POSTSECONDARY LEARNING

Recognizing the Needs of English Language Learners in Mainstream University Classrooms

Elizabeth Bifuh-Ambe

Introduction

Approximately 583,000 foreign students attend American universities (Institute of International Education, 2007). Many of these students have come to the United States from countries where very little or no English is spoken. These students face significant challenges as learning a new language nearly always involves the interplay of complex processes in the cognitive, social, and linguistic domains.

Acquiring proficiency in the various English language skills and the ability to utilize those skills as a medium of learning is a daunting task. Research suggests that children who do not speak English as their first language (L1) need five to seven years in school before they can perform as well in English as their English peers who are native speakers (Cummins, 1984). Therefore, after approximately two years of English as a second language (ESL) classes, English language learners (ELLs) at the university level are not yet adequately prepared to perform the most difficult function of literacy skills acquisition—content literacy, the ability to use language to access and master specialized material in content areas across the curriculum (Vacca & Vacca, 2005).

Researchers continue to seek effective ways to help ELLs across the levels of pre-kindergarten to twelfth grade to learn

Elizabeth Bifuh-Ambe is an assistant professor in the Graduate School of Education at the University of Massachusetts-Lowell, Lowell, Massachusetts.

to speak, read, and comprehend English as quickly as possible. Many programs throughout the U.S. focus on prevention and intervention and target both parents and their children. Some examples of such programs at either the elementary or secondary school levels are: *Success for All* (Slavin & Yampolsky, 1992)*, The Even Start Family Literacy Program* (DeBruin-Parecki, Paris, & Seindenburg, 1997), and *The Kamehameha Early Education Program* (KEEP) (Au & Carroll, 1997).

Various reports and acts of government have also tried to address the needs of bilingual learners in elementary through high school in the U.S. Among these are the Bilingual Education Act (20 U.S. C. 3283), the National Reading Panel's *Teaching Children to Read: An Evidenced-based Assessment of Scientific Research Literature on Reading and Its Implications for Reading Instruction (2000),* and the *No Child Left Behind Act, Title III (*2002).

Unfortunately, we do not know as much about meeting the literacy needs of ELLs at the university and other postsecondary levels of education (Fung, Wilkinson, & Moore, 1999). Few materials exit that offer information about instructional and learning strategies grounded in theory and practice that could assist adult ELLs use their new language to acquire subject matter across the university curriculum.

The dearth of research to address the needs of ELLs at the university level in the U.S. context may be related to a combination of factors that make the ELLs' needs at the postsecondary level a difficult topic to encompass. Fitzgerald (1995) states that among these factors are: (a) the rapid growth of ELLs in higher education, (b) the tremendous diversity among ELLs at the university level, and (c) the dynamic, evolving, and sometimes controversial state of reading research in general. Added to this is the lack of consistent and generalizable findings on second language reading processes and programs in particular (Slavin & Cheung, 2005). More research is therefore needed to shed light on the complicated interaction between English language acquisition and use, as well as the reading and comprehension of postsecondary ELL students.

A Range of K-12 Strategies

Some people may assume that research findings that address the needs of ELLs at elementary, middle, and high school levels can be transferred to college-level students. This is not necessarily the case because college level instruction is structured differently and usually builds on previously acquired social and academic knowledge. At the middle or high school levels, teachers may choose to use certain strategies that involve hands-on-approaches to enhance learning or develop clear consistent classroom routines that accommodate the needs of ELLs and help them master concepts in the content areas.

Such strategies are typically implemented through peer-mediated instructional formats where students are asked to work in small groups or in pairs. These models are carefully monitored by the

teacher to make sure that learning outcomes are enhanced (Vaughn, 2001).

One such strategy that has been used with some success in elementary and secondary schools is Collaborative Strategic Reading (CSR) (Klingner & Vaughn, 1996; Klingner, Vaughn, & Schumm, 1998; Vaughn, & Bryan, 2002). In a three-year study involving a heterogeneous group of grades 3 to 6 Latino students with learning disabilities and limited English proficiency who were facing comprehension difficulties, the CSR was implemented with emphasis on semantic mapping to enhance vocabulary acquisition, repeated partner reading (PR), and other before, during, and after comprehension strategies. Results from the study indicated that although the rate of reading increased, there were no statistically significant effects on accuracy, oral reading fluency, vocabulary, and comprehension for both low-achieving ESL students in grades 4 and 5 and students with LD.

