected blood. We have no reason not to believe him. What this means is that, even 4 years later this donor still did not have the English language skills to comprehend the questions asked of him during the screening process.

4.3.2.1 Who: The Screener

What could have been done to avoid this deadly outcome? The first mistake was in not understanding the importance of the screening process. The questions are asked because they make a difference in ascertaining the safety of the blood supply. Therefore, who is to ask the questions if there is no translator? Should they be asked at all or should the donor be eliminated if there is any chance of misunderstanding? In the opinion of the jury in this case, based on the testimony of expert witnesses (myself as a linguist as well as medical personnel at the forefront of blood supply safety), this donor should have been eliminated at the outset (but he still should have been given the t-shirt, the $10 and the free lunch for trying).

This case illuminates the critical need for educating the blood industry about screener hiring. It highlights the importance of training key personnel in cross-

cultural language issues in the workplace. The particular screener in this case, on the day in 2002 when the tainted blood was taken from the donor, was a 19-year-old female. She was a recent high school graduate with no training in interviewing and no language training.

First, there is the assumption that a young person who is untrained in language and cultural issues should be hired as a screener. A lack of training in the area of cultural and linguistic pluralism can lead such a person to find donors acceptable when they are not. Many blood donors are second language users of English with a cultural schema that differs from the screeners, and screeners need to be able to recognize when this is the case. Answers to the questions in the screening survey may not be intentionally dishonest, but yet may indeed be misleading to an untrained screener.

Screeners are charged with asking a series of screening questions in English, such as (1) have you traveled abroad in the last year? and (2) Have you had sex with a person from Cameroon? In this case, the screener quickly ticked off "no." Recall that according to the donor's explanations in Spanish during the deposition, sometimes the screener did not even wait for the donor to answer. Even though her deposition was not available for analysis, we know that she had not worked there long, she was a recent high school graduate, and she was 19 years old and inexperienced. This was her first job out of high school.

4.3.2.2 Who: Donors and Screeners

When we consider the question of *who*, we must take into account all relevant information about the qualifications of screeners and eligibility of donors. My analysis of this donor's language ability leads me to conclude that he should have immediately been disqualified as a blood donor.[2] Despite having been in the US for 4 years before his first donation, he spoke only Spanish at home and worked in an environment where he spoke little English. Thus, upon his first blood donation in 1998 when the donor asked for a translator, he was told that they did not have one available. He then asked for the forms in Spanish, whereupon he was told that they had no translations of the written forms either. Any key personnel at the Bloodmobile should have enough CCP knowledge to understand when potential donors indicate a clear message that they cannot adequately undergo the screening process in English.[3] This donor's requests for translation were clear appeals for help—obvious indications that he did not feel comfortable being interviewed in any language other

[2] Likewise, perhaps the screener should have been excluded from working in a Spanish-dominant area, since she was not bilingual.

[3] CCP knowledge among donors should also be fostered so that they can avoid serious activities when they are unable to understand interactions around them.

than his L1. The fact that neither he nor the screener was able to understand the situation resulted in the loss of a young life.

4.3.3 How: Asking and Answering

Aside from the issues of who should be allowed to screen in a transnationalized world and who should be permitted to donate blood, there is the problem of the screening interview itself. Here we enter the territory of *HOW*.

The matter of *how to ask* is one that was highlighted in the important work by Charles Briggs (1986). While his emphasis was on interviews in social science research, the fact is that interviews take place in contexts other than that of research. The screening interview is a prime example where 'learning how to ask' is of critical importance. Several important issues arise that are relevant to the process of this type of interview: building trust, asking sensitive questions, and deriving truthful answers.

Early sociolinguistic analyses grappled with the importance of taking into account the sociolinguistic variables in the interview process. Indeed, as aptly pointed out by Labov (1969), any interview must consider the relative ages, socioeconomic statuses, and sexes of both interviewers and interviewees. It seems obvious that asking people to honestly answer questions about their personal lives must necessarily be face-threatening (Brown and Levinson 1987). First, to get honest and informative answers, interviewers must, insofar as possible, mirror the demographic characteristics of the interviewee. Labov's work in Harlem overcame this problem by using interviewers who shared some co-membership (Erickson and Schultz 1982) characteristics with their interviewees regarding age, sex, race, and socioeconomic group.

The case under consideration here took no account of such variables. The screener was a young, white female. While the donor was also relatively youthful, he was a Hispanic male. Regardless of the linguistic mismatch, this demographic mismatch posed several problems.[4] An example is the question, "Have you recently had sex with a person from X country?" One issue is sensitivity to embarrassing questions. Questions such as this one are more likely to get a more straightforward answer if the interviewer more closely matches the interviewee. The problem of linguistic mismatch is, of course, a more serious complicating issue, as we have seen. These two facts taken together make for a situation in which it would be highly unlikely to derive an accurate answer. Thus, the problem is not only a linguistic one; it is a sociolinguistic one that has to do with the inextricable variables of language, culture, and social identity.

Without training in sensitivity to different norms and world views, such a screener is unable to be aware of the potential pitfalls of misunderstanding. Screeners, whether they are young, old, or someplace in between, can and should receive awareness training in questions that may lead to answers that, if not entirely accurate, may be misleading.

[4] Training in CCP would ameliorate these problems before they became problems.

Another example of such a question is what Coupland, Coupland, and Robinson (1992) term the *hay* question. *Hay* is an acronym for "**h**ow **a**re **y**ou?" One of the first questions in the blood screening interview is the *hay* question. This question is one of the first learned in English as an unanalyzed chunk that is not a query about health. Indeed, users of English quickly come to know that, pragmatically speaking, this question is an important part of phatic communication. Speakers with any amount of communicative competence typically answer "fine." It is the first part of an adjacency pair that serves as a greeting ritual. Interestingly, Coupland et al. (1992) found this to be true even in doctors' visits. When patients are first asked the *hay* question by physicians, more often than not the response is "fine" despite their need for medical attention for some physical problem. In other words, they would not be visiting their doctor if they really were feeling fine.

In his deposition in 2006, the donor asserted that when this question was asked of him during the screening in 2002, he did indeed reply that he felt fine. When he was questioned during the deposition about how he felt the day on which he donated blood, the donor admitted that he felt "real bad." Perhaps he had a headache, but he was at work anyway. He answered the *hay?* question on that fateful day with the reply, "fine," just as would be expected. Perhaps he had the pragmatic competence to understand the question as a phatic greeting. But the young, inexperienced screener apparently did not. A pragmatic misfire occurred. Perhaps it was the case that neither the donor nor the screener recognized that in the context of a medical screening process, such an apparently banal question actually has more than a phatic function. This lends further support to the importance of sociopragmatic training for the screeners.

A critically important issue in how to ask is knowing about the possibility of an effect so often discussed in social science research. It is analogous to what we in linguistics refer to as the "observer's paradox." Part of this effect, or paradox, is the possibility that interviewees will tend to answer questions in a manner which they perceive the interviewer wants to hear. In other words, interviewees in formal interview situations may have a tendency to answer according to what they think is the right, appropriate, or expected answer regardless of whether the answer accurately reflects the interviewees' real situation or behavior.

The "how" part of the blood screening interview is an important part of training. In order to effectively train screeners, there needs to be a heightened awareness among the wider community about what people mean by what they say. This subsumes issues of context (where), identities (who), and interview questions (how). The lay public may assume that asking straightforward questions in interviews will derive straightforward answers. Educational linguistics must take up the call to make sure that ordinary people become aware of the "who" "where," and "how" in arenas of public life where cross-cultural language use becomes a potentially life-threatening matter.

4.4 Conclusion

Given the examples above from the data, it is clear that the screening interview was unsuccessful in ascertaining this particular donor's eligibility for donating blood. The fact that the screening process did not take into account the donor's linguistic ability to adequately understand the questions sent a message that clear comprehension did not matter, and that the entire screening process was merely pro-forma. Therefore, in that context and given the circumstances, there was every reason for the donor to believe that the questions bore no real significance. I would go so far as to assert that the exchange sent a non-verbal message to the donor that said "we only need your warm body to take your blood."

The comprehension problems were both grammatical and pragmatic. Even minimal training in cross cultural language use on the part of interviewers would yield a quick assessment that this donor did not understand time expressions, hypothetical conditional constructions, or the passive voice. Regarding pragmatics, when the donor asked for translations and/or a translator he was indicating that he could not be relied upon to adequately understand what was being asked. When he turned to his wife in the deposition to say, "no entiendo lo que dice." (I don't understand what he's saying), after being asked if he remembers having had chills and a fever, it should have been clear that he was appealing for aid then and in prior screening interviews. When the donor said of his wife in the deposition, "she's the one reads everything for me," this indicated that his reading comprehension in English is poor and that his reading of the release forms should not have been taken as evidence of his understanding of the forms.

In interviews of all kinds, the sponsoring organization or project needs to ensure that interviewers have training in CCP to know the best practices in how to go about asking sensitive questions. While linguistic awareness is a necessary condition for interviewing people from other language and cultural backgrounds, pragmatic awareness is also paramount. The simple knowledge that "How are you?" is a greeting is an example that merely begins to scratch the surface.

We have an urgent need to educate the public about linguistic and cultural pluralism in a globalized and transnational world. Never has the need for comprehension across languages and cultures been more salient than at present. Whatever our views may be about (im)migration, it's now a reality that the potential for misunderstanding permeates our everyday lives. Different world views—and simply different languages—can be a matter of life and death.

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Chapter 5

Communicative Competence Revisited: An Ethnopoetic Analysis of Narrative Performances of Identity

Doris S. Warriner

5.1 Educational Linguistics and Communicative Competence

Educational linguistics is known for examining phenomena that are situated on the boundaries between two distinct but related areas of intellectual inquiry (applied linguistics and education), or investigating "those parts of linguistics directly relevant to educational matters as well as those parts of education concerned with language" (Spolsky 2008, p. 2). While pursuing questions and concerns that are informed by the situated challenges and constraints of practical ("real life") problems, educational linguists marshal the theoretical and methodological tools that they need to address the issues at hand and recommend new directions forward. In this way, the researcher "starts with a problem (or theme) related to language and education and then synthesizes the research tools in her/his intellectual repertoire to investigate or explore it" (Hornberger and Hult 2006, p. 78). Because such problems and themes often come out of a particular learning or teaching situation, this "problem-oriented discipline… focuses on the needs of practice and draws from available theories and principles of many relevant fields" (Spolsky 1975, p. 347). Within this large-scale endeavor, questions about language learning and language teaching have often taken priority: "in educational linguistics, the starting point is always the practice of education and the focus is squarely on (the role of) language (in) learning and teaching" (Hornberger 2001, p. 288). The relationship that exists between the language issues identified by teachers, researchers, and/or teacher-researchers and the various theoretical and methodological approaches used to investigate them has inspired research that is theoretical but applied, situated in specific contexts but influenced by larger (institutional, ideological, structural) processes, and reflective of the nested nature of local–global processes.

While some educational linguists have examined the functions and uses of linguistic forms in classroom contexts, others have looked outside of educational institutions to understand how language learning and teaching might occur in

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F.M. Hult (ed.), *Directions and Prospects for Educational Linguistics*,
Educational Linguistics 11, DOI 10.1007/978-90-481-9136-9_5,

non-traditional or informal ways. Although there has long been a focus on the dynamics of language learning, teaching pedagogy, and classroom interaction, there has also been a growing interest in the historical, sociocultural, economic and policy contexts that influence such processes (Hornberger 2001, p. 247). This is one indication of the ways that the field continues to grow and evolve, in spite of recent efforts to describe a core set of goals and priorities, and in spite of attempts made to define the field's scope or to clearly delineate its "uneasy relationship with the discipline of linguistics" (Hult 2008, p. 11).

Yet, even as the horizons of this burgeoning area of study continue to expand, it is also true that a few "core" areas of inquiry remain intact, as conceptual pillars on which other questions and insights are built. One of those conceptual pillars, the notion of (*competence*, continues to influence the intellectual pursuits of educational linguists e.g. Hymes 1972; Gumperz 1964, 1968). Indeed, Hornberger (2001) reminds us that the concept of communicative competence fundamentally influenced Spolsky's original formulation of educational linguistics as its own distinct area of inquiry:

> Educational linguistics starts with the assessment of a child's communicative competence on entering school and throughout his or her career, includes the analysis of societal goals for communicative competence, and embraces a whole range of activities undertaken by an educational system to bring its pupils' linguistic repertoires into closer accord with those expected by society. It thus is concerned with the processes used to bring about change, whether to suppress, enrich, alter the use of, or add, one or more styles, dialects, varieties, or languages. (Spolsky 1978, p. viii, as cited in Hornberger 2001, pp. 285–286)

It is clear that, for educational linguists, what is taught and learned in multicultural, multilingual, and multinational (classroom) contexts, particularly in relation to questions about "what counts" as learning across a wide range of formal and informal learning situations, is an important and necessary focus of inquiry.

5.2 Narrative Choices as Performances of Identity and Competence

Over time and across contexts, studies of communicative competence have shed light on "not just learning and teaching per se, but also the role of language in the construction and negotiation of both academic knowledge and social identity" (Hornberger 2001, p. 282; see also Wortham 2006). An interest in competence—how it is defined, realized, contested—is demonstrated in recent work that focuses on the surface-level performances of competence that disguise a lack of genuine understanding (e.g. Rymes and Pash 2001); how "the rules of communicative competence are sometimes inadequate to capture the creative manipulations of cultural rules" (Wortham 2003, p. 15); and the connections between language in use, social identity, teaching practices, and learning processes (Bartlett 2007; Gee 1996; Kanno and Norton 2003; Rampton 2006; Warriner 2007b).

However, as Kramsch points out, questions about competence (e.g. knowing how to act, talk, or behave in situationally appropriate ways)—*are actually questions about performance and performativity*. In her recent work on communicative competence, she has emphasized the ways that speakers considered "competent" actually utilize "subtle semiotic practices that draw on a multiplicity of perceptual clues to make and convey meaning" (Kramsch 2006, p. 250). Symbolic competence is thus viewed as the "ability not only to approximate or appropriate for oneself someone else's language, but *to shape the very context in which one learns and uses the language*" (Kramsch 2007). The analysis presented here addresses such questions and quandaries and, in so doing, returns to some of the very foundational and complicated questions that first motivated the development of educational linguistics as a distinct area of inquiry.

To explore such questions (e.g. how competence might be defined, viewed, investigated, and represented), I draw on an analytic approach that was developed and used by Hymes throughout his long career: the ethnopoetics of oral narrative. While there has been a lot of interest in form-function relationships in oral narratives produced by speakers in their first languages (e.g. Michaels 1981, 2006; Gee 1996; Hymes 1991, 1996; Wortham 2001), there have been relatively few empirical studies that have focused on the aesthetics of oral narratives produced in a speaker's second or third language. Yet, as the renewed interest in Hymes' contributions to the analysis of oral narrative has demonstrated (e.g. Blommaert 2009a, b; Collins 2009; Rampton 2009; Sarangi 2009; Scollon and Scollon 2009; Warriner 2007a), it is important to recognize the ways that "everyday narrative voices—irrespective of the content matter—constitute a form of empowerment as we appreciate the role of the listener in the production of situated performances in culture-specific ways" (Sarangi 2009, p. 240).

5.3 Ethnopoetics as Educational Linguistics in Practice

Hornberger argues that one of the central aims of Educational Linguistics is to discover and understand "the emergence of poetic structure, that is, patterns of indexical cues across segments of language use" (Hornberger 2003, p. 265; see also Pahl 2004). Wortham (2003), too, posits that creativity, regimentation, and poetic structure should constitute "central areas of inquiry" in the study of language in use as it relates to social and cultural phenomenon. Such principles inform my investigation and analysis of oral storytelling as a form of situated communicative and symbolic competence. Hymes describes how ethnopoetics is uniquely suited to the task of analyzing the poetic forms in oral language and their meanings:

> [e]thnopoetics helps us to see more of what is there. It can bring to light kinds of organization in oral discourse not hitherto recognized. The vital point is that speech and writing may contrast, not only in terms of elementary units of composition, lines as opposed to sentences, but also in terms of larger units, verses and stanzas, as opposed to paragraphs. (Hymes 1996, p. 182)

The analysis of autobiographical storytelling provided here focuses on what patterns emerge as well as what kind of variation there has been in patterns identified, particularly in light of the "frames" created by such creative manipulations (of form and content). As Hymes often pointed out, the aesthetics involved in communication are consequential for relationships:

> Narrators may differ in their relationship to the stories they tell, and the relationship may change in the course of telling… Especially interesting are cases in which a narrator may intervene in what he or she is saying, to frame or reframe it. (Hymes 1998, p. 492)

In this view, the analyst is not only able "to see more of what is there," s/he is able to spot "new relationships" between levels of discourse and can see all this with "an evenhanded attention to stylistic and referential function alike, to the benefit of an understanding of language and competence" (Hymes 2004, p. 8).

5.4 The Aesthetics of Narrative

Hymes has described the connections between his interests in the aesthetics of narrative and Boas's insistence on the value of "the study of literacy form—a subject that has received hardly any attention and the importance of which […] cannot be overestimated" (Boas, 1940, p. 452 as cited in Hymes 2003, p. 17). With a distinct interest in how "regularities of kinds of repetition and rhythm" and "rhythmic repetitions of identical formal units" (Hymes 2003, pp. 17–19) might influence one's identity, Hymes extends Boas's interest in "rhythmic repetition" to an exploration of multiple levels of organization, including underlying principles of grammar and structure: "the kind of organization or oral narrative considered here is present all around us and is commonly invisible" (p. 33). With a particular focus on recurrence and equivalence, Hymes' work on the ethnopoetics of oral narrative sheds light on ubiquitous presence of form–function relationships in unplanned, informal conversation. As Blommaert (2009b) emphasizes, the relationship between form–function relationships and the "cultural" dimensions of communication was one of Hymes' central concerns:

> To Hymes, the essence of narrative—what makes it poetic—is an implicit level of structure: the fact that stories are organized in lines, verses, stanzas, connected by a 'grammar' of narration (a set of formal features identifying and connecting parts of the story) and by implicit organizational patterns, pairs, triplets, quartets, etc. This structure is only partly a matter of awareness: it is the 'cultural' dimension of narration. (Blommaert 2009b, p. 269)

This work informs my analysis of the valuable role that parallelism, repetition, rhythm, recurrence, and equivalence play in meaning-making within an oral narrative. It is not just that forms are repeated, parallel or rhythmic; it is that the relationship between recurrent patterns and rhythms creates particular meanings, achieved primarily through aesthetic consistency. I investigate the meaningful recurrences of rhythmic repetitions and patterns in this narrative as a way of understanding the situated competencies that an individual relies on, creates, displays, and deploys

during the conversation. I focus on "the interplay of form and function that is everywhere central to social life" (Hymes 1991, p. 50); and I assume that the structures (or forms) that words, sentences, and narratives take are centrally relevant to the meanings conveyed and identities achieved interactionally by those words, stances, and narratives. The form of the communication is not only influenced by its intended meaning(s), it influences the ways that the meaning(s) are actually received. And all of this is context and situation dependent. As Hymes (1991, p. 50) argued, "competence is what actual persons can actually achieve, variable, vulnerable, a function of social circumstance."

