INTRODUCTION
The unprecedented spread of English throughout the world in recent years has resulted in its major role and high prestige in the academic, cultural, and political landscape of a growing number of countries (Crystal, 1995, 1997; Fishman, Cooper, & Conrad, 1977; McArthur, 1998, 2002). The mandates to teach English in earlier and earlier grades, combined with a growing exposure to the English language through television, newspapers, popular culture, tourism, travel, and the Internet, have further increased the importance of the language. In many countries, English has become the second language of academia, requiring students to be proficient enough to be able to read a large amount of textual material in English or even to participate in discussions or make oral presentations in English at international conferences. Pervasive use of English in electronic communication in all academic areas has further underscored the need for high proficiency and literacy development in English across age groups, thereby having a significant impact on the profession of English language education in English as a foreign language (EFL) contexts.

Similarly, in the United States, as well as in other English-speaking countries such as Australia, Canada, Great Britain, and New Zealand, the growing ethnolinguistic diversity in educational contexts combined with recent educational reforms have considerably transformed language education for English language learners. In the United States, increased emphasis on language across the curriculum (American Association for the Advancement of Science, 1998, 2001; National Research Council, 1996) and the growing number of English language learners in all classrooms have underscored the need for teachers in all disciplines to be able to address the specialized linguistic and academic needs of English language learners. Indeed, teacher education professional standards across subject areas have incorporated the preparation of teachers for teaching in educational settings that have become increasingly more diverse.

At the same time, the emergence of content-based instruction (CBI) as a paradigm in language education (Brinton, Snow, & Wesche, 1989; Chamot & O’Malley, 1994; Crandall, 1987, 1993; Mohan, 1986; Short, 1993; Snow, Met, & Genesee, 1989; Stoller, 2004) and its implementation across educational contexts...
(Crandall & Kaufman, 2002; Mohan, Leung, & Davison, 2001; Snow & Brinton, 1997) have radically changed the role of language teachers and the language curriculum in primary and secondary school settings and in postsecondary contexts. CBI has increasingly grounded language teaching in academic content across disciplines and has changed the focus from teaching language in isolation to its integration with disciplinary content in primary, secondary, and tertiary contexts in the United States and abroad. Furthermore, new state, national, and professional standards have also affected language education in their emphasis on performance-based evidence and accountability in primary and secondary schools and in teacher education programs. The standards have underscored quality of education to ensure academic success and higher achievement for all students, including English language learners.

The growing importance of English as an international language, the diversification of demographics in academic institutions, and increased emphasis on performance-based accountability and ongoing program improvement have expanded the impact and visibility of language educators and have greatly enhanced their professional role within the school and the community (Clegg, 1996). Understandably, this has helped to highlight the particular strengths that language teachers bring to educational settings and the significance of the quality of teacher education programs that prepare them for their greatly expanded role. The importance of CBI as an educational paradigm was underscored by research findings that identified several areas of concern; for example, the poor performance of English language learners in academic areas that was attributed in part to the specialized language of the academic disciplines, for instance, mathematics (Cocking & Mestre, 1988; Crandall, Dale, Rhodes, & Spanos, 1990; Cuevas, 1984) and social studies (Short, 1993). This highlighted one of the challenges for CBI—the lack of expertise among language teachers both in the content areas and in the discipline-specific pedagogy within which language teaching is embedded (Kaufman, 2004). The TESOL standards for teacher education programs (TESOL, 2002) have addressed this issue by emphasizing the melding of a strong linguistic foundation for teacher candidates with a solid grounding in the respective disciplines of the core curriculum. The theme of preparing English for speakers of other languages (ESOL) teacher candidates who are able to provide access to the core curriculum across content areas for primary and secondary school students is reiterated across the standards. The standards advance the position that teacher education programs must prepare ESOL teacher candidates who understand and are able to

- construct learning environments that support ESOL students’ language and literacy development and content-area achievement (Domain 1—Language)
- construct learning environments that support ESOL students’ cultural identities, language and literacy development, and content-area achievement (Domain 2—Culture)
- know, understand, and use standards-based practices and strategies related to planning, implementing, and managing ESL and content instruction (Domain 3—Planning, Implementing, and Managing Instruction)
• collaborate with their colleagues across disciplines and serve as a resource to all staff . . . to improve learning for all ESOL students (Domain 5—Professionalism) (TESOL, 2002)

The TESOL standards underscore the importance of expanded pedagogical content knowledge (Shulman, 1986, 1987) that, in the case of CBI, combines knowledge of linguistics, language acquisition, and language pedagogy with the content knowledge and the specialized pedagogy of the social and natural sciences disciplines. Partnerships and joint activities among ESOL and other content-area teacher preparation programs can facilitate the attainment of greater awareness and acquisition of instructional skills in these areas. The advent of CBI has made the content from other disciplines an integral part of language teaching, and the pedagogical approaches that are prevalent in the respective disciplines within which language teaching is embedded are also becoming part of the CBI classroom experience. For instance, constructivism, an approach grounded in the cognitive developmental theory of Piaget (1970) and in the sociocultural theory of Vygotsky (1978), has been a dominant pedagogical paradigm in mathematics and science education for several decades and has also affected language learning research and pedagogy (Freeman & Johnson, 1998; Hall, 2002; Johnson, 2000; Johnson & Golombek, 2003; Kaufman, 1996, 2000; Ko, Schallert, & Walters, 2003; Lantolf & Appel, 1994; McGroarty, 1998; Murrell, 2001; Prabhu, 1996). Embedding of content in language teaching and the focus on standards-based education will likely strengthen integration of pedagogical approaches such as constructivism in language teacher education (Kaufman, 2004).