Other studies (Fung, Wilkinson, & Moore, 1999; Hernandez, 1991) suggest that intensive instruction in comprehension strategies using the students' primary language (L1) can improve students' comprehension of content area subject matter. In a multiple-baseline-design study involving 7th and 8th grade Taiwanese English Second or Official Language (ESOL) students, Fung, Wilkinson, and Moore used both L1 (Mandarin) and L2 (English) texts for reciprocal teaching. Students were provided with explicit teacher-directed strategy instruction. Results of the pilot and main study showed student gains in both standardized and researcher-developed reading comprehension tests.

Follow-up interviews also indicated that students were able to transfer comprehension strategies in novel expository comprehension tasks. The results of these studies provide practical support to the view that one approach to enhancing comprehension of subject matter in the content areas for ELL middle school students may be through using reading strategy instructions that are based on the students' L1 literacy skills. Cummings (1984*b*) hypothesized that knowledge and experiences acquired from L1 experiences can lay the foundation for L2 literacy acquisition.

How Postsecondary Learning Differs

It would, however, be theoretically and practically unsound to transfer results of studies conducted at elementary and secondary levels to a university context. First, the ethnic and linguistic variety of students represented in university language teaching courses or mainstream classrooms precludes the use of a strategy such as reciprocal teaching that focuses on dialogue between the teacher, a leader, and the students. In that approach the teacher provides a lot of guided practice in comprehension strategies such as predicting, questioning, clarifying, and summarizing. Students work in small collaborative learning groups and the teacher continues to provide support through prompts, praise, and alternative directions to ensure students' success.

This procedure therefore necessitates that all students in the classroom share the same L1 in order to benefit fully from the levels of English language processing and teacher scaffolding of strategic thinking tasks that are required for comprehension (Fung, Wilkinson & Moore, 1999; Vaughn & Bryan, 2002). Therefore, in a linguistically diverse postsecondary class, reciprocal teaching would be impractical because learners do not share a common L1. Due to this limitation, college-level ESL courses are often limited only to developing students' decoding skills and knowledge of syntax or vocabulary for literal comprehension (Beebe, 1988). Such skills alone do not often ensure reading comprehension adequate for academic learning.

In addition, college instructors' training experiences for teaching ELL students are often different and sometimes non-existent (Menken & Look, 2000). Menken and Look stated that according to the 1997 National Center for Education Statistics, only 2.5% of teachers who instruct ELLs have a bilingual degree or certificate and only 30% of all teachers with ELL students in their classes have received any professional development in this area.

These statistics refer to elementary and secondary school teachers, but it stands to reason that university instructors are equally if not even more untrained to meet the academic needs of ELLs. Even if university teachers have bilingual training, the conceptual structure of university programs places some constraints on them. They are typically more concerned about covering the course material than ensuring students' comprehension and may therefore not implement instructional procedures that would take up a lot of instructional time or necessitate extensive instructor scaffolding.

University professors may also be under the assumption that if ELL students have succeeded in the Test of English as a Foreign Language (TOEFL), a prerequisite for enrollment in college courses at most U.S. universities, then those students are capable of pursuing a university education.

Such an assumption is often erroneous, since some studies have shown that even a successful score on the TOEFL does not guarantee successful communication with native speakers of the language (Harley et al. 1990; Kasper & Petrello, 1996). A study by Wang (in press) indicates that some college Chinese students still have difficulties expressing themselves verbally or understanding some spoken forms of the English language even after passing the TOEFL. This difficulty stems from the colloquial nature of certain forms of English.

In addition, students do not often comprehend the specialized concepts and the technical vocabulary found in textbooks that is needed to successfully master academic content (Ambe et al., 2004; Blachowicz & Fisher, 2000). Compounding this limitation is the fact that ELLs who come to the U.S. to learn English and pursue an academic career in the university level typically do not have the time to wait for adequate English language proficiency to develop before enrolling in the mainstream classes of the university (Kasper & Petrello, 1996). After enrollment, however, surviving in the classroom with such minimal knowledge of the English language becomes daunting.

Theoretical Implications of Second Language Acquisition

To shed light on some challenges that ELLs at the University level encounter as they acquire proficiency, it is necessary to examine some theories and implications of second language acquisition (SLA). The process of SLA draws from many interdisciplinary perspectives, among them constructivist theory, psycholinguistics theory, and classroom research theory.

Constructivist Theory

The constructivist theory of language learning posits that students construct their own learning through reflection and experience as they constantly interact with new educational situations (Vygotsky, 1978, 1979). This seldom involves only the individual student, but also includes social engagement with others. The ELL student, however, requires extensive periods of time in such social settings with native speakers as well as in the classroom in order to evolve into a skilled language user.