5.5 Research Context

Ayak, who is from the Sudan, was 27 years old, married, and the mother of two young children when I met her in the winter of 2001. At the time, she was enrolled in an adult English as a Second Language (ESL) program housed in a larger "alternative" school administered by the local school district. The adult ESL program, located just south of the business district of a mid-sized city in the Western United States, was attended by a large number of recently arrived immigrants and refugees from a variety of geographic contexts (Asia, Europe, Africa, Central America, South America). The program had ten levels of instruction, with two or three classes per level, with high turnover of students each week. When I met Ayak, she was enrolled in Level 4 (a "high intermediate" level) even though she had been placed in Level P[1] when she arrived in the U.S. a year before. In this program, Level 4 students studied English as a Second Language (ESL) from 8:30 to 3:00 every day with the goal of moving to Level 5 classes, classes that counted towards high-school completion.

Before coming to the U.S. in October 1998, Ayak, her husband, and her children lived in Egypt for 10 months. Ayak's husband, who was also a student in the same program, knew some English before arriving in the U.S. and was therefore placed in a higher level class (level 3) right away and quickly moved up to levels 4 and 5. Ayak told me it had been very hard to live in the U.S. at first because she did not know anybody and because she did not speak any English. While looking back on her first few months in the U.S., Ayak said that she had often wondered why she even came to the U.S., but that her husband reassured her that she would make friends when she learned some English.

Just before my first recorded interview with Ayak, I learned that she had recently taken a job at one of the fast food restaurants at the airport. She was happy to have the job (and was proud to have found it "for herself" and "by herself") but she was already talking about needing to find "a better job." During this interview, Ayak told me that "the days now is very hard for [her] family"[2] because her husband's earnings

[1] Level P was designed for students who have limited ability to read and write in their first languages and who are, therefore, considered "pre-literate."

[2] See also Warriner (2004).

were not enough to support their family (even though he worked full-time). During both of our recorded interviews, Ayak told me that she would need to work in order to supplement her family's income, and that she wanted to do so. To help manage this, she told me that she hoped her mother would be able to come and live with them and take care of her children so that she (Ayak) could go to school and/or work more easily. As Ayak said, "When she come here, I don't look for babysitter. She stays with my children." At the time, Ayak's mother was still in Egypt and was having trouble getting to the U.S. because of problems with processing the visa.

On the day of this first interview with Ayak, it was clear that she was very excited to share with me good news about her recent efforts to find a job. She began by telling me that she had become frustrated with the fact that, even though she had filled out numerous job applications provided by Department of Workforce Services (DWS), no one had called her and she had yet to be invited to a job interview. I eventually learned, from her very revealing autobiographical account (excerpts provided below), that she had decided to pursue a different course, just the day before, and had succeeded in creating an employment opportunity for herself as a result of this action. In the sections that follow, I examine the ways that Ayak positions herself as a problem-solving, action-taking, assertive mother and learner of English by showing how particular narrative choices manage to disrupt a number of stereotypical representations of refugees and their experiences. This analysis of her situated performance within the context of autobiographical storytelling illuminates the patterns and structures that contribute to her successful performance of an interactionally competent identity.

5.6 An Ethnopoetic Analysis of "Everyday Narrative Voice"

The oral narrative excerpts examined here come from two recorded interviews with Ayak. The first excerpt occurred soon after I asked her why she was studying English. After she told me she needed to get a job, I then asked a few questions about job applications and interviews. In response, Ayak quickly established a larger context for our discussion of English language learning in relation to employment opportunities with a declaration of the difficulty of her family's circumstances. In this portion of the narrative, she relies on repetition to convey both great hardship and great urgency, and to counter stereotypical images of the adult learner with "limited English proficiency." Starting with a passionate assertion—"the days now is very hard for my family"—she moved into a patterned and rhythmic repetition of certain grammatical forms, highlighted in bold here:

The days now is very hard for my family.

For months, I send for [my mother]
***maybe** four hundred dollar,*
***maybe** three hundred dollar and a half.*
I don't have enough money now.

My husband,
he's work *alone.*
No, no, me
I didn't work*, yeah.*

My husband
he's have *now here run the house here, uh,*
he's run *house,*
he's pay *the bill,*
he's pay *insurance,*
he's, *uh, everything.*

The rhythmic patterns conveyed a set of meanings and showed that Ayak's aesthetic choices not only demonstrated her competencies as a storyteller but also created a context that influenced future choices in the narrative and thereby helped to clarify their meaning as well. With rhythmic repetition in the form of verb–object phrases, Ayak adds detail and explanation to the characterization of her husband. Not only does he "work alone" (i.e. he is the only one of the two who works), but he *run the house, pay the bill[s], pay insurance… everything*. Indeed, the pattern is so effective and engrained that, by the time the last phrase is uttered, a verb is no longer necessary (the reader sees "*he's, uh, everything*" but inserts "*he* ***does*** *everything*").

With these aesthetic choices, Ayak establishes—expediently and effortlessly—a great deal of meaning and content—not only that her husband has a job and brings in money to support the household but also that the burden of financially supporting the family rests solely on his shoulders. The use of parallel forms here conveys what he contributes as well as what Ayak does not do. Indeed, she points out that his income pays for "everything," a comment which emphasizes the fact that Ayak is not working at the moment even though she would like to. In this excerpt, even though Ayak does not tell us explicitly that she does not do much to help the family right now, we learn what she does *not* do by listening to what she has said about her husband. That is, the poetic form, the rhythmic repetition, and the parallelism communicate a great deal both directly (by stating some facts openly) and indirectly (by implying others). Finally, the structural parallelism (e.g. "he's have… he's run… he's pay…he's…") creates a dramatic contrast between her husband's contributions and Ayak's lack thereof. This sets up a rationale for the actions recounted subsequently, in later parts of the account.

Importantly, the aesthetic presentation of this narrative not only demonstrates Ayak's emerging competence as a second language learner and speaker of English; the patterns and forms used help to counter stereotypes about recently arrived refugees in two basic ways. First, it shows that Ayak is not just "communicatively competent" in her second language, English; she is able "*to shape the very context in which one learns and uses the language*" (Kramsch 2007). Also, Ayak makes clear that she and her husband both expect and intend to work hard to support themselves and make their dreams a reality. Neither seems to expect a hand-out, a free ride, or unlimited support. Through rhythmic repetition, contrast ("he's work alone; no, no, me—I didn't work"), Ayak then manages—in an extremely persuasive

way—to communicate a number of very compelling facts while also performing a set of competent identities. She positions herself as not just a victim of unfortunate financial circumstances but, also, as a speaker of English, a supportive spouse, a concerned mother, a future worker, and a contributing citizen. Because Ayak was enrolled in teacher-fronted, grammar-oriented classrooms, she was exposed to the structures of English in ways that were decontextualized, disembodied, and disconnected from her life. Perhaps, as Hymes and Boas have both argued, all narrators are equipped with such competence and all oral narratives are full of such patterns and rhythms; they just go unrecognized, and uncelebrated most of the time.

Soon after this exchange, Ayak elaborated on these issues in ways that provide additional evidence of her abilities, innate or learned, to incorporate rhythmic repetition, parallelism, and recurrence in her oral narrative:

Yeah I looking=
This is the problem
    I tell *my husband [I]*
    I want *to looking for another babysitter stay with my children*
    I want *to work*
    [I] looking *for a job*
    I help *you*
This is a big problem
    my mother
        she's need the money
        and here need the money
        no, no way
I want *to looking for the job*

Through recurrence (e.g. returning to issues already mentioned), repetition (e.g. "this is the problem" is said twice), and parallelism (e.g. "I tell… I want… I want… I looking… I help…"), Ayak presents a communicatively (and interactionally) competent self by conveying a great deal of information in an aesthetically pleasing, meaningful, and efficient fashion. Without the repetition of certain forms, including certain sentences, it would have taken a great deal more time and effort for Ayak to relay the meaningful content delivered in this instance. Ayak proves herself to be capable of drawing on multiple linguistic and pragmatic resources in her effective presentation of information and her presentation of a competent self. Again, with her evolving knowledge of English as a second language as a resource, Ayak draws on and demonstrates a great level of competence in her efforts to convey nuanced meanings and complex positions as a learner of English, new immigrant, attentive mother, and future worker and citizen.

A few weeks later, during our second recorded interview, I asked Ayak what she hoped to get out of this program. In her response, she again described the connection between learning English and getting a better job. After discussing her work history in the U.S., Ayak described how different things were in the Sudan:

Interviewer: Why did you come here to this school?
Ayak: I come (.)
    I want *to learn English*
    I get
    I looking *for better job (.) Yeah (.)*

I talking *with the, with the people*
I: Did you have a job before this job?
A: No I didn't work here
I: This is the first job?
A: Yeah
I stayed home
my husband
he's work two jobs
I: This is your first job ever
You had (.) no work (.) in Sudan
A: In Sudan
the woman
most ***the women***
they didn't go *to work*
they stay *with children*
(they) care *about children*
(they) stay *at home*
I: What do you think about working?
Do you like working?
Do you prefer not to work?
A: Yeah (.) I like working
I: Why do you like it?
A: Um? I like because when
when you stay at home
you just sleep
you just do anything
when you go to job (.) you
you talking about people
you know about people
you know what happened *in this country maybe*

Using repetition and parallelism, Ayak helps me understand what she likes about her job at the airport (e.g. the fact that her supervisors are caring and understanding; the fact that she is able to get out of the house and "know about" people, etc.). Once again, her narrative counters negative stereotypes of the lazy, waiting-for-a-handout immigrant, and her active use of repetition, recurrence, and parallelism is very helpful to this undertaking. A little while later, after I asked if these positive aspects of the job would keep her there for a while, Ayak began to tell me about her plans for the future. She discussed her desire to finish her high school diploma in this adult ESL program, go to college, and get a better job. She also discussed her ideas about opening a daycare service to serve the needs of others:

Maybe *in the future*
when I finish
when I take *diploma in [Valley]*
maybe *I want to go to college um hum*
when I finish *college*
maybe *I learn more*
I looking for the better job then
because now [my job] is very far away for me
maybe [when] I finish
I take training for the daycare

maybe when I finish college
I take training
maybe I open daycare in my house
maybe I open daycare in my house
cheaper daycare than another daycare

In this extended narrative excerpt, we are once again provided ample evidence of Ayak's emergent and creative abilities to communicate a set of complicated and nuanced ideas in her still-developing competencies in her second language, English. She not only has the semantic and syntactic knowledge needed to create grammatically correct sentence structures, she demonstrates her intuitive understanding of the value of certain patterns and regularities for communicating nuanced meanings in an artful but powerful way. The repeated use of the dependent clause (e.g. "when I…") throughout the excerpt makes clear her firm belief in the causal relationship between "finishing" the program (and college) and the employment opportunities she envisions and hopes will be available to her as a result. Simultaneously, the repeated use of the hedge "maybe" as an introduction to seven out of 14 lines emphasizes how tentative this relationship is in her mind. As with other excerpts discussed here, the poetics are structured and mediated but also emergent and improvised. Such creative manipulations (Wortham 2003) could have not have been rehearsed in her ESL classes but reflect great communicative, interactional, and symbolic competence.

After we discussed Ayak's plans and ideas for the future (and after she mentioned opening a daycare in her house), I asked Ayak whether she had talked with the school's DWS representative who is in charge of helping students find work or job training programs. In response to my question, Ayak told me a long story about how she got her current job by herself and without the help of the DWS representative, even though that representative had helped Ayak fill out applications for many other jobs. This excerpt, below, is full of rhythmic patterns that contribute to the meaning of her talk:

This is for myself
I tell *my husband*
"Let's go to airport
I want *to looking for the job.*
Maybe ***I didn't*** *get job because I don't have experience for job before,*
because ***I fill in*** *all the application,*
I write *'never' for work in the United States,*
maybe they didn't call me."

When I go *to airport,*
they ask me
they tell me
"Go and fill application"
they take me *in interview.*

When I go *to interview,*
they ask me
"What do you do?"

"Why you don't work before?"
I tell him
"Because I have small children"
"I don't have somebody care about them."
They ask me
"What about now?"
"You get somebody care about them?"
I tell
"Yeah"
"I have my family coming here now in this year, they care about my children."
I tell him that*.*
They tell me
"you need work in the morning."
I tell them
"No, because ***I go to school*** *in the morning.*
I want to learn *English more.*
I want to finish *high school.*
I want to take *diploma for high school.*
After that ***[I] want to go*** *to college,*
I want to continue *my (laugh) English.'*
She's very happy,
[she] says
"I like you
you sound good
you come in next week*."*
She give me paper for direct test.
I take direct test…

In this longer excerpt, Ayak the narrator both represents and enacts an identity constructed for Ayak the character by positioning herself as both a victim of unfortunate circumstances and as a resourceful survivor who is prepared to overcome the obstacles she faces. Moreover, a number of linguistic resources are used to achieve this end. First, Ayak alternates between two types of subject–verb combinations: one where she is the subject of the sentence, and the other where "they" are. Although it is not a very complicated word order, the meaning conveyed is complex and nuanced, where the audience quickly comes to realize how interdependent the two are. Through this kind of reference and predication, Ayak describes not just the dire circumstances facing her family but also what actions she decided to take to address this problem. In the end, such form achieves significant functions. For instance, her use of metapragmatic descriptors and quotation allow her to identify and articulate her desire to work in spite of the constraints associated with finding care for her young children. Finally, particular lexical and grammatical constructions (e.g., word choice, verb tenses, hedges) demonstrate the need and desire to find work. She creatively manipulates the limited linguistic and interactional resources at her disposal to consciously create a particular kind of social identity as a learner, a new immigrant, a recipient of government assistance, a future worker and contributing citizen, and an involved and supportive spouse and mother.

5.7 Discussion and Conclusion

To illuminate and understand the demonstrated and emergent competencies of one adult learner of English, I examined the "creative manipulations of cultural rules" that occur across particular segments of one narrative. I also analyzed the consequences of those creative manipulations for how the narrator, the characters of the narrative, and the listener were positioned as a result of the decisions made about what is told and how it is told. Similar to Blommaert's analysis of aesthetics of asylum seekers' narratives (Blommaert 2001; Blommaert and Slembrouck 2000), I examined the actual process of communicative interaction as a skillful, accomplished creation of locally relevant and institutionally recognized languages, literacies, and identities (Warriner 2007b). By building on and extending the scope of Hymes' (1991, 1996, 1998, 2003) notion of ethnopoetics, this chapter demonstrates how Educational Linguistics as an intellectual endeavor is not only grounded in history with a constant set of questions and concerns but, also, responsive to recent developments in theory, method, and practice. The analysis reported on here represents the kind of grounded theorizing that should emerge from such a dialectic approach and thus serves as an illustrative example of Educational Linguistics in practice.

At the intersection between linguistics and education but with an explicitly anthropological orientation, this chapter demonstrates how the insights and tools of Educational Linguistics might help us understand the situated experiences and educational trajectories of English language learners living in specific contexts. Informed by a critical perspective (e.g. Kanno and Norton 2003; Luke 1997, 2004; Pennycook 2007), the discussion also highlights how issues of access, transparency, power and prestige influence the situated challenges and "real-world" problems associated with globalization and transnationalism. As such, this work illustrates, theoretically and methodologically, the central pursuits of the field of Educational Linguistics as well as the potential contributions of this "problem-oriented discipline" for "the needs of practice" (Spolsky 1975, p. 347).

Theoretically, the analysis builds on and extends the notion of communicative competence to include a consideration of the kinds of communities that speakers imagine themselves participating in (Kanno and Norton 2003) as well as the symbolic competence needed to both imagine and perform that identity for particular strategic ends. Defined as "the ability to shape the multilingual game in which one invests" (Kramsch and Whiteside 2008, p. 667), the notion of symbolic competence references much more than the language or communicative knowledge and abilities that second language learners acquire in and through interaction. Instead, the emphasis is on relations of power and the interactional dynamics that influence such relations. According to Kramsch (2006, p. 250), "What is at stake is not only the communicative competence of nonnative speakers, but how they are to position themselves in the world, that is, find a place for themselves on the global market of symbolic exchanges." The discussion of

Ayak's linguistic resources and innovations demonstrates the emergent, situated and provisional nature of such competencies. The analysis also illuminates the workings of "imagined" communities of belonging and difference on two dimensions, spatial and temporal. As Kanno and Norton (2003) have observed: "our identities must be understood not only in terms of our investment in the 'real' world but also in terms of our investment in *possible* worlds" (p. 248). In addition, the analysis contributes empirical evidence to the many conceptual assertions now in circulation that emphasize the dialogic nature of interaction, learning, and identity construction as well as the ways in which context is emergent, continually defined and redefined both interactionally and historically.

There are also a number of important methodological implications, not least of which is the demonstrated value of looking for (and therefore finding) a greater repertoire of abilities and competences than is typically expected. In addition, this analysis provides situated examples of the ways that the specific uses of poetic structure are contingent on the particulars of the event as well as emergent, created over the course of an interaction (Wortham 2003, p. 22). Finally, the examination of form in relation to function over the course of an extended narrative demonstrates the importance of looking beyond the speech act, the IRE exchange, and even the stanza level to understand what resources and abilities learners have and can call upon to perform "legitimate" identities in particular communicative contexts.

Pedagogically, a few implications also follow. First, the analysis raises questions about current trends in assessment and suggests alternatives that would provide better assessment measures while yielding more effective pedagogical approaches. Efforts to understand what language learners have learned must take into account what individual learners show us they know when they are actually *using* their second language to communicate *meaningful* information about something they care about. Second, pedagogical approaches that prioritize a focus on form in an effort to bring greater metacognitive awareness to the adult ESL classroom context would benefit from recognizing that second language learner narratives are packed full of patterned, rhythmic structures. A systematic examination of the many grammatical forms that exist throughout learners' own oral narratives provides compelling examples of the structures of English that are often taught in decontextualized and meaningless (and therefore less effective) ways.

The analysis of autobiographical storytelling provided here highlights how linguistic, interactional, and symbolic competencies are displayed and performed by an adult learner of English within the qualitative interview. It also sheds light on the immediate consequences that might be attached to specific choices as well as what long-term implications there are for the individual pursuit of particular trajectories, both imagined and real. The analysis highlights the locally specific ways that "structured creativity" influences not only the function of the storytelling event but, also, how a narrator's choices facilitate her emergent and growing competencies as a language learner, contributing citizen, and participant engaged in local communities of practice.

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Chapter 6

Employing Eye-Tracking Technology in Researching the Effectiveness of Recasts in CMC

Bryan Smith

6.1 Introduction

Text-based synchronous computer-mediated communication (SCMC) has been referred to as a "lean" medium—one of its clearest contrasts to face-to-face communication. This leanness requires learners to signal communicative trouble more explicitly in SCMC through linguistic material and typographical signs, since prosodic and paralinguistic markers present in the face-to-face mode used to indicate communicative trouble (e.g., segmentation, intonation, and stress) are not available for use in text-based online communication (Ortega 2009). At the same time, computer technology affords researchers in educational linguistics and related fields avenues to capture and analyze learner interactional data in highly effective ways. Nevertheless, much SCMC research fails to capitalize on many of these affordances. What is needed is for researchers to explore more innovative methodological approaches in capturing SCMC data. It is from this perspective that the following study employs eye-tracking and screen capture technology to explore the relationship between recasts, noticing, and performance.