The challenge for language teacher education programs is to prepare candidates whose pedagogical content knowledge includes linguistic-based pedagogy with content-based pedagogy of science, mathematics, and social studies. Such preparation includes the construction of deeper understandings of linguistics and mathematical and scientific concepts to enhance the design of learning environments that support students’ cultural identities, language and literacy development, and academic achievement. An additional challenge is the preparation of teachers in all subject areas to address the needs of English language learners. Although the standards for these disciplines, set by their respective professional associations, discuss issues of differentiated instruction or teaching all learners, to date there has been little research or curriculum development from within these disciplines that guides teachers in accommodating linguistic and cultural diversity in their instruction. What may be required is an approach such as that used, for example, in California or Florida, where all primary and secondary school teachers are required to complete a program that includes language and literacy development, intercultural communication, and the integration of language and content instruction.

The importance of combining content and pedagogical content knowledge in the preparation of qualified teachers has also been given increased attention in national and professional standards and in scholarly work across disciplines (Darling-Hammond, 2001; Interstate New Teacher Assessment and Support Consortium [INTASC], 1992, 2002; National Board for Professional Teaching Standards, 1991; National Council for Accreditation of Teacher Education, 2001b; National Council of Teachers of Mathematics, 2000; National Research Council/National Science Foundation, 1996; TESOL, 2002; Wang & Walberg, 2001). The emphasis
on strengthening pedagogical content knowledge is further evidenced in the recent melding of the pedagogically focused 1992 Interstate New Teacher Assessment and Support Consortium (INTASC) standards for teacher candidates with the discipline-based standards. One example is the redesigned set of standards—a collaborative project of INTASC with the National Science Teachers Association—that has resulted in new integrated standards for science teacher candidates (INTASC, 2002). Similar initiatives are underway as additional disciplines integrate their professional disciplines with the national INTASC standards that emphasize pedagogy.

MAJOR THEMES IN THE CONTENT-BASED INSTRUCTION CASE STUDIES

Standards-driven curriculum development, enhanced interdisciplinary collaboration in language teaching, and reflection and assessment in professional development are highlighted across all case studies showcased in this volume. Although the major themes described here are interwoven throughout the volume, some chapters give greater emphasis to one or the other of these and have been arranged accordingly. The major themes are

- partnerships and constructivist notions in CBI
- reflection and inquiry in CBI professional development
- standards-based CBI curriculum, assessment, and professional development

Partnerships and Constructivist Notions in Content-Based Instruction

Collaborative partnerships have played a key role in transitioning language teaching and learning to a CBI paradigm (Crandall, 1998b; Kaufman, 1997; Kaufman & Grennon Brooks, 1996). The authors in this volume, who represent state education departments, universities, or schools in the United States and in other countries, describe a range of professional endeavors and a multiplicity of collaborative initiatives that have emerged within schools and between schools and tertiary institutions in response to the new standards and changing paradigms. These joint projects that include primary and secondary school faculty and administrators, teacher candidates, teacher educators, and representatives from state education departments and national professional organizations underscore the increased role of all stakeholders in the educational process. Some examples of these include a school-university project that placed upper-intermediate English language learners in mainstream social studies classrooms designed especially to meet the needs of linguistically and academically diverse students (chapter 2: Bunch, Lotan, Valdés, & Cohen), a whole-school intervention project that included teacher supervisors and teachers in the design of a content-based EFL curriculum (chapter 3: Jakar), a schoolwide partnership in an EFL context to identify required English language functions and assign the teaching of these to ESOL and other content teachers (chapter 4: Hurst & Davison), collaborative partnership between an ESOL teacher with teachers across the curriculum in the teaching of beginning English language learners in a middle school (chapter 5: Bernache, Galinat, & Jimenez), and a joint exploration by practicing teachers and teacher learners of Vygotsky’s (1978) zone of...
proximal development (chapter 6: Gordon). These case studies display collaboration that is multifaceted and includes interpersonal, interdisciplinary, and cross-institutional initiatives.