One aspect of learner communicative interaction which has witnessed intense interest in recent years, where we might expect some meaningful differences in online versus face-to-face interaction based on this issue of "leanness," is in the area of negative corrective feedback, specifically recasts. To date, however, though the discussion surrounding corrective feedback in SCMC environments mirrors that in the face-to-face literature in that we have switched from addressing whether such feedback works and have shifted to examining what kind works best (Ellis 2007); there is still little data-driven consensus on the utility of recasts in the SCMC environment. It seems that much of the difficulty in arriving at a more stable view on the role of recasts may be due to the impoverished nature of the SCMC data that researchers have been satisfied with.

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F.M. Hult (ed.), *Directions and Prospects for Educational Linguistics*,
Educational Linguistics 11, DOI 10.1007/978-90-481-9136-9_6,

6.1.1 Using "Alternative" Data Sources in CMC Research

Calls for employing richer and more valid CMC data collection techniques have been offered and answered by several researchers over the past few years (Lai and Zhao 2006; O'Rourke 2008; Smith 2008; Smith and Sauro 2009; Smith and Gorsuch 2004). Together, these studies make a compelling case for the view that it is now time to move beyond the practice of relying on the "impoverished picture" that chat logs paint of the SCMC experience for users; we should instead integrate these additional data sources to a certain degree as a matter of course in CMC/SLA research.

Several years ago, Smith and Gorsuch (2004) argued that relying purely on text-based chatscripts when interpreting task-based SCMC discourse is unsatisfactory in many ways. In their exploratory investigation of task-based, meaning-focused SCMC, they found that additional information in the form of video and audio records integrated with a screen capture dramatically altered their initial interpretations of what learners do in SCMC. They suggest that claims about the occurrence of certain interactional moves and strategies should rather be based on information gathered from more than simple traditional chat text logs of the interaction. They argue that not to do so requires researchers and consumers of that research to infer too much. Smith and Gorsuch showed that this more dynamic approach provided a greater precision in understanding what participants were attending to through the record of their verbalizations, scrolling behavior, and their facial expressions. Additional interpretations regarding learner output, strategy use, negotiated interaction, and pragmatic moves were also afforded by this approach.

In a survey of the recent research on tracking student behavior in Computer Assisted Language Learning (CALL), Fischer (2007) argues that without knowing what students really do when they use a particular program, CALL researchers and developers run the risk of operating in a theoretical vacuum. How, for example, can we begin to evaluate claims of the effectiveness of certain software components unless we know whether or not students use them? Indeed, Fischer demonstrates that there is very often a poor correlation between students' reported and actual use of specific CALL program components. That said, it is clear that although tracking techniques can tell us what students do, they cannot tell us why they do it. Thus, the right technique and measure must be matched to the appropriate questions.

O'Rourke (2008) argues strongly against the overreliance of output logs in interpreting chat interaction and suggests incorporating keystroke logs, video screen capture records, eye-tracking, and conventional video recordings of the user's physical environment to enhance the richness of the SCMC data collected. Echoing O'Rourke, Smith (2008) examined the nature of CMC self-repair in the task-based foreign language CALL classroom. Chat data were evaluated first by using only the chat log file; and second by examining a video file of the screen capture of the entire interaction. He found that the results led to a fundamentally different interpretation of the chat interaction, which varied according to the data collection and evaluation methods employed. Employing a combination of screen capture video files, chat logs, and a customized coding scheme, Smith and Sauro (2009) examined the relationship

between interruptions which occur while one is typing a chat message (referred to as incursions) and deleted text as well as the effect such incursions have on the subsequent output produced by learners. Results showed that incursions by the interlocutor during the message construction phase seem less and less likely to lead to a deletion the further into a "message in progress" this incursion appears. Further, in connection with self-repair, there was some evidence that learners created more linguistically complex output when this self-repair was self- rather than other-initiated.

In the spirit of capturing as dynamic a record as possible, the current study employs chat logs, screen capture and eye tracking technology to better account for what learners produce textually as well as what they seem to attend to in the input and their own output. The purpose of this paper is to simultaneously explore a currently debated theme in the field of SLA (the role of recasts) while employing new methodological techniques for capturing and examining these data (eye tracking and screen capture technology), all within a computer-mediated communication setting. Before launching into the details of this study, some discussion of the role of recasts is in order.

6.1.2 Definitions of Recasts

Recasts are a type of implicit negative feedback, which have been argued to facilitate SLA. Though there are several competing definitions of recasts in the SLA literature, they are essentially discourse moves (by an interlocutor) that rephrase a learner's utterance to be more target-like by changing one or more sentence components while still retaining its central meaning (Trofimovich et al. 2007). Sheen (2006) defines recasts as a teacher's reformulation of all or part of a student's utterance that contains at least one error within the context of a communicative activity in the classroom.

Recasts have been shown to be one of the most common types of corrective feedback in the L2 classroom (Braidi 2002; Lyster and Ranta 1997; Oliver 1995; Sheen 2004) and are widely viewed to promote SLA in the context of meaningful interaction (see Mackey 2007 for recent work in this area). Recasts are believed to be powerful since they simultaneously provide both negative feedback and positive input (Leeman 2003). They may occur in reaction to a breakdown in communication—in which case they may be embedded in a negotiation routine of some sort—or they may be provided by the interlocutor (in response to a learner's non-target-like utterance) without any true non-understanding having occurred.

Though several recent studies have reported limited or no effects of recasts on SLA (Lyster 2004; Ellis et al. 2006; Loewen and Erlam 2006; Sauro 2009), a large and growing body of evidence largely supports their potentially facilitative effect on SLA. The pedagogical context (Ellis et al. 2001; Nicholas et al. 2001; Oliver and Mackey 2003; Sheen 2004, 2007) in which recasts occur as well as the nature of the recast itself have been shown to be important intervening variables in the effectiveness of recasts (Loewen and Philp 2006; Sheen 2006; Tarone and Bigelow 2007). For example, Sheen (2006) reported that more explicit recasts, that is, those that were shorter in length, introduced fewer changes, and involved lexical or

phonological errors rather than other types of errors, led to higher levels of learner uptake. Loewen and Philp (2006) found that short, interrogative recasts which targeted a single error were predictive of learning whereas Tarone and Bigelow (2007) provide evidence that multiple recasts of the same target item are noticed more readily than those provided only once.

Recasts have been shown to be beneficial for improving learner grammar. Doughty and Varela (1998) found that intensive recasts directed at simple and conditional past tenses led to interlanguage development. Examining whether computer-delivered oral recasts could facilitate the development of linguistic accuracy and increase the production of modified output, Sagarra (2007) found that such recasts improved learners' development of grammatical accuracy in written tests and oral face-to-face interactions as well as the subsequent production of modified output. Generally speaking, however, the evidence in support of recasts suggests that they are more effective for lexical items than for grammatical items. There is evidence that learners first focus on (and arguably notice) the semantics of interactional exchanges and only later on form (Mackey et al. 2000; Tarone and Bigelow 2007).

6.1.3 Noticing

The argued positive effect of recasts is very often tied to the construct of noticing in the L2 literature, which has been argued to be a prerequisite to L2 learning (Schmidt 1993). Indeed, noticing has been shown to be a critical factor that mediates L2 input and interaction driven learning (Gass and Varonis 1994; Long 1996; Gass 1997). Current research suggests that factors affecting noticing of recasts include the nature of the recast itself (Mackey et al. 2000; Long et al. 1998; Trofimovich et al. 2007), learner proficiency level (Ammar and Spada 2006; Philp 2003; Mackey and Philp 1998), and working memory capacity (Mackey et al. 2002; Sagarra 2007; Tarone and Bigelow 2007). Generally speaking the research suggests that learners seem to be more able to notice lexical recasts than grammatical recasts. This is likely the explanation for the higher "effectiveness" of the lexical recasts over grammatical recasts discussed above. Clearly, then, in this line of research it is essential to operationalize how one measures noticing.

6.1.3.1 Measures of Noticing

Though there is no real consensus on how best to measure noticing, two methods have been employed most widely. One is the analysis of immediate uptake in the discourse (Braidi 2002; Lyster and Ranta 1997; Mackey and Philp 1998; Tarone and Bigelow 2007). Uptake was initially identified by Lyster and Ranta (1997) as a potentially good indicator of noticing. The other well established strategy for measuring noticing is the collection of introspective data via stimulated recall (Egi 2007; Gass and Mackey 2000; Mackey 2006; Mackey et al. 2000, 2002).

This notwithstanding, researchers have used many other approaches to measure noticing including think aloud protocols (Sachs and Suh 2007), immediate reports and cued immediate recall (Egi 2007; Philp 2003), learners' comments via online journals (Mackey 2006), modified output (McDonough 2005) and questionnaires (Mackey 2006). Other approaches to measuring the effectiveness (and therefore indirectly the noticing) of recasts include the use of some immediate or delayed productive measure (Doughty and Varela 1998; Leeman 2003; Long et al. 1998; Trofimovich et al. 2007).

6.1.3.2 Synchronous CMC Studies on Recasts and Noticing

When considering recasts in computer-mediated communicative (CMC) environments we are normally considering written recasts rather than oral recasts, though there is an increasing amount of research on recasts provided in a voice chat environment (see, for example Heins et al. 2007; Satar and Özdener 2008). The beneficial potential for written CMC recasts mirrors the argued benefits of chat interaction in general, which includes more processing time (Payne and Whitney 2002; Pellettieri 1999; Shehadeh 2001; Smith and Gorsuch 2004) and, by extension, increased online planning time during these "conversations in slow motion" (Beauvois 1992). SCMC also holds "particular promise" for the learning of especially complex or low-salience forms due to the argued heightened visual saliency of these forms afforded during written interaction as well as the enduring, as opposed to ephemeral, nature of the text produced. Together, these differences put SCMC in the form of text chat at an advantage for encoding recasts in ways that facilitate cognitive comparison (Sauro 2009). Just how often recasts occur in a SCMC pedagogical context and certainly their effectiveness, however, is still not at all clear.

Iwasaki and Oliver (2003) found that there was less negative feedback (including recasts) and less uptake in an online chat context than in face-to-face verbal interactions. Loewen and Erlam (2006) reported a total of eight cases of uptake following 89 recasts, or a very low rate of 9%. In perhaps the most compelling study of this sort, Lai and Zhao (2006) compared recasts provided on similar SCMC and face-to-face tasks in their study with ESL dyads. They reported low amounts in the SCMC mode overall, with a total of only 17 recasts produced by their six dyads combined. Of these, about 78% of all recasts in their online chat condition were grammatical in nature (morphosyntactic and sentence fragment reformulations), with only 17% targeting lexical items. Though they did not distinguish between noticing of each type of recast, their overall (combined) noticing rate was about 10%. One possible reason they offer for this relatively low rate was that nearly half of the recasts were "non-contingent" in nature, with an average of three to four turns in between the problematic utterance and the recast. Such a time lapse might have made it difficult, if not impossible, for the participants to notice the recast.

Other studies have reported higher amounts of noticing of recasts. Further examining questions raised in Lai and Zhao (2006), Lai, Fei, and Roots (2008) found that 132 of the 290 instances (or 46%) of recasts in the CMC sessions were noticed. Contingent recasts (those that occurred immediately after a non-target-like utterance by the learner) had higher degrees of noticing than did non-contingent recasts. This is an important point for CMC researchers, given the disjointed turn adjacency and split negotiation routines characteristic of SCMC interaction (Smith 2003). Though their study explicitly contrasted contingent against non-contingent recasts, their overall data report that of all the noticed recasts, lexical (word choice) recasts were noticed about 60% of the time whereas grammatical recasts (morphosyntax and fragment reformulations) were noticed 36% of the time. Tudini (2007) notes that the 41 recasts she found in her data showed a high level of immediate uptake (24, or 59%). Sachs and Suh (2007) compared the efficacy of textually enhanced and unenhanced CMC recasts in the development of certain target language forms. They found that though textual enhancement was related to reported awareness and that higher levels of reported awareness showed stronger correlations with post-test performance, there was no direct significant relationship between enhancement and post-test performance. It seems that (unenhanced) recasts alone did not (in many cases) lead learners to report meta-awareness of specifically targeted forms.

Thus, it becomes clear that studies of online interaction have found varying amounts of negative feedback, specifically recasts, though comparison across these studies is difficult since they explore a mix of proficiency levels, chat interfaces, public versus private chat sites, pedagogically versus non-pedagogically-oriented sites/tasks, dyadic versus multi-user (or whole class) interaction, voice versus text chat, and varying degrees of "treatment" duration. In terms of methodology, perhaps the most important issue to keep in mind in interpreting these studies is whether or not the native speaker, interlocutor, researcher, etc. provided systematic and frequent recasts, or whether these recasts were more incidental in nature. Clearly, if the goal of the study is to examine the effects of recasts on learners then the former is indicated, whereas if the goal is to simply explore recasts as "naturally-occurring" interactional phenomena then we would expect the latter.

As Lai et al. (2008) mention, noticing is a crucial condition for the claimed utility of recasts. That is, unless recasts are noticed by the learner, they are of little value. Thus, simply knowing whether or not recasts are likely to occur is of limited value since their likely presence can be manipulated by the teacher or researcher. What is more compelling is determining their potential effectiveness once they do occur. The review of existing studies of recasts and noticing reveal some of the methodological limitations in establishing the efficacy of recasts. These common approaches are essentially retrospective/introspective or product-oriented in nature. A trait that the retrospective/introspective approaches share is that they rely on various sorts of self-report data. The more product-oriented measures are by definition indirect measures of noticing and are largely unable to provide a more direct link between noticing and performance (see Sachs and Suh 2007).

6.2 The Current Study

The present study is an attempt to evaluate the application of an eye tracker—a technology regularly used in educational psychology and reading research—to explore whether recasts are noticed in an SCMC environment. This exploration is in response primarily to limitations in retrospective methods. By tracking the eye movements of learners engaged in SCMC interaction, we may gain more compelling, objective, and concrete process-oriented evidence about what learners attend to in the input rather than simply relying on more indirect and product-related measures of noticing.

6.2.1 Research Questions

The motivation of this study was to apply a methodologically sound and objective measure of noticing corrective written feedback, specifically recasts. The overarching research question asked whether eye-tracking technology could help determine what learners attend to in an L2 SCMC task-based learning environment. The specific research questions are as follows:

1. Are intensive recasts noticed by learners?
2. If intensive recasts are noticed by learners, are some types of recasts noticed more than other types?
3. If recasts are noticed by learners, does this lead to target-like use of the recast item?

6.2.2 Methodology

This study is different from previous studies of recasts in SCMC in that it provides learners with intensive rather than naturally-occurring recasts and isolates recasts from negotiation of meaning. It also provides exclusively *contingent* recasts. That is, though there was some degree of meaning negotiation that the task elicited incidentally, the few recasts that occurred within negotiation episodes were not included in the data. Also, recasts were provided to the learner during the next turn in all cases. This differs slightly from Lai et al.'s (2008) definition of contingent recasts in that the appearance of any line of text sent by either participant that divides the targeted utterance from the recast is enough to classify the recast as non-contingent. The present study opts for a more lenient coding procedure since recasts provided by native speakers in their next possible turn (see Smith 2003) were considered immediate (contingent). All recasts in the present study were of this immediate sort.

6.2.2.1 Participants

Eight non-native speaker volunteers were recruited for this pilot study. Participants were a diverse group from China (2), Columbia (2), the Czech Republic (2), Japan (1), and Korea (1). As a group, participants had a range of TOEFL scores (paper and pencil) from 497 to 617. They ranged in time spent in an English speaking country from 6 months to 9 years. All were students at the same large southwestern university in the United States.

6.2.2.2 Materials

In order to capture the eye-gaze of participants, a Tobii 1750 eye-tracker was used as the participant monitor. This monitor is outfitted with two infra-red cameras that remotely track the pupil movements of the participants. The Tobii 1750 was connected to a normal Dell PC owned by the researcher. Thus, to participants, the eye-tracking monitor appeared to be part of a normal PC terminal. The accompanying ClearView 2.1.0 software was used to capture and evaluate the raw eye tracking data produced. ClearView allows one to execute a screen capture and superimposes a small blue dot onto the screen to indicate eye focal points at any given time. As a participant looks away from the computer screen, the blue dot disappears; when the participant's gaze returns to the screen, the dot reappears. In addition to tracking the path of a participant's eye movements across the screen, ClearView also calculates the duration of each eye-gaze fixation point. That is, it records the precise time, location, and duration of each fixation. The video prompt (described below) was played on an iPod Touch. The chat program used was PSI, an open source, jabber-based cross platform chat client. All chat logs were automatically saved in PSI. It should be noted that the font size for the chat interaction was enlarged to 36 point font. This allows one to see more precisely where the eye fixations occur once playback is initiated. MS Word was used for the post-treatment writing task.

6.2.2.3 Procedures

The first step in using an eye-tracker is to calibrate the device to each participant. The calibration program asks each participant to follow a blue dot with their eyes as it moves around the screen. The calibration for each individual is saved, which allows individuals to resume work with the eye tracker for subsequent sessions without having to re-calibrate. This process takes about 1 min Learners then viewed a short video clip (just under 3 min), which was a clay animation with sound, but with no spoken language used. After viewing the video clip the researcher activated ClearView's recording function and instructed learners to maximize the PSI chat program which was already running. Participants interacted in English in a synchronous chat environment with the researcher.

The premise of the task was that there were three versions of the video and the native speaker had to choose which of the three options the learner viewed. Learners were asked to "re-tell" the story in as much detail as possible in order to allow the researcher (native speaker) to choose the correct video. There were indeed three versions of the video clip, but in actuality these three only differed in the very ending of the video. In this way we were able to ensure that learners attempted to use sufficient detail in their descriptions of the video. The researcher was permitted to ask questions, provide feedback, etc. in order to successfully complete the task. This task structure, then, creates a situation where participants have a shared goal and (the learners) are obliged to share/exchange information with their interlocutor.

Chat time was limited to about 25 min Learners were allotted 1 h to complete all aspects of the session. The researcher provided intensive recasts to learners as errors were made. After the task was brought to a successful resolution, participants were given 15 min to re-tell the story in writing from beginning to end using MS Word. Participants were not permitted to use any outside materials, review the clip a second time or examine the chat log just created.

6.2.2.4 Data Coding

The variables of interest were as follows:

Independent variables:

1. Eye fixation/Noticing (categorical)
   (a) Noticing = eye fixation on the target item of 500 ms or longer
   (b) No Noticing = less than 500 ms fixation on the target item or no evidence
2. Recast type (categorical)
   (a) Lexical
   (b) Grammatical

Recasts were defined as episodes in which the interlocutors rephrase a learner's utterance to be more target-like by changing one or more sentence components while retaining its central meaning and without breaking the flow of the communication.

3. Successful uptake (categorical)
   (a) Yes
   (b) No

Though generally speaking we may not expect immediate uptake to occur in significant amounts in a CMC environment due to the ability of learners to review what has been written by interlocutors (Iwasaki and Oliver 2003; Loewen and Erlam 2006; Smith 2005), uptake when viewed in a less restrictive

way[1] is indeed interesting since it shows attempts to incorporate recent feedback by the interlocutor in a productive way.

Dependent variables:

1. Noticing (categorical)
   (a) Yes
   (b) No
2. Accuracy of use of target item (on post-task writing sample) (Scale)

Percentage of target-like use (from 0 to 100) on each recast item from the chat session.

Note: targeted items that were not attempted by learners on the post-task writing sample were not included in the data. Therefore, a score of 0% (0.00) means attempted but used in a non-target like fashion in each attempt (if more than one).

One of the output text files the ClearView software produces shows the exact time and duration of each fixation. These fixations are measured in milliseconds (ms). Though there does not appear to be an "industry standard" for what constitutes a meaningful eye fixation, much of the psychologically-based reading research suggests that fixations shorter than about 250 ms are of little interest. Since the present study is largely exploratory in nature—seeking to simultaneously examine the role of recasts in SCMC interaction and advance the methodology for exploring recasts in this environment—the conservative bar of 500 ms was set as the minimum threshold for counting a fixation as such. Further, fixations of this length or longer were counted as instances of noticing as long as they occurred while participants were actively engaged in the chat interaction part of the task. To this end, a two step process was used to establish the legitimacy of each eye fixation. First, the text output was examined and fixations were sorted in descending order of length. Those which were 499 ms or shorter were not considered further. Those which were 500 ms or longer in duration were checked against the video file of the chat interaction, which shows the path of a learner's eye gaze through trails and each fixation in terms of a blue dot superimposed on the screen. This blue dot grows larger as the duration of the fixation grows longer. That is, all legitimate eye fixations appeared on both the text output (indicating the precise length and location) and the video file. Those "fixations" that occurred before or after the actual chat task were not considered further. This two-step procedure allows one to quickly zero in on those eye fixations of interest (the longer ones) without having to replay in real time each learner's ClearView video file from start to finish. Once the approximate location of each fixation is established, one may play the video file from just prior to this point to determine the nature of the eye fixation, for example, whether it may have

[1] Smith (2005) argues for a broadening of the definition of uptake for SCMC to include any productive use of the targeted feature (by the target learner) occurring after the feedback move (delayed uptake). Smith suggests that immediate uptake is less likely to occur in SCMC because learners have access to the written record of the interaction.

Table 6.1 Sample of output data from ClearView

Fixation # (n = 1,352)	Timestamp	Duration 500 ms or > (n = 57)
812	404,447	2,376
987	503,283	1,322
734	360,117	1,271
123	65,864	1,270
160	94,324	1,270
106	42,282	1,183
797	392,760	1,066
592	276,071	1,008
133	77,056	992
107	46,652	922
446	235,731	882

occurred in reaction to an immediately preceding recast or some recast item from earlier on in the chat (both are considered here).

Table 6.1 shows a segment of the ClearView text output pre-sorted by fixation length. The first entry under fixation is number 812 (out of 1,352 total for that learner). This was also the longest fixation (2.376 s) registered by ClearView for that learner. The time stamp column shows precisely when in the video file this fixation occurred (404,447 ms or about 6 min 45 s into the interaction). Though there was no pre-test in this study, those non-target-like words and phrases that were used by learners and subsequently recast by the native speaker were counted as "unknown," thus allowing the accuracy of these "target items" to be compared against subsequent use in the chat interaction as well as during the post-chat writing story retelling. In cases where the post task writing yielded more than one attempt at a recast item from the chat interaction, the total number of target-like uses was divided by the total number of attempts. This yielded a ratio between 0 and 1.00 for that specific item for that particular participant. Finally, instances of successful uptake were coded following Smith (2005). Successful uptake is uptake in which a student repairs a linguistic feature to be target-like. By capturing and coding the chat data in this way, it is possible to show the relationships between recasts, noticing, uptake, and accuracy of subsequent production.

6.3 Results

The chat transcripts yielded 61 recasts total. Accordingly, there were 61 potential instances of eye fixations (noticing) following recasts, and also 61 potential occurrences for uptake (since uptake as it is defined here is always possible in CMC). There were only a total of 44 attempted uses of a recast item in the writing sample, however. That is, not all items which were recast resulted in use or attempted use by learners. Given the small sample size (n = 8) of this exploratory study, inferential statistics is not warranted. Further, though there were 61 instances of recasts

(and potential noticing and uptake), these instances were not evenly dispersed among the participants. This, along with the fact that we cannot consider each of the 61 (or 44) observations as "independent," also complicates the analysis. Accordingly, descriptive statistics alone are presented below.

With respect to the first and second research questions, 60.7% (n = 37) of all recasts were noticed in the SCMC environment as measured by fixations of 500 ms or longer. Just under 40% (n = 24) of recasts resulted in no noticing. Table 6.2 shows a breakdown of this same data by the independent variable of recast type (lexical or grammatical). Of the 61 recasts, over 80% (n = 49) were grammatical and just under 20% (n = 12) were lexical in nature. Of the lexical recasts 75% were noticed by learners (9/12) as opposed to only about 57% (28/49) of the grammatical recasts.

With respect to research question 3, Table 6.3 shows the mean accuracy score (dependent variable) for each type of recast item (independent variable) across the condition of noticing (independent variable). Since the dependent variable in this comparison is accuracy score, only those recasts which were also attempted in the post-task writing sample are included in this analysis. The overall proportion of lexical to grammatical recasts is about the same as in Table 6.3, as might be expected.

At least three things are immediately evident from these data. First, we notice that all lexical recasts that were subsequently attempted in the writing sample were noticed by learners, while those that were not noticed were not later attempted. Second, among those lexical recasts that were noticed during the chat interaction and that were attempted in the post-task writing sample, the target-like use percentage was about 89%. That is, when learners attempted to use these lexical items in the story retelling task, they used them correctly about 89% of the time. This contrasts sharply against those grammatical recasts which were noticed in the chat interaction. For these recasts, learners used them correctly only about 67% of the time—not much better than the 61% success rate for those grammatical recasts that were not noticed. Finally, the similarly low post-test means for the noticed and

Table 6.2 Recasts noticed by type

Type	No fixation	Fixation	Total
Lexical	0.049 (3)	0.147 (9)	0.196 (12)
Grammatical	0.344 (21)	0.459 (28)	0.803 (49)
Total	0.393 (24)	0.607 (37)	1.00 (61)

Table 6.3 Accuracy of noticed/unnoticed recasts by type

Type	Noticing	N	% of total	Mean	SD
	No	11	28	0.61	0.47
Grammatical					
	Fixation	19	49	0.67	0.44
	No fixation	0	0	–	–
Lexical					
	Fixation	9	23	0.89	0.24
Total		39	100		

unnoticed grammatical recasts is interesting itself, but when we consider this number in conjunction with the relatively high percentage of grammatical recasts noticed in this comparison (almost 50% of the total) we see that though grammatical recasts were likely to be noticed, this did not translate into successful productive use of the same. At least not to the same extent as "noticed" lexical recasts. A discussion of these points follows in the next section.

Table 6.4 shows the relationship between noticing and successful uptake. As might be expected, all cases of successful uptake of recasts in the data ($n = 12$) were also noticed by learners during the chat interaction. Where there was no successful uptake (this includes where there was no attempt made at subsequent use in the chat interaction), we see an evenly split degree of noticing. Again, as expected, the majority of recasts (noticed or not) resulted in no uptake. In considering the evenly split "no uptake" condition, it seems problematic to consider uptake to be a strong measure of noticing. If this were the case, we might expect a markedly higher percentage of "No fixation" relative to "Fixation" which is not the case. This suggests that noticing (as it is measured here at least) is not necessarily related to successful uptake.

The successful uptake data from Table 6.4 are further delineated in Table 6.5 according to attempted use in the post-chat writing task. Here we see that though relatively few in number, those recasts that showed successful uptake in the chat interaction had a mean score of 83% correct when they appeared in the post-task writing sample, whereas those where no uptake occurred had a mean score of 66% correct.

Table 6.6 examines this same data across the independent variable recast type. From this table, we see that noticed lexical recasts (since there were no cases of "unnoticed" successful uptake) which witness successful uptake show a substantially higher post-task accuracy score than do noticed grammatical recasts. Of particular interest is the modest advantage for noticed lexical recasts in the successful uptake condition over the no uptake condition. Also of interest is how narrowly distributed the lexical recast (+/− successful uptake) mean scores are relative to the grammatical mean scores. Again, though the numbers are modest, the combination of the data in Tables 6.4–6.6 seem to suggest that though the occurrence of successful uptake is in the direction one might expect, systematically increasing alongside

Table 6.4 Uptake and noticing

Successful uptake	Noticing	N	%
Yes	No fixation	0	0
	Fixation	12	19.7
No	No fixation	25	41.0
	Fixation	24	39.3
Total		61	100

Table 6.5 Uptake and accuracy of recast use

Successful uptake	N	Mean	SD
Yes	10	0.83	0.32
No	29	0.66	0.44

Table 6.6 Uptake and accuracy of recast use by recast type

Successful uptake	Recast type	N	Mean	SD
Yes	Lexical	4	0.917	0.165
	Grammatical	6	0.778	0.403
No	Lexical	5	0.866	0.299
	Grammatical	24	0.616	0.455

higher mean scores, it is not likely to be a causal variable in influencing mean scores, but rather it correlates nicely with these scores.

6.4 Discussion and Conclusion

The data seem to suggest that learners fixate on lexical recasts much more than grammatical recasts. Consistent with previous research on recasts, it seems that lexical recasts are much easier to notice, retain, and use productively in subsequent chat interaction and on the post-task writing sample than are grammatical recasts. Also consistent with previous research, successful uptake (when uptake was possible) was found to occur rarely—appearing only 20% of the time. Further, uptake alone seems to be a poor measure of noticing. Overall, noticing resulted in successful uptake about one-third of the time (see Table 6.4). As one might expect, *all cases* of successful uptake were also noticed by learners. However, there is no clear evidence that items where no successful uptake occurred were *not* noticed. Indeed in instances where recasts did not result in successful uptake, there were about equal amounts of noticing versus no noticing.

The real interest in exploring the relationship between recasts and noticing is determining whether recasts, once noticed, have some beneficial effect on SLA. Tables 6.5 and 6.6 show that although (noticed) recasts that resulted in successful uptake had higher productive scores than did those recasts that did not result in successful uptake, we see that the mediocre mean scores for those that were grammatical in nature strongly weigh down this overall mean. This suggests that noticed lexical recasts, which also result in successful uptake, are easier to process and retain at least in the shorter and middle term. The large standard deviations for grammatical items reported in Table 6.6 may indicate, however, that this ability to retain such grammatical information is highly variable across individuals. Follow-up research should explicitly examine this point, perhaps beginning with the variable of working memory capacity (WMC). Those with a higher WMC may have an advantage for retaining grammatical information of this sort over those with a lower WMC. In contrast, lexical items may be less complex and, therefore, such WMC differences may not affect the accuracy of subsequent productive use of these lexical items. Finally, Table 6.6 shows that "No Uptake" lexical items had a higher mean score on the productive measure than did grammatical items where uptake *did* occur. This further calls into question the notion of successful uptake itself as playing

a significant role in SLA. What we can say from these data is that where one has evidence of successful uptake, we can be reasonably sure that these same items have been noticed by learners and that these items will be subsequently used with slightly more accuracy than their no uptake counterparts.

6.4.1 The Methodology

Using eye-tracking technology provides us with a clear and precise aspect of learner interactional data that has not typically been captured and analyzed in CMC/SLA studies (for a rare exception see O'Rourke 2008). Specifically, it seems to provide a good indication of noticing (at least at some level) as reflected in the post-task written productive measure. The most useful types of output generated by the ClearView software in this study is found in the video files, which show real time screen capture along with the path (saccades) and eye gaze fixations (see Fig. 6.1), as well as the text output file that shows the time and duration and spatial location (on the screen) of each fixation. The text output file alone, though perhaps quite useful for advertising or usability testing where the screen image is much

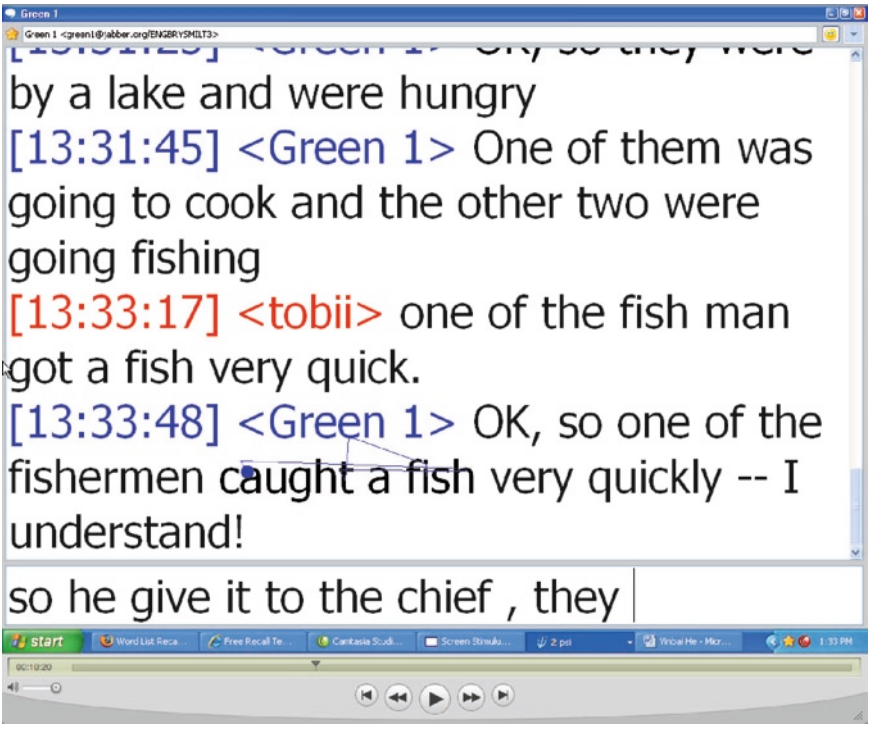

Fig. 6.1 Eye tracking saccade and eye fixation

more stationary, is limited in its usefulness for examining interactional chat data without the screen capture file. It does help us quickly narrow down potential points of interest on the video file, but in chat interaction one needs not only a measure of duration but also an indication of multiple fixations on a given point of text such as a morphological ending, lexical item, etc.

6.4.2 Limitations

This pilot study was a principled exploration of the efficacy of using eye-tracking technology to explore chat interactional data from a cognitive interactionist theoretical perspective. An obvious limitation is the very small sample size, which precluded any typical inferential statistical analysis of the data. However, even with such small numbers certain trends seem to emerge from the data, which perhaps warrant a closer look.

Since this study seems to be the first principled application of eye-tracking technology in SLA research of this sort, many decisions regarding coding needed to be made. For example, though not arbitrary, the cut off length of 500 ms for considering a fixation as evidence of noticing may be too short or too long. With little guidance in this area one way to better establish this cut off may be to carefully correlate such a measure of noticing with other sources such as think-aloud protocols or stimulated recall. It is precisely this need to correlate the eye-gaze measure of noticing with other, more established measures that is a first step in legitimizing this approach as a tool in future inquiry into noticing and SCMC.

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Chapter 7

The Educational Linguistics of Bilingual Deaf Education

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7.1 Introduction

Generations of deaf students have navigated educational institutions, and whether or not these institutions provided linguistically appropriate and socially responsible education, their pupils have emerged as competent, multilingual adults whose identities and life options are shaped by the educational choices afforded them. The themes addressed in this chapter represent our attempt to illustrate some of the enduring issues and complexities deaf children face as they acquire language and knowledge. The topics presented here only penetrate the surface of the labyrinth of deaf education, but they point to several areas of investigation that educators and researchers alike will need to pursue in the coming decades.

Padden and Humphries (1988) advanced a groundbreaking insight that we take as our starting point. They remind readers of a convention introduced by Woodward in 1972 to distinguish audiological deafness—small-d *deaf*—from cultural deafness—big-d *Deaf*, and develop the concept of Deaf culture to explain the many ways that deaf individuals form and structure communities. Cultural deafness, they argue, is

All authors contributed to the content and perspectives represented in this chapter and are listed in alphabetical order. Partial support of the second author was provided by the National Science Foundation Science of Learning Center Program, under cooperative agreement number SBE-0541953. Any opinions, findings, and conclusions or recommendations expressed are those of the authors and do not necessarily reflect the views of the National Science Foundation.

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F.M. Hult (ed.), *Directions and Prospects for Educational Linguistics*,
Educational Linguistics 11, DOI 10.1007/978-90-481-9136-9_7,

much more informative about the ways of being, thinking and learning appropriated by deaf people than the more limited perspective provided by a focus on hearing ability alone. And yet, hearing status and membership in the Deaf community are not unrelated. They write (Padden and Humphries 1988, p. 3): "Deaf people are both Deaf and deaf, and their discussions, even arguments, over issues of identity show that these two categories are often interrelated in complex ways."

The social structure of deaf communities is unlike any other minority community because deaf communities are formed by virtue of a common language that is not typically transmitted from one generation to the next within the family. Deafness is spread across the population in a manner that does not respect genetic relations or social divisions such as class and ethnicity. This does not mean that genetic and social characteristics have no influence on the structure of deaf communities. However, in the context of deafness, cultural capital is not as easily passed from one generation to the next since parents and children do not always share full competence in the same language. As a result, deaf adults have widely divergent experiences—in social networks, in language exposure and competence, in the development of identity, and in their educational experiences. But one experience is unfortunately common across the spectrum. Deaf adults frequently report frustrations with the educational settings that are formed to serve them. Thus, while the divergent experiences of deaf adults demonstrate that education can be achieved via many different paths, the theme of frustration indicates that there is a tremendous need for educational linguistic research to provide more linguistically appropriate and socially responsible learning environments for this population. In addition to summarizing some of the unique issues and historical contexts that characterize deaf education, we outline several exciting new research directions that are possible in the transdisciplinary context of sociocultural theory, cognitive-functional linguistics, and signed language research, that point toward new possibilities for creating socially responsible learning environments for deaf students.

7.2 A Sociocultural Perspective on ASL and Deaf Education in the United States

The majority of deaf individuals are raised in hearing families where American Sign Language (ASL) is not the primary language of the home (Mitchell and Karchmer 2004) and attend schools that favor a monolingual approach where the focus is on the development of English (written, oral, or signed). Indeed, most deaf students in the United States today are educated in "inclusion" settings (Gallaudet Research Institute 2008) where no one but the interpreter has a functional knowledge of ASL—classrooms in which deaf students report an overwhelming sense of isolation from their peers and their teachers (Cerney 2007). As adults, these individuals consider ASL to be their primary language. Yet, while ASL is the primary or preferred language for this population, the majority does not have the opportunity to study it formally.