**Reflection and Inquiry in Content-Based Instruction**

**Professional Development**

In recent years there has been increased attention to teachers' self-image as emerging professionals and to their developmental discourse about the process of becoming a professional (Edge, 2002). A critical reflective stance on practice, performance-based accountability, increased diversity, and enhanced technological proficiency has become an integral part of the process of state, national, and professional accreditation. Educational reform has stimulated inquiry and reflection, review of existing organizational structures and curricular content, and increased clinical experiences in teacher education programs (Williams, 2000). Through the TESOL (2002) standards and the accreditation process, CBI has become central to curriculum reform and has been infused into institutional and program conceptual frameworks. Development of CBI learning modules has engaged participants in reflective inquiry and discourse within and across disciplines. Educators have collaboratively redesigned curriculum and learning experiences and alternative assessment approaches for improving learning and teaching for English language learners. Reflection and inquiry have become central to professional development and to joint inquiry with primary and secondary school professionals as exemplified in many of the case studies. Some examples include a joint inquiry between teacher educators and primary and secondary school teachers through a Professional Development School model (chapter 7: Dubetz, Abreu, Alegria, Casado, & Diaz), the infusion of language into a social studies class to encourage reflection and better understanding of cultural issues in current events (chapter 8: Olsen & Belnap), reflective practice as central to helping language teachers move from traditional language teaching approaches to more content-based approaches in an elementary EFL program (chapter 9: Diaz-Maggioli & Burbaquis-Vinson), and reflective communication between the subject specialist and language specialist that raises interpersonal and interdisciplinary challenges as new understandings of each other's disciplinary foci emerge (chapter 10: Arkoudis).

**Standards- and Content-Based Instruction Curriculum, Assessment, and Professional Development**

The transition to standards-based curriculum development requires a paradigm shift in teacher education. The increasing importance of standards in designing and implementing CBI curriculum, developing effective assessment systems, and providing appropriate professional development is central to many of the chapters. Some examples include the development of a standards-based assessment initiative in collaboration with the state education department to prepare teachers to integrate the state's content standards into their language instruction (chapter 11: Gottlieb & Boals); a collaborative curriculum mapping process using state curriculum frameworks and assessment to transform a grammar-based high school ESOL curriculum to a content-based curriculum that articulates with and serves as a bridge to the mainstream curriculum across subject areas and grade levels (chapter 12: De Jong &
Grieci); and a sustained theme-based CBI program at a junior high school aligned with district, state, and TESOL standards to provide a basis for a range of experiences for English language learners that include academic/formal and social/informal language (chapter 13: Bigelow, Ranney, & Hebble).

Technological advances have led to the proliferation of new technologies for educational contexts and have opened new possibilities for classroom learning and professional development. Computer, video, and wireless technologies have expanded the notion of community of learners beyond local communities into global electronic learning communities. New technologies have greatly enhanced student achievement and teacher learning (Beatty, 2003; Bransford, Brown, & Cocking, 2000; Perkins, Schwartz, West, & Wiske, 1995; Warschauer, Shetzer, & Meloni, 2000). Universities have drawn on the new technologies to expand their role in professional development beyond the local region. Through online and distance learning, universities combine distance technologies with interpersonal face-to-face communication in working groups and community of learners to design programs for in-service teachers from all disciplines, regardless of geographical location. Teemant (chapter 14) describes a distance-learning program in which CBI plays an important role and is integrated throughout the program and instruction guide for the teachers. An important feature of this professional development program is the combination of distance and on-site approaches and the use of specially trained on-site ESOL/bilingual facilitators.

CONCLUSION

CBI has emerged in recent years as a pedagogical anchor to language education and has opened new opportunities for integration of interdisciplinary collaborative approaches for language teaching and learning. The current emphasis on standards-based accreditation and resulting reconceptualization of teacher education programs will likely further expand the horizons of language pedagogy by bringing constructivist approaches to the foreground in CBI and language teacher education and by opening new avenues for linguistic and interdisciplinary classroom-based research.

This volume reflects the diversity of CBI paradigms that are prevalent in primary and secondary schools and collaborative partnerships that have emerged within and across institutions and disciplines. These underscore the dramatic shift that has taken place in the field of language education and highlight the new challenges that have emerged in recent years in the preparation of teacher candidates for their reconceptualized role. Such preparation is no longer discipline-specific but extends beyond the field of linguistics and language education to other social and natural sciences and their respective pedagogies. In the coming years, the pedagogical content knowledge of language teachers will likely integrate epistemological notions that underpin the disciplines within which language teaching and learning is embedded.
CONTRIBUTORS

Dorit Kaufman is director of the professional education program at Stony Brook University, State University of New York (SUNY), in the United States. Her research interests include native language attrition and narrative development in children, teacher education, content-based instruction, and constructivist pedagogy. She received the R. Neil Appleby Outstanding Teacher Educator Award and the SUNY President’s/Chancellor’s Award for Excellence in Teaching.

Jodi Crandall directs the interdisciplinary PhD program in Language, Literacy, and Culture and codirects the MA Program in ESOL/Bilingual Education at the University of Maryland, Baltimore County, in the United States. She has written extensively on content-based instruction from the perspective of research, program or materials development, and teacher education and on adult ESOL and literacy.