Vygotsky (1983), a pioneer in the field of education, recognized over 80 years ago that, "bilingualism is an unavoidable and highly productive path of language development and education" in the deaf child (p. 217, quoted in Zaitseva et al. 1999, p. 10). Yet bilingual education is not the dominant approach in schools and programs for the deaf across the globe today. Indeed, only 11.4% of deaf children in the United States currently attend schools where ASL is the primary language of instruction (GRI 2008). Bilingual education in the context of most minority language communities concerns acquisition of a majority language in the school setting and maintenance or promotion of a minority language learned in the home. For deaf children, however, the situation is much more complex. The language of the home is most often spoken, and whether it is the dominant language of the community or a minority spoken language, deaf children have rarely attained fluency prior to entering school. Likewise, a signed language in most cases will not be used in the home at all, or with less than full fluency, and so native competency in a signed language is also rare among deaf children upon entering school. Thus, the majority of deaf children come to school without fluency in any language, not because their general development is delayed, but because of a lack of accessible language input (Kuntze 1998). Bilingual education for deaf children, then, must provide a context in which students can develop proficiency in *both* a signed language and a written form of a spoken language primarily within the school setting, while addressing the consequences of first language deprivation in early childhood.

It is well documented that delayed language acquisition has detrimental effects on language processing and ultimate acquisition outcomes in deaf individuals (Mayberry et al. 2002; Morford 2003; Newport 1990). Thus, early exposure to complete language models is critical. Yet there remain a number of factors that hinder this critical early exposure—factors such as family reluctance to learn sign language, false hopes that the child's deafness will be 'cured' with technology and/or training, and the mistaken belief that acquisition of a signed language will impede development of speech and that speech development will occur fully if given enough time. These issues continue in a deaf child's life well past the optimal time for acquiring a first language, and impact the child's access to the educational curriculum.

Most research on the education of the deaf in the United States and Canada centers on the teaching and learning of reading, and the historically unsatisfactory outcomes (see Musselman 2000 for a review). One common approach to understanding reading development in deaf students is to investigate whether deaf readers parallel hearing readers, focusing particularly on phonological and phonemic awareness. However, hearing and deaf students differ dramatically in their starting points when learning to read. Hearing students who acquire English in the home from birth have largely mastered the language prior to school entry. Reading development for these students is a question of learning to map orthographic representations of English to prior phonological, lexical, syntactic, semantic and pragmatic knowledge of the language. Hearing English Language Learners (ELLs), too, are generally taught listening and speaking skills prior to the development of reading (Evans and Seifert 2000). Most deaf students, by contrast, have very little

knowledge of English (or any spoken language) prior to school entry and will not learn to speak or comprehend spoken English prior to developing reading skills. Thus, deaf children must use orthography as a *primary symbol system* to acquire a new language (Kuntze 2004; Supalla et al. 2001).

By failing to recognize that deaf students typically learn English through reading and that they are doing this without a foundation in spoken English, we are failing generation after generation of students. The average deaf student graduates high school with a fourth grade reading level (GRI 1996), and this grim statistic has not changed in almost a century (Chamberlain and Mayberry 2000). One flawed approach to remedy the problems of deaf education has been an effort to make English "visible" by producing gestures corresponding to English words, resulting in various signed English systems commonly referred to as Manually Coded English (MCE). While MCE is perceptually accessible to deaf individuals, research has revealed that it does not represent spoken language structure in the same way that spoken forms do (Supalla 1990); thus MCEs convey a partial semantic representation of a spoken English utterance, but do not convey the structural properties of the language. "As part of understanding linguistic accessibility for deaf children, the structure of signed language must meet the cognitive prerequisites for perception and processing in the visual/gestural modality," (Supalla and Cripps 2008, p. 185). Public education in the United States is responsible for providing opportunities for all students to become competent in speaking, reading, writing, and comprehending the majority language, English. Development of ASL as a fully accessible first language (L1) may prove to be a preferable alternative to signed English systems as a bridge to the learning of English as a second language (L2). This approach has the additional benefit of allowing deaf children to engage in literate thought—thinking critically and reflectively in their L1—prior to the development of linguistic proficiency in English.

The point here is that rather than focusing on what these students are lacking, we could and should look at this population of deaf American school children as linguistically different—not as hearing children with a defect but as deaf English Language Learners. We ought to see the child as a "little linguist" (Brennan 1999, quoted in Knoors 2006) and should establish the environments suited to developing their linguistic capacities to their fullest potential and to enhancing the use of their potential in academic and social learning (Knoors 2006). In other words, rather than teach to weakness, we must learn how to teach to strength. As Grushkin (1998, p. 186) aptly states, "the search for a phonological basis in the reading skills of deaf individuals represents an ethnocentric perspective that is not entirely applicable or useful in the case of most deaf (and some hard-of-hearing) readers, due to the biological need of the population to relate to the world visually." Viewing deaf students from a deficit model is not uncommon and is evidenced by the widespread use of signed forms of English and focus on aural–oral rehabilitation in educational settings.

A current growing trend departs from the tradition of pathology by embracing these students as deaf students in a hearing world, and therefore potentially bilingual and bicultural. Though still largely uncharted territory, research on bilingual deaf education is being initiated (see, for example, Evans 2004 for a study of English literacy development in a bilingual deaf school setting), and bilingual

education for deaf and hard of hearing students may prove to be a step in the right direction towards changing the grim statistics, if it coincides with high quality teaching and accountability. LaSasso and Lollis (2003) completed a survey of bilingual deaf education programs, examining 78 residential and day schools (public mainstream programs were excluded). Of the 71 respondents, 19 reported using bilingual methods. All of these programs were established between 1989 and 1998, likely in response to dissatisfaction with total communication trends and the use of various manual codes of English (MCEs). Although labeled as bilingual, most of these programs (15 of the 19) did not have a formal bilingual curriculum with measurable annual goals and instructional strategies and materials. Additionally, a closer look at the manner in which English is conveyed to students in these programs reveals that

> many of the programs appear to still be following the notion of Total Communication, which includes all types of communication, including speech, English based sign systems, and ASL. This is surprising, given that a major reason for the creation of bilingual programs was the perceived failure of English based sign systems or so-called sign-supported speech systems in the education of deaf children (LaSasso and Lollis 2003, p. 86).

We see then, that even within programs that have adopted a bilingual approach to deaf education, the deeply rooted mainstream cultural perceptions of pathology and the prestige of English over American Sign Language are hard to overcome.

Nonetheless, bilingual programs are emerging, and not only in the United States. For example, in the Netherlands, all major schools for deaf students established bilingual programs in 1998. It is interesting to note that in the Netherlands, there is an elaborate system of special education, and separate schools and classes are favored. They have thus not been at the forefront of the inclusion movement. Perhaps this lends itself more readily to bilingual programs for deaf students. Indeed, mainstream settings are often challenging environments for the deaf (Knoors 2006). With the inclusion policies of the United States, enrollment of deaf students in separate schools, and even separate classrooms within the public school, has long been on the decline. Low incidence is a huge factor in deaf education and special schools and programs have historically helped to compensate for these low incidence factors. It is nearly impossible to have a bilingual program where so few speakers of a language can be found in a given school. What many children lack, then, is a critical mass of language peers and language models. With such a small population of language models, how does a child develop "typically" and, more importantly, what does "typical" ASL development look like? And, finally, with limited research, how do we know that a bilingual approach is beneficial, or even preferable?

A bilingual approach to deaf education requires that we shift our thinking about deaf students in a number of ways. The following sections offer a glimpse into three current themes in cognitive and linguistic research as they apply to deaf bilinguals, and the opportunities each area provides for innovation in educational linguistics. We begin by addressing the nature of the bilingual lexicon in signers as opposed to speakers. We expand on this topic by considering how grammatical information on the face of signers situates specific lexical knowledge so that deaf children can become sensitive to intersubjectivity, or the use of language to shape the opinions of others. Expanding to an even broader perspective, we then address the

language-specific ways that signed and spoken metaphors shape conceptualization, and point out the need to understand metaphorical mappings in both ASL and English in order to evaluate conceptual development in deaf children in the United States. Common to all of these topics is an underlying theme that the education of deaf children who are signers cannot be understood in the absence of a fuller understanding of signed language acquisition and processing.

7.3 Understanding Signs and Words: Lexical Processing in Deaf ASL-English Bilinguals

One of the central issues shaping current research on hearing bilinguals is the question of whether or not the words of multiple languages are stored, accessed and produced separately. Mounting evidence indicates that hearing bilinguals generally activate both languages whether listening, speaking or reading (Sunderman and Kroll 2006). Initial assumptions that these effects would be limited to first language (L1) activation during second language (L2) processing have been challenged by findings that even L1 processing is not immune to cross-language activation. Van Hell and Dijkstra (2002), for example, found that Dutch-English bilinguals were able to make faster lexical decisions for L1 Dutch words such as *appel* that have cognates in L2 English (e.g., *apple*) than Dutch words such as *aardig* that do not have cognates in English (e.g., *kind*). Despite these widespread findings of cross-language activation for bilinguals who use two spoken languages, the interaction of signed and spoken languages during lexical access is only beginning now to be addressed scientifically. The greater part of research on lexical processing by deaf individuals has focused either solely on signed language processing (see Emmorey 2002 for an overview), or on the development of reading in the deaf population (Musselman 2000). In both cases, language use has been addressed largely from a monolingual perspective. It is essential that these issues be considered from a bilingual perspective if we hope to improve upon our current understanding of language processing and usage in the deaf population, as well as our current understanding of bilingualism.

One common psycholinguistic approach for investigating the structure of the lexicon in adult bilinguals is to explore priming effects. Priming refers to how processing of one word influences the processing of subsequent words. If an individual can comprehend a word more quickly following exposure to a prime, the assumption is that the two words tap overlapping representations, either in their semantics or in their form representations (phonological or orthographic). Research on priming within signed languages is well established. One of the primary factors that has been shown to influence priming within a single signed language is the language background of the signer. This is particularly important given the great variability in age of first language exposure to signed languages. Native signers, who have been exposed to a signed language from birth but who are a minority among deaf signers, may have differently structured lexicons than non-native signers, who make up the majority of deaf signers, but who may have learned a signed language

any time from the preschool years through childhood, and possibly not until adulthood. This factor cannot be ignored in considering the structure of the bilingual lexicon in deaf individuals who use a signed and a spoken language.

Semantic priming (i.e., facilitated comprehension of one sign following a sign with a related meaning, as in ASL CAT following MOUSE[1]), is found in both native and non-native signers (Bosworth and Emmorey 1999 and Corina and Emmorey 1993 as reported in Emmorey 2002; Mayberry 2007). These results are an indication that lexical representations in signed languages, like spoken languages, rely on associations of semantic relationships. Although semantic priming has been documented in both native and non-native signers, there are not yet studies that probe the extent of the similarities in semantic priming. Two factors that influence lexical access in hearing individuals are the age that a word was acquired as well as a word's frequency of use. Frequency effects for signed languages are documented (Emmorey 2002; Carreiras et al. 2008), but we do not yet know if the age that signs are acquired affects the speed of lexical access; and yet, this factor could have huge consequences for non-native signers who aren't exposed to any signs in early childhood. One way to conceptualize the potential difference between native and non-native signers is that native signers may be more responsive to distributional characteristics of their language resulting in signs that are *most likely to occur* in a specific context being activated more rapidly than signs that are semantically related, but less likely to occur in that context. For non-native signers, the semantic relationships between signs may be more evenly distributed, such that all semantically related signs have similar likelihoods of being activated. Such differences, if they exist, would be a matter of milliseconds. While that may seem negligible, over the course of an extended classroom discourse, where children are trying to follow the signed utterances of multiple participants and their teacher, those milliseconds may add up to a breakdown in comprehension.

A second type of priming that has been investigated for signed languages is form-based priming. While the literature on spoken language form-based priming includes studies of both phonologically- and orthographically-related primes and targets (e.g., English *cat* and *cap*), studies of signed languages look only at phonological priming since very few deaf signers use an orthographic system for their signed language (but see Flood 2002). Phonologically related signs share formational parameters such as handshape, location or movement, as in ASL CAT and INDIAN. The results of form-based priming studies indicate a complex interaction of factors including the time course of form activation, the type of form relatedness between prime and target, phonological neighborhood density[2] (Carreiras et al. 2008), and learner variables.

[1] Following conventions from the linguistics literature, ASL signs are represented by English glosses in capital letters.

[2] Phonological neighbors are words or signs that have the same phonological form as a target word or sign with the exception of one exchanged phoneme. Some words, such as English *cat* have many phonological neighbors (mat, pat, kit, cut, can, cap, etc.) and thus have *dense* phonological neighborhoods. Words with *sparse* phonological neighborhoods have very few phonological neighbors.

Some evidence of form-based *facilitation* in primed lexical decision has been found in BSL (Dye and Shih 2006) and ASL (Corina and Emmorey 1993; Mayberry 2007), but is most robust when several phonological parameters overlap between the prime and target, and when the target is presented shortly after the prime without intervening items. Facilitation effects have only been found for native signers or early childhood learners of ASL. Importantly, Mayberry (2007) found *inhibition* effects for signers first exposed to ASL in late childhood and in L2 learners. This suggests that whereas native signers rapidly activate and de-activate different lexemes, non-native signers may become fixated on certain lexical items even when they are not appropriate to a given context. What could account for this unusual pattern of form-based activation in the lexicon of non-native signers?

In two recent studies of sign perception, Morford and colleagues (Morford et al. 2008; Morford and Carlson under review) found that non-native signers have unusually high levels of sensitivity to phonetic variation in handshape relative to native and L2 learners of ASL. Handshape may be a preferred phonological entry point to the ASL lexicon for non-native signers because it is more static than movement and location. However, there are reasons to suspect that a hyper-sensitivity to handshape may have a negative impact on other aspects of processing. For example, non-native signers may allocate more attention to perceptual processing than to lexical recognition and semantic processing. Further, a search of the lexicon based primarily on handshape is less constrained than a search based on multiple phonological parameters and is more likely to activate incorrect signs. Once a sign is activated, inhibition with lexical competitors, combined with a longer timecourse for the deactivation of previously activated signs (Emmorey et al. 1995) would explain the protracted time course of sign recognition that has been observed among non-native signers (Grosjean 1981; Emmorey and Corina 1990). In sum, these studies indicate that lexical processing for signers is already variable with respect to language background, without even considering bilingualism.

While there are still many questions about signed language lexical processing awaiting investigation, we cannot wait for these to be answered before beginning to investigate whether or not lexical access of written words relies to some extent on the prior semantic networks that deaf children have developed through their use of a signed language. While many studies show a correlation between signed language proficiency and reading ability (Chamberlain and Mayberry 2000), fewer studies have investigated the possibility that deaf children actually mediate their comprehension of written words by accessing the sign lexicon (Hermans et al. 2008). Given the breadth of evidence of cross-language activation in hearing bilinguals, it seems likely that signs and written words with related meanings will become activated simultaneously during lexical access in deaf bilinguals, but the way that language modality interacts with cross-language activation is still an open question, and one that is essential to designing an appropriate L2 curriculum for deaf students in bilingual classrooms.

Comprehension of single signs and single words is a basic element of many more complex language processing tasks. In the next section, we address the question how deaf children come to understand the way that speakers take a perspective on their own utterances, and how they use language to convince others of their

opinions. These language functions cannot be achieved through words or signs alone. Thus, we must expand the focus of our attention on the use of words within social contexts.

7.4 Intersubjectivity and Theory of Mind in Young Deaf Children: The Importance of Quality Interaction

Intersubjectivity has to do with the ways in which speakers engage with the people they are talking with. It refers to the uniquely human ability to share joint attention for an outside object and to appreciate what others know and believe. In addition to joint attention, humans seem geared toward the argumentative—that is, towards influencing each other's opinions, beliefs and attitudes (Verhagen 2008). As Verhagen (2008) reminds us, humans aren't satisfied with the simple sharing of information. We seek to shape opinions.

As children develop, they begin to appreciate that they are distinct from others, but that they have connections to others. They begin to explore themselves in relation to others and begin to sense that what they think, believe, and want is not what others think, believe, or want. Ultimately, they begin to communicate based on that understanding and try to shape the thoughts of others, through their communication. The ability to "read" the minds of others (the lack of which is said to be the hallmark of autism) is critical to child development. These early developments form the underpinnings for our later intersubjective development. Intersubjective competence is important for social behavior and cooperative learning; for example it is necessary for such ideas as empathy and altruism. Children continue their intersubjective growth long after they enter school. Intersubjective skills are critical to academic success, for example, in the understanding of narratives and for learning to read. Importantly, intersubjective development depends on quality interaction with caregivers.

One sub-domain of intersubjectivity research is often referred to as "Theory of Mind" research. "Theory of Mind" here refers to a child's understanding that his own mental states differ from others' beliefs and knowledge. This ability to understand that what one knows is uniquely his own is mastered between the ages of 3 and 5. Researchers developed a series of tasks designed to test a child's understanding of the beliefs (and false beliefs) of others. A number of researchers (Peterson and Siegal 1995, 1999; Schick et al. 2000) have adapted the so-called "false belief task" to use with deaf children and showed that deaf children as a group perform poorly on false belief tasks. Specifically, deaf children with hearing families tend to master the tasks around age eight. However, deaf children with deaf families who had acquired ASL from birth master the tasks on a par with their hearing peers, highlighting the importance of early, plentiful exposure to language and interaction.

How does exposure to ASL in early childhood promote intersubjective development? Shaffer (2006) has suggested that certain pragmatic aspects of ASL such as appropriate topic marking may be linked to intersubjective competence. Simply put, a grammatical topic is shared information. A child without the ability to discern

what constitutes "sharedness" may be unable to competently use topic marking. Interestingly, Shaffer (2006) reports that deaf children in language rich environments begin using topics appropriately at approximately 3–4 years of age—precisely the ages that Theory of Mind emerges in typically developing children. How does having these skills in place before school entry impact a deaf child's academic progress? For example, are deaf children who can distinguish their own beliefs from their peers' more likely to engage in classroom discourse, analyzing ideas instead of adopting them uncritically?

It seems clear that in addition to a need for cycles of theory to practice in deaf education, empirical studies in linguistics and child development are critical. It is not enough to just proclaim bilingual education as a sound approach. Solid research is necessary, as is well-reasoned pedagogy. Below is one last emerging area of cognitive linguistics research that can inform bilingual education theory and pedagogy—metaphorical development, which notably, is a highly intersubjective task.

7.5 On Being Metaphorically Bilingual: Metaphorical Impact in the Education of Deaf Children

Classical metaphors were once considered to be mere colorful lines of prose, such as, "Night threw a cloak of diamonds over the lake". Metaphors were traditionally seen as flowery bits of frill that added to the interest, but not the content, of a sentence. However, modern philosophical and linguistic scholars have now determined that metaphor is much more central to our conceptualization and learning processes than previously thought.

George Lakoff and associates' (1980, 1989, 1999) arguments lay the foundations for the current exploration of metaphorical concepts. The conceptual metaphors that people use everyday are automatic and common, contradicting the traditionalists' viewpoint of metaphor in figurative use, which was considered rarer, more ornate, and accessible more to literary masters rather than to the persons on the street. According to Lakoff and Turner (1989), metaphors are conceptual mappings. A source image can be mapped onto a target image through the conceptual cognitive framework involving a three-part structure: two endpoints (the source and target schemas) and a bridge between them (the detailed mappings).

Metaphor acquisition, whether with hearing children, deaf children or second language learners, has not been studied extensively, although Kalyuga and Kalyuga (2008) found that metaphorical use and comprehension is indeed connected to language acquisition. Other studies that focused on the onset of metaphorical comprehension and production (Siltanen 1986; Zurer Pearson 1990; Altmann 1997; Ozcaliskan 2003) found that the *production* age ranges from 3 to 11 years of age. Since production depends upon comprehension, studies are still needed to accurately determine when comprehension of metaphors occurs. Although little research has focused on metaphor acquisition in deaf children or in second language learners

of ASL, what is known in studies on children who hear is that the use and comprehension of metaphors seems to "dramatically influence the effectiveness and efficiency of instructional methods" (Kalyuga and Kalyuga 2008, p. 251).

7.5.1 Metaphor and Conceptualization

We use metaphor to establish new connections among domains of thought and to develop our image schemas. Lakoff and Johnson (1980, 1999) identified several basic kinds of metaphors that support their hypothesis that metaphorical concepts are experientially grounded. One is the *orientational* metaphor, which organizes a whole system of concepts with respect to spatial orientation: up-down, in-out, front-back, deep-shallow, and central-peripheral. These metaphors appear in our linguistic repertoire due to our physical and cultural experiences. An example of an orientational metaphor, **HAPPY IS UP**[3], is part of a coherent system of thought rather than an isolated and random case of linguistic expression. Expressing a concept using the word "up" typically conveys positive, happy feelings and concepts. For example, all things being equal, physical height psychologically correlates with strength, power, and health in American society, leading to expressions like, "walking tall," "be in tip-top condition," "head and shoulders above the rest," and so forth.

An *ontological* metaphor allows an experience to be viewed as an entity (Lakoff and Johnson 1980, p. 26). "Events and actions are conceptualized metaphorically as objects, activities as substances, states as containers" (Lakoff and Johnson 1980, p. 30). In American culture, a powerful ontological metaphor, **THE MIND IS AN ENTITY**, specifies that the mind is an object that can be held, broken, snapped, and even operated like a machine (Lakoff and Johnson 1980, pp. 25–29). The mind is seen as an object because people are physical beings, experiencing the world as objects themselves. *Structural* metaphors can be rooted in more elaborate concepts than mere containers or directionality, however. They allow whole conceptual systems from a source domain to be mapped onto equally rich conceptual systems of the target domain, for example, **UNDERSTANDING IS GRASPING**. Note that although orientational, ontological and structural metaphors can be found in all languages, not all languages encode the same metaphorical mappings.

Our educational system does not take into consideration the profound cultural and visual differences between deaf children and the hearing adults who work with them in educational institutions. Even when hearing teachers and counselors learn to sign with their deaf students, they may persist in conceiving of the world in terms of the metaphorical concepts and image schemas that are a part of their native spoken language. We know that English grammatical structure does not map cleanly onto the grammatical devices of a signed language (Supalla

[3] Following conventions from the linguistics literature, metaphors are represented in bold small capital letters.

1990), but educational linguistics research has not yet addressed the issues that arise when teachers and students communicate across dissimilar metaphorical concepts.

7.5.2 *Conceptualization Across Language Boundaries: A Cross-Linguistic Comparison of Metaphor*

One English metaphor found in verbal languages, as well as in some signed languages, can help us to illustrate how easily misunderstanding can take place between a hearing teacher using signed English and a deaf child whose native language is ASL—**UNDERSTANDING IS GRASPING**. Speakers of English commonly express, "I got the idea, no problem" or "Sam can't quite get the concept behind physics." However, ASL does not metaphorically "grasp" the abstraction of understanding. In ASL, grasp denotes the physical act of grabbing and reaching for a concrete object. If someone signs that they "grasp" an idea, meaning to understand a conceptualized thought, it would not be grammatically acceptable. For teachers using the English lexicon and English figures of speech, there can easily be misunderstandings of the metaphorical ideas being presented. A child who uses and understands ASL might initially be at a loss in comprehending the message.

When ASL uses the conventional sign TO-GET (two grasped handshapes moving towards the speaker's body), what is implied is a literal, physical act of obtaining an object, not an abstract thought of comprehension—i.e., I GOT iPOD, not I GOT IDEA (see Wilcox 2000, pp. 138–140 for elaboration). In ASL, the sign TO-GET refers to the physical act of grabbing and holding onto an object and this verb form does not pervasively accept the metaphorical meaning of comprehension. Instead, Wilcox 2000 notes that in ASL an idea will "suddenly appear" into consciousness in much the same way that people or objects appear within the limited visual range that makes up a deaf person's receptive environment.

> Objects pop into the deaf person's peripheral vision. Vehicles, birds, family members, household pets, skateboarders—all appear suddenly and without warning into the visual field of a person who does not hear them approaching. The abrupt manner in which everyday objects project themselves onto the awareness of a deaf person's world maps correspondingly onto the target domain of an idea that is suddenly understood. (Wilcox 2000, p. 266)

Thus, ASL construes 'understanding' as being mapped from the metaphor **IDEAS IN EXISTENCE ARE STRAIGHT**, rather than the metaphor **UNDERSTANDING IS GRASPING**.

Conceptual differences in ASL and English metaphor are not the only cause for misunderstanding. A brief cross-linguistic examination of metaphor found in other signed languages highlights a variety of potential sources of misunderstanding across speakers and signers of different languages. For example, although British Sign Language (BSL) does use the commonly conceived **UNDERSTANDING IS GRASPING** metaphor, there is another BSL variant that means

'understanding'—TO-COMPREHEND (BSL). The source domain comes from pulling the strings of a bow (Brennan 1990, p. 127).

> The notion is expressed as though drawing or eliciting from the source (a bow) while the fingers bend and simultaneously move toward the upper body. Parallel index and middle fingers of both hands flex inward (palm orientation facing each other), pulling upward to the side of the forehead, as though pulling something toward the brain, in the conceptual manner of retrieving information. The primary motivating metaphor, **UNDERSTANDING IS DRAWING THE STRING OF A BOW**, can be seen as a sub-modified form of grasping in the thought domain. (Wilcox 2007, p. 260)

However, to ASL users unfamiliar with BSL, the BSL sign for TO-COMPREHEND can easily be conceived to mean 'retrieving' or 'pulling in', such as 'pulling in sounds at the ears' or 'pulling in visual sights' or 'recruiting persons into an organization or program'. ASL users can initially metaphorically conceive the BSL TO-COMPREHEND sign as a desire for the signer to continue explaining what he or she is talking about, while the BSL signers are simply projecting the notion that they understand the message.

Returning to the metaphor **UNDERSTANDING IS GRASPING**, there are a variety of languages that accept this metaphor, including French Sign Language (LSF), Italian Sign Language (LIS), and Catalan Sign Language (LSC). As noted, spoken English speakers use this metaphorical instantiation extensively. However, ASL, along with Japanese Sign Language (JSL), does not. Seen in Table 7.1, ASL and several other signed languages use **IDEAS IN EXISTENCE ARE STRAIGHT** to map comprehension or understanding.

The sign TO-GET is a basic and pervasive sign in ASL. A teacher who uses signed English structure and semantics—thus English metaphorical conceptualization—may very well sign a statement such as, "Do you get what I'm saying? I hope you can get it before we leave for the day". The teacher may feel that her message is perfectly sensible. A deaf child who uses ASL, however, can be left puzzled, wondering what it is she or he is supposed to physically pick up and take from the classroom. How many other conceptual metaphors create confusion and lack of understanding in the education of a deaf child? In a classroom taught by a monolingual teacher, a deaf child who uses ASL might struggle to extract meaning from semantically confusing English metaphors. To bridge the educational and conceptual gap, either the deaf child or the teacher needs to be metaphorically bilingual.

Table 7.1 Metaphors we understand by/Strongly motivated mappings (*not* inclusive)

UNDERSTANDING IS GRASPING	IDEAS IN EXISTENCE ARE STRAIGHT
English (spoken and written)	American Sign Language (ASL)
British Sign Language (BSL)	British Sign Language (BSL)
Catalan Sign Language (LSC)	Catalan Sign Language (LSC)
Italian Sign Language (LIS)	Italian Sign Language (LIS)

Metaphorical mapping cannot be understood without taking into account the impact of culture surrounding the metaphor. Culture is needed for metaphorical comprehension to be clear. Basso's work with the Western Apache led him to show that language properties are too often studied in an isolated vacuum: "Wrenched from their natural context like so many fish out of water and hung up for sale, the sentence types…are arrayed and analyzed as if they had no place of origin, no relationship to the affairs of men, no purpose but to be dissected and once laid open, awarded to the cleverest bidder" (1976, p. 115). Experienced educators of deaf children often feel as though the array of educational materials available to them offers a similar isolated vacuum. Language, with its rich metaphorical processing, cannot be taught through the exposure of isolated signs and words. Proponents of deaf education must generate research that challenges and eliminates the vast metaphorical poles that often create misconceptions between many hearing educators and deaf children.

7.6 Conclusions

Bilingual education for deaf children implicitly recognizes the importance of signed languages in deaf education. However, unpacking the implications of sign-text bilingualism reveals more unanswered questions than solutions to current problems in deaf education. Teachers of the deaf are being sent into uncharted territory when asked to sustain the development of both a signed language and the written form of a spoken language in their classrooms. The need for educational linguistics research in this domain is immense. In order to understand deaf students' vocabulary growth and sight word recognition, we must uncover the interrelationships between signed and written lexical representations. The development of a Theory of Mind, typically mastered by hearing children prior to school entry, becomes a necessary focus of inquiry in deaf students who are not exposed to intersubjective language in the home. Or is it possible that our current models of signed language morphosyntax and pragmatics are not sufficient to capture expressions of Theory of Mind in deaf children? Finally, how do truly fluent bilinguals alternate between the metaphors of their two languages, particularly when they don't align between the two languages? It is possible that many of the awkward utterances produced by L2 learners are not a failure to learn the grammar of their second language, but a failure to realize that expressions in their first language are language-specific metaphors that simply don't translate to their second language.

We conclude with a poem written by a deaf poet and teacher of the deaf, Olive Sanxay, written around the turn of the century. The poem is instructive in that it contrasts the dreariness of school, pen and paper with the fullness of life painted in bright hues and visual images on a canvas. As Spolsky (2008, p. 8) notes, despite increases in the spread of education across the globe, the quality of education has not necessarily improved, in part due to "the failure to remedy the effects of hegemonic monolingual education in a language not well enough known by the richly pluralistic pupils in schools." Bringing signed languages into schools for deaf students should not be seen

as a threat to the value and role of spoken language pedagogy, but rather as a way to enrich and enhance the conceptual and linguistic development of future bilinguals.

Genius

Once, following his whim, an artist soul,
Disdaining camp and court and mart and gown,
And drear monotony of schools, flung down
His book and pen, and with elation stole
Out from the beaten way. Without control
He dipped from passionate Life's most gorgeous hues
To paint his impulse bright beyond excuse.
And following his whim, a sacred whole
Of human tragedy upon his canvas pale
He wrought with such fine skill where others fail,
That Fame reached down a loving hand and smiled.
So, following his whim, with fancy wild,
When Death stretched forth her hand, so cold, so dim,
He found a felon's grave awaiting him. (Sanxay 1900)

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Chapter 8

Multiuser Digital Games as Sites for Research and Practice

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8.1 Introduction

Over the past decade, digital games have proliferated in number of titles and diversity of type, offering choices in regard to different styles of play. While stereotypical 'shooter' games remain prevalent, other genres are growing in popularity. *The Sims 2*, called a 'digital dollhouse' by its creator Will Wright, is the best selling PC game in history, while Wright's alien-evolution simulation game *Spore* sold over one million copies in the first 3 weeks of its release in September of 2008 (Terdiman 2008). Distinct digital game genres are emerging, and include shooter (e.g., *Halo 3*), action (e.g., *Grand Theft Auto*), strategy (e.g., *World of Goo*), role playing (e.g., *Fallout 3*), adventure (e.g., *World of Warcraft*), simulation (e.g., *The SIMS*), and sports genres (e.g., *Madden Football*), with most games combining elements of several genres.[1] Digital games may combine traditional game, contest, puzzle, and story elements (Murray 2004), and can be designed for progression-style gameplay, where player options are pre-determined by designers, or emergent gameplay, where designers create rule-bound conditions from which play emerges organically and, sometimes, unpredictably (Juul 2005). Games can be played by single players, multiple players, or massive numbers of players who may, or may not, know one another outside of the game space. Each of these features present distinct possibilities for second language (L2) research and practice.

[1] Game examples are taken from the top rated games by users in each category. These are dynamic results that change based on new releases, platforms, and the communities of use surrounding them. For real time rankings, see http://www.gamespot.com/games.html.

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F.M. Hult (ed.), *Directions and Prospects for Educational Linguistics*,
Educational Linguistics 11, DOI 10.1007/978-90-481-9136-9_8,

Concurrent with the explosion in diversity and quantity of commercial games, we have witnessed a profound interest in the use of games in a variety of professional contexts. For example, in 2005, the first National Summit on Educational Games was held to "accelerate the development, commercialization, and deployment of new generation games for learning" (NSEG Summit 2005). Educational or 'serious' games[2] have been developed to explore history, aid in military organization and training, three-dimensional CAD training, therapy, pedagogy and identity formation, business practices, and medical training (e.g., Aldrich 2005; Barab et al. 2005; Beck and Wade 2004; Prensky 2001, 2005). Language learning is one arena within which digital games can have an especially noteworthy impact. Digital games are significant for language learning, not only as potentially useful new tools within the confines of traditional foreign language contexts, but more importantly, as *new* semiotic and cultural environments which construct, and are constructed by, ontologically new social practices (Lankshear and Knobel 2006).

In a recent review addressing the role of new media in language learning, Thorne, Black, and Sykes (2009, pp. 813–814) highlight the importance of understanding the complexity and inherent social activity associated with commercial and educationally-focused game spaces.[3] They note:

> The remix, plurilingual, and emergent nature of many L2 [second language] digital vernacular communities and VE [virtual environment] contexts highlights the centrality of meaning, the use of (sometimes multiple) languages for the performance of desired identities and aesthetic expression, and at a metalinguistic level, the development of repertoires and strategies that serve as tools to negotiate social actions within novel and fluid communicative events.

From this perspective, digital games offer a great deal more than just engagement and motivation. As prominent sites of digitally-mediated activity, they represent high-stakes digital spaces that are often intimately linked to other communicative contexts and social networks in both on- and offline environments.

This chapter addresses the use of digital games as a site for both research and practice within the scope of educational linguistics. We first contextualize our discussion through an exploration of games as *new* ontological social practices, that is, semiotic social-material conditions that are new to the human experience. From this perspective, we then present various definitions of games and their unique relationship to learning activity as a whole. For this discussion, we specifically address two types of multiuser digital games—multiplayer online games (MMOGs) and synthetic immersive environments (SIEs); the analysis of these two types, we propose, provides additional groundwork for framing our understanding of multiuser digital games in terms of language learning. In the remainder of the chapter, we first suggest goal orientation and social consequence as two especially meaningful components

[2] We would like to caution against positioning 'serious' games as more valuable than 'entertainment' games since both can have an impact on learning in different areas.

[3] Thorne et al. (2009) also discusses language socialization and second language use, as well as development in online spaces (e.g., fan fiction, diaspora communities; see also Thorne 2009).

of multiuser digital games for language learning and, based on current research, relate these two areas to future investigation. We then highlight ways multiuser digital games might be meaningfully considered in educational practice, both in and out of the formalized foreign language classroom.[4]

8.2 The Unique Social Practice of Digital Games

Prior to our examination of multiuser digital games in the context of language learning research, it is critical to briefly situate their existence within the larger scope of mediated interaction and social activity. In a recent volume, the literacy theorists Lankshear and Knobel (2006) set out to parse the "new" in literacy studies (and by extension—communicative activity involving new media and Web 2.0 tools and practices) by differentiating between paradigmatic and ontological novelty in literacy research and practice.

Paradigmatically, "new" approaches to literacy are meant to describe the research perspectives of the analyst, with the emphasis on moving away from psycholinguistic frameworks and toward those which are situated and more broadly construed as sociocultural; this often includes the work being done under the rubric of *educational linguistics*. What we are looking at in this chapter—multiplayer game engagement wherein avatar-embodied participants roam 3-D graphically rendered virtual worlds—involves what Lankshear and Knobel (2006) describe as ontologically new literacy practices.

The concept of ontological newness encompasses literacies and communicative genres associated with technological mediation, but it also emphasizes how such mediation impacts language and literacy-related social practices along other fronts, including, but not limited to, scale (e.g., volume of interaction potential), space (e.g., conflation of geographic distance), and aesthetic and communicative sensibility (e.g., emergence of collaborative and remixed forms of knowledge construction). From this perspective, our treatment of multiplayer digital games aims to understand not only the linear practice of a user's gameplay experience, but also the contextual surroundings which contribute to, and are ultimately shaped by, the gameplay.

Due to both their economic[5] and social impact, multiplayer digital games arguably comprise the most socially and cognitively complex forms of interactive media currently available. Participation in these online spaces constitutes a set of global cultural practices that have contributed to an overall shift in the perception and construction of reality, including the political, economic, educational, and social choices people make in the 'real' world (e.g., Castronova 2001, 2007;

[4] Due to the scarcity of direct empirical research in the area of digital games and language learning, we suggest this chapter be viewed as a 'call to arms'—a starting point for researchers and practitioners in this area.

[5] See Castronova (2001, 2007) and Steinkuehler (2008) for discussion.

Lenhart et al. 2008; Squire and Steinkuehler 2006; Thorne 2008). It can be argued that multiplayer online games are not only constructed *by* social activity, but are active agents in the construction *of* social activity. Shaffer and Clinton (2006) describe the dialectical and co-constitutive relationship between tools and the cognitive-communicative activities they mediate as "the reciprocal relation between tools and thought…every tool contains thoughts and every thought contains tools" (p. 290). In this stronger view of mediation, computer-generated tools and environments, like people, are actants and as such, they influence human agents based on their material and ideal properties, histories of use, and roles in ongoing activity (Thorne and Black forthcoming). While not the focus of this chapter, this critical relationship between tools and their associated practices emphasizes our understanding of games as new ontological social practices. This is directly related to the potentially profound learning experiences made possible in both formal and informal learning contexts.

8.2.1 What Is a Game?

It is useful to examine the notion of *game* in conjunction with the concepts of *play* and *engagement*. This aids in our intention to stress digital games as a unique social practice, while also highlighting the especially notable features of games for language learning.

The notion of 'rule-governed' is central to most definitions of 'game', since it is rules that give a game its structure. Juul (2005) makes a distinction between games of emergence, where a limited number of rules combine to afford a much greater number of possible outcomes and play trajectories, and games of progression, like adventure games, where the majority of possible outcomes have been pre-determined by the designers. While game designers purposefully create the rules of a game,[6] unpredictability, or at least the illusion of it, is also key to game design, as it provides the players with a sense of agency.

Key to a definition of game, and alluded to above, is the concept of *play*, which has been discussed in relation to language and language learning (e.g., Cook 2000; Crystal 2001; Lantolf 1997; Tarone 2000). *Paedia* refers to carefree, improvised, and open-ended play, as opposed to *ludus*, meaning rule-bound play, and *agon*, or competition. It is the job of the game designer to balance player experience of *paedia*, *ludus*, and *agon* to create an engaging experience.

Other scholars have investigated the notion of engagement and its relationship to the goal-driven nature of play. Aldrich (2005) and Prensky (2001) explain that goals can be game-driven, context-driven, or user-driven. Game-driven goals refer to those explicitly built into the game as central benchmarks that players need to accomplish to be successful in the game; whereas user-driven goals are those

[6] Although, sometimes, the rules are flaunted.

created by the players themselves to personalize their gameplay experience. Contextual goals refer to the objectives that emerge during gameplay. By and large, all three motivations serve to create an engaging gameplay experience.

An additional framework that might be applied to language learning research is Salen and Zimmerman's (2005) explanation of how interactive design leads to engaging and meaningful play. Game interactivity occurs on multiple levels: at the interpretive or emotional level, at the functional level through the game interface, at the participatory level through gameplay itself, and at the 'beyond-the-object' or cultural level through participation in attendant discourses. Good design integrates choice at all levels of interactivity, which afford "contextual potentials" that are "encountered by a participant, from which meaning emerges" (Salen and Zimmerman 2005, p. 62). In this sense, game spaces are analogous to L2 learning spaces, where language learning involves similar systemic and scalable potentials.

Player motivation is also related to engagement. Because the commercial digital game industry is dependent on players as customers, it has paid close attention to those aspects of game design which allow players to customize their experiences, gain frequent rewards, and otherwise stay motivated to keep playing. Arnseth (2006) notes that designers of learning environments might learn from these game designers. For example, he asserts that digital games situate learning in meaningful contexts; they scaffold play by storing skills, knowledge, and objects for continual development; they alternate between isolated and complex tasks rather than progressing from isolation to complexity; and they adapt to, and customize feedback for, individual players at just the level needed for the next activity. In other words, a well-designed game targets a player's zone of proximal development (Vygotsky 1978; see also Lantolf and Thorne 2006; Nardi et al. 2007) just as a well-designed learning environment targets that of a learner.

8.2.2 Multiplayer Digital Games

An understanding of the key defining concepts of digital games as related to their existence within emerging social practices can inform educational and applied linguistics research. In practice, there are dozens of established, growing, and diversifying digital game types. While other game types have significant potential for language teaching (e.g., Purushotma 2005; Miller and Hegelheimer 2006; Ranalli 2008), we limit our discussion here to digital games in which human–human interaction occurs in the game itself.[7] We focus on massively multiplayer online games (MMOGs) and synthetic immersive environments (SIEs) because they are

[7] For a summary of the various types of game and simulation possibilities, see Aldrich (2005), Prensky (2001), and Sawyer and Smith (2008).

first and foremost multiplayer,[8] which means that players can, and in many cases are required to, interact and collaborate through the game interface in real-time,[9] resulting in the emergence of new social practices.

MMOGs are commercially designed and avatar-based multiplayer virtual worlds within which thousands of people simultaneously interact, compete, and collaborate with one another (Steinkuehler 2008). In an MMOG like *World of Warcraft (WoW)*,[10] players create characters with which they explore fictional worlds, assist one another, battle monsters and other players, and craft and exchange goods and services, all of which is done in an effort to "level-up" (i.e., gain experience and skills that allow for more complex and intricate gameplay). For regular and experienced players, MMOGs form meaningful systems of culturally organized activity that contain and promote a wide range of domain (game)-specific and social-interactional language use. In-game language may sometimes be very specific to game tactics (e.g., "heal!," "buff plz" or "stand back") or 'game culture' (e.g., gamer specific language, see Steinkuehler 2006). Nevertheless, the sheer volume of people with whom players can interact in online games, as well as the global diversity of the in-game population, allow for potentially numerous intercultural interactions in a variety of languages (e.g., Thorne 2008).

While the potential for applying commercial MMOGs like *WoW* to language learning and pedagogy is important and just beginning to be explored, another reason to examine multiplayer game design and player behavior is to inform the development of games that are specifically created for learning purposes, what we are calling synthetic immersive environments (SIEs). Drawing on the complex, goal-directed, collaborative gameplay behavior inherent in MMOGs, SIEs are engineered spaces which "integrate the many benefits of online gaming to produce explicit, educationally related outcomes in simulated, relevant *interactional* contexts" (Sykes 2008, pp. 10–11, emphasis ours). In this sense, SIEs are designed to target specific learning outcomes through the creation of a multiuser game space in which the participants are directly engaged in activity relating to specific domains of knowledge.[11]

If we view SIEs within the educational, or serious, games context, they are oriented toward multiplayer experiences and the utilization of immersive interaction for the facilitation, and enhancement, of learning. SIE designers are free to incorporate level- and need-appropriate language in their games with the objective that

[8] Sawyer and Smith (2008, p. 26) further classify multiplayer games into four categories: (1) multiplayer games (one to four players), (2) multiplayer tournament (eight to 64 players), (3) massive multiplayer shared (1,000–10,000), and (4) massive multiplayer grid (everyone).

[9] It is important to note that the technical capability of synchronous communication does not automatically guarantee the existence of collaboration and interaction between users.

[10] *Wow* is currently the most popular MMOG, which topped 18 million worldwide subscriptions in 2008 (mmogchart.com).

[11] While there are numerous games that have been created for learning purposes in a variety of fields (see Sawyer and Smith 2008 for a complete categorization), there are only three that have been designed specifically for language learning—*Croquelandia, Zon,* and *Tactical Iraqi/Pashtu/French*.

during gameplay, users will gain language skills, as well as sensitivity to strategic and pragmatically appropriate language use needed for participation.

Both types of multiuser digital games discussed here offer a number of potential benefits for language learning (García-Carbonnell et al. 2001; Sykes 2008, 2009; Sykes et al. 2008; Thorne 2008; Thorne and Black 2007; Thorne et al., 2009). In the sections that follow, we highlight potential benefits and suggest ways in which they might be conceptualized for both research and practice.

8.3 Multiplayer Games in Research

Scholars in the relatively young field of games studies are developing heuristics for the analysis of digital games and play, several of which might be adapted to analysis of language learning in digital game spaces. Drawing on the interdisciplinary origins of the field, Aarseth (2003) proposes three broad dimensions for the analysis of games: gameplay (i.e., player actions, strategies and motives), structure (i.e., rules), and game world (i.e., fictional content and topology of gaming). Aarseth advocates several methods: (1) studying the design, rules, and mechanics of a game; (2) observing and conducting ethnographic research on players; and (3) playing the game for both research and pleasure, and ultimately attempting mastery.[12]

In consideration of these three dimensions presented by Aarseth (2003), as well as current studies relevant for language learning, we highlight two components of digital games that are especially relevant for our understanding of multiplayer digital games in language learning—goal directed activity and social activity. Empirical examples are included where available and each section concludes with suggestions for future research.

8.3.1 Goal-Directed Activity

A fundamental game structure common to both MMOGs and SIEs is the *quest*. Quests are goal-oriented activities (open-ended or highly structured) that, when completed, provide rewards and experience points, which are necessary to 'level up' and gain access to more skills and resources. Especially relevant to language learning is the task-based approach to quest completion, the orthogonal distribution of resources to facilitate player-to-player interaction, and the importance of failure-states in providing meaningful, relevant feedback.

Quests have a parallel in task-based and goal-oriented activity (Ellis 2003; Richards and Rodgers 2001; Salmani-Nodoushan 2007). Players focus on meaning

[12] We agree with Aarseth's assertion that playing the game of study is critical for educational and applied linguists wishing to do research in this area or implement digital games in the classroom.

to arrive at an end goal through a series of micro-tasks. Purushotma, Thorne, and Wheatley (2008) highlight the ways in which tasks in video games are especially suited for language learning within a task-based model. They suggest that gaming environments emphasize goal-directed activity and establish language as a resource that is critical to successful gameplay.

MMOG players have the option of completing any number of hundreds of different quests based on their level and geographical location in the game. As mentioned previously, many quests and activities in MMOGs are easier, and often more interesting, when completed in multiplayer groups (e.g., one member may be good at long distance protection and healing while another is good at close range combat). For dungeons or 'instances' (i.e., specialized play areas where tasks are more complex and group play is critical) and especially difficult quests, players are implicitly encouraged to create a heterogeneous group with complementary skills.[13]

The game interface not only supports, but intentionally encourages, collaborative group play by affording party-specific communication channels and semi-permanent guilds (i.e., groups of players who routinely work together as a team) which are formed to share resources among players who want to trade and group frequently (see Ducheneaut et al. 2007; Juul 2005). Interaction around a common goal or cultural endeavor is a critical component of MMOGs and serves as a valuable context for language learning. Drawing on Peña and Hancock (2006), Thorne et al. (2009) suggest that as players reach higher ranks in MMOGs, they undergo a process of language socialization in which their role becomes increasingly complex, dynamic, and intimate. This includes the generation of relevant attendant discourses and social relationships, ranging from random interactions to serious relationships. In many cases, these relationships are transcultural and multilingual.

Intercultural communication, the importance of which has been explored thoroughly in the L2 literature (cf., Belz and Thorne 2006; Furstenberg et al. 2001; Kramsch and McConnell-Ginet 1992; Thorne 2003) is further evidenced in Thorne's (2008) unique case study[14] of two gamers in *World of Warcraft*—an English speaker in the United States (Meme) and a Russian speaking player located in the Ukraine (Zomn). The two players met through a questing experience in which Meme was hunting dragons as part of a quest and Zomn was pursuing the same creatures for leather, seemingly competing against one another for the same restricted resource. Instead of competition, however, the two players agreed to collaborate for mutual benefit and played together for some time. As they played, they interacted primarily in English, but also used Russian and discussed popular cultural, home and school

[13] In most cases, these quests are designed to be impossible without the support of a well-balanced group that requires ongoing negotiation of roles and gameplay practices by both experienced and new players.

[14] See Bryant (2006) for the only other empirical work examining L2 learning in MMOG contexts.

lives while concurrently coordinating their gameplay. As Thorne notes, many of the exchanges exhibited similar strategies often encouraged in the L2 language classroom. These included:

- Negotiation of meaning: throughout the interaction each player confirmed understanding and clarified meaning.
- Drawing on external resources: during the interaction Meme instant messaged another Ukranian friend for help with Russian phrases he wanted to use when talking to Zomn.
- Explicit feedback: In one turn, Zomn explicitly asked if the word he was using, "interpritir," was spelled correctly and Meme responded, "it's actually interpreter, but that was close."
- Translation: Zomn helped translate one of Meme's slang phrases from Russian.
- Reciprocal alterations between expert and novice: Both Meme and Zomn acted as learners and experts at different times in the interaction.

While this single case study cannot be generalized to all MMOG environments, those who play MMOGs regularly comment on similar multilingual exchanges in which they engage in intercultural communication with players from around the world. For individuals with specific language interests or for MMOG use as a part of instructed L2 settings, it is noteworthy that MMOGs are often played by speakers of a variety of European and Asian languages.

The complex feedback mechanism of MMOGs is a critical component of gameplay experiences. Feedback is most often realized through explicitly designed failure states, the most common of which is the temporary death of one's character. Players can attempt a task as many times as necessary in order to successfully reach their goal, a design element which sends the message that failed attempts are necessary for learning and skill-building. This feature is especially relevant to language learning in that it not only focuses on the skill being learned, but also affective factors, such as anxiety, that often inhibit language learners (Purushotma et al. 2008).

MMOGs provide effective, multi-level feedback delivered through a variety of mechanisms (e.g., the loss/gain of assets, the ability to do certain things, additional help from the avatars in the space) in order to help players improve while attempting tasks. As noted by Gee (2003, p. 1), "each level dances around the outer limits of the player's abilities, seeking at every point to be hard enough to be just doable." In this way, MMOGs require players to remain in the areas suited to their levels and to complete specific quests targeted at what they need to learn. Two things happen as a result. One, the discourse between players in different areas of play are distinctly different in complexity and social affordances (Peña and Hancock 2006), with higher level areas being more complex and intricate. Two, players who venture out of their level zone must either collaborate with more advanced players or stay in their own zone until they are ready to move to the next level. Feedback is delivered implicitly through the game as needed and also explicitly as in the aforementioned failure states.

In addition to the lure of ascending levels and earning assets, as is the case in purely game-based MMOG environments, quests in educationally focused SIEs need to be focused toward inculcating content that corresponds to curricular objectives. As players advance in their language skills, the SIE quests would become more complex and targeted at more advanced skills. It should be noted that the specificity of quests likely increases the efficiency of language learning in SIEs, but there is also the danger of detracting from the gameplay experience and potentially discouraging risk taking in the digital space (as is indicated by the student comments excerpted and discussed below). General game design principles can form the base-level knowledge informing SIE research and development. Future language-based SIE development should keep in focus the relevant features of immersive spaces that carry the most significant opportunities for making salient the content to be learned.

The key to SIEs is the creation of similar goal-oriented activity and feedback to that found in MMOGs, which is specifically focused on the learning objective and tasks, in addition to the interaction, relevant for language learning. For example, in *Croquelandia*, an SIE created explicitly for pragmatic development, each quest is directly targeted at a specific language function (e.g., apologizing to a friend for being late, asking to borrow a book from one's host sister). Successful completion of the quest indicates control of an interaction.

As opposed to the temporary death of one's avatar, failure states in SIEs can be explicitly designed to emulate genuine consequences of language failure (e.g., gain/loss of invitations, heightened/lessened homesickness, more/less friendships). As noted by Purushotma et al. (2008, n.p.), "we should engineer the game to cater primarily to failure and partial success" because these failure states are vital to language learning. The importance of failure states is confirmed by the first empirical analysis of an SIE for language learning (Sykes 2008). Although students were given the opportunity to experiment and "fail," half of the 25 learners interviewed noted that quest restarts signaled a failure to learn the material; therefore, they did not experiment or attempt tasks in numerous ways. Instead of the "humorous and playful" fail states proposed by Purushotma et al. (2008), more typical classroom feedback mechanisms (e.g., right or wrong) seemed to have been perceived. In-game behaviors were not sufficient to have a positive impact on the players' experience.

Research on the design and creation of quests should be a critical research question for those wishing to investigate the development and use of SIEs in language learning. This includes the examination of how content and resources can be distributed to make the best use of the questing structure and analysis of the definition of roles, distribution of resources, and the creation of failure states. Furthermore, investigation in this area requires much more than just comparing how specific types of feedback might contribute to learning "from" the game. We encourage investigation into delivery mechanisms (i.e., rewards for completed quests versus in-task formative feedback), long-term versus short-term rewards and incentives, and experimentation with various types of feedback (e.g., implicit versus explicit), all of which will aid in the development of game worlds that present more productive environments for language learning.

8.3.2 Social Activity

While many describe games as "low risk" environments (cf. Gee 2003), we propose that they can also be high-stakes, meaningful spaces with substantial social consequences for the players. Research has shown that interactions in multiuser virtual environments exhibit numerous features of emergent social behavior (e.g., gesture, romantic encounters, political action, commerce, and caretaking). In this sense, online games are valid, real-world communication tools fully integrated (although often stigmatized) in modern society (Gee 2005; Thorne 2006) and as such should be considered viable, relevant cultural artifacts. These are critical pieces in helping language learners build a communicative repertoire that enables them to successfully interact in a variety of on- and offline contexts.

Through their *Bridging Activities* model, Thorne and Reinhardt (2008; see also below) highlight the importance of making use of consequential online social practices in instructed advanced language learning settings. MMOGs represent one set of digital vernaculars that may hold intrinsic value for a large number of learners. The authenticity and social consequences presented in these spaces can be quite profound (Steinkuehler 2006).

MMOGs are massive, involving thousands of players physically dispersed across continents, age groups, and backgrounds. Players can interact in groups as small as two to five or as large as 200 to complete various game activities like questing and trading. Players can command their characters to joke, laugh, cry, cheer, dance, or otherwise 'emote', which the other players in the vicinity are able to see and hear. The fact that a player may communicate with other players while presenting a designed behavior allows for identity play and anonymous risk-taking, although the fact that the other players are human means that the stakes for play and risk-taking are high, in that anti-social behavior may lead to negative social consequences and a lasting poor reputation for one's character.

Taylor (2006) describes a profoundly different play experience based on her character selection in an ethnographic study of *Everquest*. She first illustrates a relatively independent play experience process as a Gnome Necromancer (a specific race and class in *Everquest*). However, with the second character she created (a Barbarian Warrior), she needed to collaborate very early on and, as a result, participated in a different gaming experience. Her switch in character also required a shift in linguistic, cultural, and emotive behavior. Since one's character is one representation of the human player, the social consequences of miscommunication in MMOGs are real. Furthermore, as evidenced in Thorne's (2008) case study of Meme and Zomn, the interactions occurring independent of one's in-game character are also meaningful and have the potential to contribute to the development of a language learner's multilingual identity outside of the game. Although the specific social practices learned in MMOGs may not always transfer to non-digitally mediated contexts, the skills and strategies learned through these spaces can have an important role in the overall language socialization of learners (Thorne and Reinhardt 2008; Thorne et al., 2009).

SIEs also offer benefits related to authenticity and social consequence through their potential to simulate versions of the target language and culture while also encouraging organic social interaction among players. While in no way a replacement for study abroad, through specific design elements, participation in an SIE has significant potential to emulate non-mediated contexts learners may encounter. In this way, SIEs can aid, for example, in pre-departure preparation for study abroad. As in MMOGs, the digital context allows for language experimentation on the part of the learner through character development and personality selection. If they so choose, learners can create two or three distinct characters to explore various versions of their own multicultural identity (e.g., Lee and Hoadley 2007). With regard to language learning, seeing a world through another's eyes and developing meta-awareness of language as a tool for the presentation of a self is a fundamental aspect of intercultural competence (Kramsch 1993). This is something often encouraged in the language classroom, yet rarely achieved, since learners do not typically emotionally engage with simulated roles.

It is important to point out that gameplay alone does not always facilitate identity and role experimentation (Sykes 2008). As is the case with MMOGs, where the distribution of resources provides benefits for the development of different characters, SIEs should also include different experiences for distinct character creation. In her research investigating the use of *Croquelandia*, Sykes (2008) confirms the existence of 'real world' emotion and consequence related to the SIE experience. To take one case, a non-player character, who was a critical part of a quest, disappeared from the SIE due to a technical glitch. The community of learners involved in the game (four classes of an advanced Spanish course) was searching for her and spent a great deal of time debating and discussing her location. One of the students interviewed made the following comment about finding Ana:

Sample (2)

"...last Thursday, I think, I came home and my friends were going out and I said I'm going home and play the video game for awhile, I want to see what happens, like if I can find Ana..." Lisa, Interview 1, S2

For this student, the fact that she cared enough about finding Ana to use her free time to continue playing the game (without any impact on her class grade) indicates that there is an important connection with the characters, scenarios, and content from the SIE. The digital space allowed for the maintenance of a level of emotional authenticity related to that experience that does not typically occur in other simulated classroom contexts.

Related to the concept of game design, task creation, and the use of digital games for language learning, is research that compares use of spaces that have already been built (e.g., MMOGs) versus the construction of new SIEs (e.g., *Croquelandia*). When we consider that the cost of commercial gaming spaces falls in the multi-million dollar range,[15] creating ways for developing less costly

[15] The cost of *World of Warcraft*, the most popular MMOG, is estimated at $65 million.

resources or leveraging spaces that have already been built is critical. Even the creation and development of smaller game spaces for educational purposes are quite expensive and time consuming. Therefore, future research should consider how to leverage the products already in existence to enhance the spaces already being built as well as to make best use of created SIEs in the areas where they are most relevant. Moreover, in developing SIEs, sacrificing state-of-the art graphics or additional control and design of the game space might be a valuable trade-off. In all cases, the social practices and behaviors associated with multiplayer game spaces should be a central focus of investigation.

Research into multiplayer online games should address the critical social and interactional components that contribute to our understanding of games as emerging social practices relevant to language learning. This includes addressing in-game play and interaction through tasks and goal orientation as well as the associated social activity surrounding gameplay. This comprehensive picture aids in gaining a complex understanding of how and why multiuser games are relevant in the language learning context.

8.4 Multiplayer Games in Practice

We maintain that good game design, whether an SIE or MMOG, reflects Arnseth's (2006) notion of 'learning to play', rather than playing to learn. In the first approach, game activity is understood as a form of socially situated practice, and the focus is not on the learner-player 'reading' or 'watching' the game, but 'doing' and 'participating' in systems of social semiosis. In contrast, Arnseth argues that viewing the game as a text from which content is learned, or playing to learn, without consideration of the context of play, reflects a learning-as-transmission model where the game is seen to leave "cognitive residues" that may influence future behavior (e.g., violence). This approach can be understood as 'playing to learn', where learning is 'disguised' as a game, and cognition is separate from context. We concur with Arnseth that 'learning to play' is a more useful notion, and we feel that in language teaching, 'learning the language to play the game' is a more useful approach to practice than 'playing the game to learn the language'. With this in mind, both task-based and literacy-based approaches are commensurable with multiplayer games.

8.4.1 Task-Based Approaches

Multiplayer digital games are suitable for an in-class task-based approach (Ellis 2003), if the quests and various activities in the game are presented in a structure that focuses primarily on meaning exchange and meets an instructional objective.

A MMOG quest is structured like a task, in that the meaning of the quest must be comprehended in order to complete it. The text and narrative of a particular quest or line of quests can be broken down and discussed in class, and students can report on the quests and activities they completed. From a task-based perspective, the parameters for meaning exchange in game interactions are already set-up, because resources and abilities are distributed among players unequally, and so all may potentially contribute to group activity. In both language learning task design and game design, this distribution is intentional—in learning tasks as jigsaw or information gap design (Blake 2000; Smith 2004; Pica et al. 1993), and in multiplayer gameplay as orthogonal unit design (Smith 2003; Juul 2005).

It would be difficult and counterproductive, however, to attempt to break down all in-game activities into discrete tasks, because much of the enjoyment of gameplay arises from the unpredictable quality of interactions. Juul (2005) explains that the principle of emergent game design relies on the random interaction of rules and system complexity, and may involve variation of states, irreducible patterns of play, and novelty or surprise in the form of emergent gameplay. Interaction and meaningful communication among players to strategize and achieve common goals arises from this emergence, and it is this sense of infinite-seeming 'interesting choices' (Meier, 1991 in Juul 2005, p. 75) that provides a player with a sense of fun and meaningfulness.

8.4.2 Game-Mediated Literacy Development

A literacy-based framework for using digital games in the L2 classroom may be found in *Bridging Activities* (Thorne and Reinhardt 2008), a pedagogical approach designed to bring everyday digital practices into the L2 classroom for the purpose of developing critical language awareness. Grounded in principles of language awareness and the concept of multiliteracies (New London Group 1996), new media literacies (Kress 2003; Lankshear and Knobel 2007; Steinkuhler 2007), and identities in language learning (Gee 2007; Block 2007), the *Bridging Activities* model centers on guided exploration and analysis of student selected or created digital vernacular texts originating in digital practices like chatting, blogging, surfing, and gaming, with the goal of fostering critical awareness of those practices and the language(s) used for them. Application of the model involves an iterative implementation cycle of observation and collection of technology-mediated texts and practices, which leads to exploration and analysis of those texts, and ultimately participation in practices and creation of new texts. While facilitation is necessary at all levels, the collection, analysis, and creation aspects involve explicit guidance on the part of the instructor, to bring linguistic form, function, and relationship to social context to the active awareness of the learner, and if possible, to the level of critical awareness.

For gaming, observation and collection would involve playing the game, observing the designed narratives (Calleja 2007) of quests and in-game story lines, and producing personal narratives of strategizing and playing. Guided exploration and analysis would involve an embedded cycle of description, analysis, and interpretation—description would involve situating the narratives; analysis would involve relating them to the rule-based structure of the game; and interpretation would involve critically framing the narratives and relating them to broader socio-cultural discourses, including attendant discourses of gaming culture. Creation and participation would involve informed and transformed play, developing both L2 literacy and game literacy (Gee 2007).

The potential for multiplayer games in language learning might be seen in their capacities to transform literacies, both through the experiencing of designed narratives that are socio-cultural texts and practices, and the production of personal narratives (Calleja 2007) that recount play or practice. In other words, a designed narrative in a game can be understood as a story to which the player is audience, and as such may be described, analyzed, and interpreted by the player as it unfolds to her. Simultaneously, the player can describe, analyze, and interpret his or her own personal narrative while playing the game. Crucially, these narratives can be constructed through social interaction within and around the game, both in-game and out-of-game.

8.5 Conclusion

The dynamic nature of emerging ontological practices as related to digital games necessitates a multi-dimensional perspective for research and practice. This allows for the analysis of, not only mediated activity, but also the scope, scale, and communities of practice that construct, and are constructed by, the use of emerging technological tools. In this chapter, we have identified areas for research and practice that are especially relevant for those interested in digital games and language learning. In doing so, we suggest multiplayer digital games as new contexts for language development, and not only practice spaces that are useful for the recreation of traditional pedagogical practices.

To quote Marc Prensky (2001, p. 7), there is no doubt that "learning is a big job. No one method works alone for everything. Digital game-based learning is great in that it motivates and teaches in ways that other methods seldom do. But it is neither the unique solution to all training [learning] problems nor a panacea." Through this discussion, we hope to begin answering the many questions raised in this area and gain systematic understanding of how and when multiuser digital games are most effective. As always, the ultimate goal is to grant learners access to second language skills that are essential to the creation and maintenance of ongoing, meaningful relationships with speakers of languages other than their own. With continued research and development, multiplayer digital games are an innovative area that has the potential to transform language learning.

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Chapter 9

Envoi: Towards Responsible Language Educational Management

Bernard Spolsky

As the editor of a "handbook" (Kaplan 2002) even longer than the one that Francis Hult and I edited (Spolsky and Hult 2008), Robert Kaplan's review (2009) of our collection continues our longstanding difference of opinion over the need for the field of educational linguistics (Kaplan 1980; Spolsky 1980). But, unlike most reviewers of such a mammoth collection, he read our book from cover to cover, and concludes with "the probably vain hope that teachers, teacher trainers, educational supervisors and inspectors, politicians and others charged with educational management at various levels will read it, try and understand it, and attempt to apply its lessons" (p. 282). In this, he captures the motivation for the Handbook volume and the field, a desire to overcome the rampant ignorance of scientific research about language and the ways it is learned. This ignorance is a clear example of what Revel (1988, 1991) identified as the "flight from truth," the failure of so many people to recognize the knowledge that should be applicable to the practical policies they endorse or establish. The most recent and disturbing case, discussed in more detail below, is the unwillingness or inability of otherwise intelligent educators and politicians to recognize the fundamental flaws in the testing philosophy behind the ill-named US "No Child Left Behind" Act, with its clearly deleterious effects not just for a large group of language learners (Crawford 2008; Menken 2008) but for humane education itself (Evans and Hornberger 2005).

The goal of the present volume is to show that the field we label educational linguistics can continue to expand, seeking new knowledge to deal with problems of language educational management. The Blackwell *Handbook* set out to summarize the 2008 state of the field, and this new volume is intended to show continuing productivity by looking at recent "cutting edge" research that can contribute to solutions. The eight chapters show the sustained vitality of the field, and the contributions to education of the openness to new knowledge and technology. Accepting as the authors do the notion that educational linguistics is problem-oriented rather than theory-based, I find the cases that they present most revealing.

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F.M. Hult (ed.), *Directions and Prospects for Educational Linguistics*,
Educational Linguistics 11, DOI 10.1007/978-90-481-9136-9_9,

Essentially, they continue the argument presented as early as Spolsky (1970a) that the relation between linguistics and language pedagogy is about implications rather than applications. Unlike little boys with hammers looking for something to bang, we start with problems and search for solutions in the fields we know.

The chapters by Smith, Sykes and colleagues and Warriner in this volume illustrate this. Smith has noticed a new tool, the technique of eye-tracking used in reading research and based on developments in cognitive linguistics, and sets out to explore how it might be used to study an age-old question in second language pedagogy, the effect of various modes of correction. Its disciplinary basis makes it more than just an example of applied technology, similar to the applied linguistics performed by those who assumed that some aspect of linguistic theory (e.g. transformations) or techniques (e.g. minimal pairs) might be useful in some part of language teaching. Sykes and colleagues take a new technical development, the multiplayer digital game, and delve into how it can be more than an entertainment, drawing as it does on rich language skills and so relevant to second language learning. Warriner too is concerned with obtaining a richer view of the second language proficiency of a speaker telling about a very real and worrying personal situation; the paper shows that the ethnopoetic system of analysis pioneered by Tedlock (1972) and further developed by one of the early patrons of educational linguistics, Dell Hymes (1981), provides a fruitful method of discovering and revealing the brilliant linguistic and rhetorical skills buried in what at first glance might have been considered limited English proficiency. These three chapters, then, demonstrate that educational linguistics will continue to expand its ability to tackle problems of language education as its practitioners draw on the developing theories and techniques of the many disciplines in which they are trained. Freed from the need to confine such selections to linguistics, they remain able to apply other disciplines to language-related problems. It is for this reason that I now see educational linguistics as a form of language management.

The chapters by Hult and Creese stress the inter- or transdisciplinarity of the field. In the paper in which I first illustrated the scope of educational linguistics by reporting on the case of the Navajo Reading Study (Spolsky 1974), I described the disciplines and skills and techniques we needed to master or add to our research team: sociolinguistics—specifically language maintenance to decide if it was worth developing material in Navajo (Spolsky 1970b, 1975, 2002); psycholinguistics—to study the speech of 6 year old Navajo children (Spolsky et al. 1973b; Spolsky and Holm 1977); code switching and borrowing of English words in spoken Navajo (Spolsky et al. 1973a); language management, specifically lexical development (Spolsky and Boomer 1983); vernacular literacy (Spolsky and Holm 1973); reading material (Holm et al. 1970); writing systems (Holm 1972); socioeconomic aspects of bilingual education (Spolsky et al. 1976); and empirical evaluation of bilingual education (Rosier and Holm 1980). In addition, we were deeply involved in planning and writing material for teaching reading in Navajo and in teacher training. Whereas "applied linguistics" seems to suggest that only linguistics is being applied, educational linguistics has from the start stressed transdisciplinarity.

Hult's chapter makes clear that a transdisciplinary approach to solving problems requires consideration of sociolinguistic ecology, the "cutting edge" of the sociology of language, as well as language policy and management, literacy and literacies, second and foreign (additional) language learning and teaching, and the whole critical area of assessment now so closely interwoven with policy (see the 2009 issue of the *Annual Review of Applied Linguistics*).

Creese's chapter describes one important aspect of transdisciplinarity, the need to add to a research team people with access to (or even membership of) the linguistic or ethnic community whose language education problems are being studied. This reflects a growing willingness to treat native speakers of a variety not as *informants* but as colleagues, an approach early demonstrated by Hale and Alvarez (1970). In the Navajo study, our research would have been impossible without the co-operation of people like Wayne and Agnes Holm and Irene Silentman. When I first came to Israel, our studies of the Old City of Jerusalem (Spolsky and Cooper 1991) were handicapped by the absence of a senior Arabic-speaking researcher, but later work with Muhammad Amara and others (e.g., Spolsky and Amara 1986, 1997; Spolsky et al. 1999) helped to fill this gap. Creese also mentions a very successful research forum that brought together various disciplines relevant to the studies.

Another important contribution is the chapter by Carlson and colleagues on educational linguistics and its significance in studying the language problems of the deaf. The study of Sign Languages (the myths about which remain common among the lay public) is a vital field for educational linguistics, with its recognition of the critical importance of social context (e.g., deaf language users and the Deaf community) and the need for multidisciplinary research to deal with the complex problems. Particularly now, with the widespread acceptance of a "bilingual" or rather bimodal (Sign and oral) approach, and growing relevance of the cochlear implant (Spencer and Marschak 2003) producing a trimodal situation (physiological, visual—Sign and lip-reading—and oral), innovative and cautious research sensitive to the concerns of the community is of vital importance.

The chapter by Boxer reminds us of the need to add the sociolinguistic to the psycholinguistic in dealing with the problems of (im)migrants and language learners. It focuses on one case of inadequate language management, the failure of those working with blood donors to make sure that donors fully understand the necessity to report situations where their blood might be infected. It represents, in other words, a frighteningly large number of situations where, absent any or sufficient language teaching to immigrants, health and medical services are required to provide effective language translation and interpretation for those who do not have full proficiency in the standard official language (Spolsky 2009: Chapter 7). This problem of language management for medicine and health, first studied by some of the earliest British sociolinguists in the 1970s (Candlin et al. 1974), remains a critical issue: a similar set of problems is faced by other social services such as law and police. The fact that societies provide ineffective language education for minorities and immigrants makes it necessary to provide what software programmers call "work-arounds", namely auxiliary translation and interpretation services.

How relieved I was when an emergency room doctor spoke to me in Hebrew, and how anxious I was when I needed medical assistance in Armenia and had to rely on the interpreting of a student at the conference! Boxer's paper makes clear the reason to consider this part of the kind of problem to be tackled by educational linguistics.

I have left to last the chapter by Leung, dealing with an issue adumbrated in my opening, the tragically common misfit between what we know about sociolinguistic ecology (especially the variety of home language pupils bring to school) and about research evidence showing how this complexity can be most effectively treated (Batibo 2004; King and Benson 2003; Walter 2003, 2008) and the ideologically based language education programs that ignore the needs of minority and immigrant children. This suggests a needed new field for educational linguistics, calling not just for the understanding of how language management is carried out, but how the relevant language managers might be influenced by those carrying out research in the appropriate disciplines.

We have some bad examples. The so-called audio-lingual method, a naïve mishmash of behavioral psychology and structural linguistics, was unfortunately sold to the language teaching profession in the flurry of emergency programs developed in response to Sputnik; the National Defense Education Act summer programs modified teachers' knowledge of vocabulary but did not produce more proficiency in their students (Hayes et al. 1967) who were exposed to boring drills. In the same way, the easy acceptance by educational administrators with little if any experience of language teaching or the power of testing, something first deplored well over a century ago (Latham 1877), has led to a strange belief that more testing will make up for the effects of poverty on educational achievement. We know about the potential influence of language activism (Spolsky 2009: Chapter 10) and the importance of ideologically committed civil servants to the success of the Welsh language revival program (Williams 2007), but need to learn how to fight myths about language and language education on the part of the general public and elected and appointed officials. It is clearly not enough to produce and publish scholarly research showing the potential of bilingual education and the value of multilingualism to overcome the monolingual hegemonies that are almost universally in vogue. Tracking the current debate over *No Child Left Behind* and its even less responsible addition *Race to the Top*, one is shocked to realize how little effect research evidence has on government and politicians, and what little chance educators and teachers seem to have to compete with a powerful testing industry and those who support it.

A recent paper by Dobrin (2009) and the collection of five papers it introduces tackles one aspect of the problem we face, namely the paradoxical connection between the work of SIL with its religious motivation and of what she calls "academic linguists" working with threatened language communities. She argues that secular linguists should take greater responsibility for this work, especially because they are not *prima facie* committed to the major social and cultural changes that SIL necessarily intends, such as a new religion and literacy. In a way, both general and applied linguists with their perfectly reasonable linguicentrism, like missionaries with their appropriate wish to save the souls of their selected group of

speakers, are similarly reluctant to recognize the social, cultural, economic and political aspects of their linguistic intervention. It is the problem-oriented interdisciplinarity of educational linguistics (and not least its origin in two universities[1] where there was a close tie between linguistics, anthropology and education) that opened the field to respect the community whose language is being manipulated. Maintaining this spirit is what promises continued progress in the field, and constitutes one of its main challenges. It is appropriate at this stage to pay tribute to the late Dell Hymes, trained as an anthropological linguist, who saw the relevance of a program in educational linguistics in the Graduate School of Education of which he was Dean. His constant stress on the human and the need to consider speakers rather than grammars helped set the mood for our field.

The second challenge, and one about which I have less to suggest, is the problem of implementation. In the model of simple language management (Nekvapil 2006; Nekvapil and Nekula 2006), it is the individual speaker who finds ways to solve language problems, and in complex language management, it is a multinational firm that develops strategies to deal with observed language problems inside and outside the business (Nekvapil and Sherman 2009). But in other domains and social institutions, the number of potential managers multiplies. Consider an education system: the participants (any of whom may wish to manage language policy) include pupils, teachers, department heads, principals, school boards, those who elect school boards, regional educational departments, inspectors, national or federal educational departments, education ministers and those who elect or appoint them, and supranational bodies. How does one find the key to influencing such a byzantine network? Consider how it took half a century to enforce the Jacobin decision during the French Revolution to require all French instruction to be in standard Parisian French, even with the central authority of Napoleon at one stage, and how a century later there was still a need for a constitutional amendment and new laws to try to achieve the goal!

Perhaps the new "cutting edge" for educational linguistics will be to learn how to apply political science, social psychology and advertising to correcting the myths about language and education that persist in so many societies. Two pieces in the 29 October 2009 issue of the British science journal *Nature* give important clues. An editorial (pp. 1173–1174) on the reactions to Darwin's theory of evolution points out that scientists and policy makers cannot simply assume that the public presented with 'the facts' will come to agree with them; rather they must take into account "value systems, cultural backdrops and local gaps" when framing their arguments. In another article, Bond (2009) analyses the contrasting approach of those scientists who, noting the conflict between instinctive biases to statistical data, believe that children need to be trained in probabilistic reasoning from as early

[1] The University of New Mexico, this year celebrating 30 years of educational linguistics (a result in part of my initial appointment there in 1968 to Anthropology and Elementary Education), and the University of Pennsylvania, where an anthropological linguist, Dell Hymes, had been appointed Dean of the School of Education.

as the age of eight, and those who doubt the effectiveness of education and call for techniques of "liberal paternalism" to nudge them to favored responses. There is, I believe, a successful example of this second approach in the work of the late Wallace Lambert in the initial evaluation of the French immersion programs: in his studies (Lambert and Tucker 1972) he emphasized that French immersion had no long-term negative effects on the learning of English reading and mathematics, as well as obviously improving their proficiency in French. Working together with growing francophone imperialism in Quebec, these results led to a rapid expansion of the programs in the desired direction. If we are convinced of the correctness of the evidence we have seen, nudging is surely justified.

The challenges are there, and I salute the goal of this volume to continue to meet them.

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