Although socializing with native speakers could speed up language acquisition and even scaffold academic learning, some college-level ELLs do not find it easy to make friends with American students. First, due to the extensive amount of time ELLs must devote to studying, not much time

is left for socializing; and, secondly, there is a perception that American university students are not interested in developing close friendships with foreign students. Furthermore, because ELLs from foreign countries do not typically have off-campus work permits, they lack opportunities to interact with the larger community (Ambe et al., 2005).

Psycholinguistic Theory

The psycholinguistic aspect of language acquisition and processing focuses on how knowledge is acquired, the role that previous knowledge plays in the acquisition process, and the affective factors that influence the way people perceive and process second language data (Beebe, 1988). Processing and acquisition often occur concurrently.

In a review of both process and acquisition, Seliger (1988) made the distinction that processing involves the psychological mechanisms that allow the learner to understand the second language utterances and be able to produce similar utterances in his or her own language, while acquisition deals with how the second language user acquires the interlanguage (IL) system. Interlanguage refers to a unique grammar that develops due to the interaction between the first language (L1) and the second language (L2). This grammar neither belongs to the source language nor the target language and can only be found in second language learning contexts (Selinker, 1972, as cited in Seliger, 1988).

Selinker identifies some processes responsible for interlanguage: (a) transfer of rules from learner's first language as the learner tries to produce second language utterances; (b) transfer of training due to excessive drilling in particular forms of the second language in class, and (c) overgeneralization of target language linguistic forms. Central to IL is the concept of fossilization, which refers to a period when learning the target language ceases, regardless of further exposure (Gass & Selinker, 2001).

Because it is difficult to determine when learning has ceased, fossilization is often referred to as stabilization of linguistic forms; a period when the learner has reached a plateau. Interlanguage can play quite a complex role for adult ELLs' language acquisition in the university context for various reasons. First, by adulthood, the rules of the first language have been so thoroughly internalized that overgeneralizations may occur frequently, often hindering the language acquisition and reading process in the L2.

Secondly, not enough time is spent in most college ESL programs to adequately prepare the students to master English grammar rules. This means that in the learning environment, the ELL depends on limited schema to process information and confirm or reject decisions about new language constructs. For the ELL second language learner in the university context, reading truly becomes "a psycholinguistic guessing game" (Goodman, 1967).

Classroom Research Theory

Classroom research theories of second language acquisition examine the interaction between the context of learning and levels of proficiency; for example, the similarity between the IL of instructed (classroom) learners and that of learners who learn language naturally without any formal instruction (Beebe, 1988). Long (1983) reviewed the literature on the effects of instruction on: (a) second language acquisition processes such as transfer or overgeneralization of rules; (b) acquisition sequence; (c) rate of acquisition; and (d) ultimate level of second language attainment. From this review it was concluded that, although the language development of both instructed and uninstructed learners demonstrated processes like transfer, instructed learners were favored because they were more likely to drop overgeneralization and other IL features in the long term.

Meaningful and effective second language instruction often speeds up the rate of acquisition and the ultimate level of acquisition of a second language. Krashen (1981, 1982, 1985) had formulated the theory that comprehensive input is a necessary provision for second language acquisition to occur. Krashen stipulated that for input to be comprehensive, it should be sufficient, comprehensible, interesting, relevant, and not grammatically sequenced. Comprehensible input requires repetitions, confirmation, clarifications, modified structures used for interactions, and should focus on the "here and now" (Long, 1983).

In systematic reviews of various research findings, Cummins (1994) concluded that sufficient comprehensible input is necessary to scaffold ELLs' comprehension, because L1 and L2 academic skills are interdependent. Unfortunately, most ELLs in the university context have not spent enough time in the language classroom to attain a level of target language proficiency that would permit comprehensible input or develop the proficiency level needed to use the language for both social and academic purposes (Harley, Allen, Cummins, & Swain, 1990).

Cummins (1984b, 2000) refers to two levels of language proficiency: (1) basic interpersonal communicative skills (BICS) and (2) cognitive academic language proficiency (CALP). BICS are often informal and are usually aided by facial expressions, gestures, and body language. Social language which is rich in context does not often require precise vocabulary and standard grammatical features. It is often aided by the interlocutor's multiple attempts to communicate using queries and gestures, due to their desire to understand and be understood. On the other hand, CALP, which usually takes place in the classroom, does not often have enough gestures, body language, and facial expressions that could facilitate communication.

Furthermore, academic communications take place in limited time frames. Because of this, social language is likely to develop more rapidly than academic language (Rance-Roney, 1995; Watts-Taffe & Truscott, 2000). Cummins posits that it takes an average of two years to develop BICS while the development of CALP requires a period of five to seven years, because learning the correct use of grammatical features such as plurals, prepositions, possessives, and other language mechanics takes a longer time.

BICS and CALP must be sufficiently well developed before a learner can adequately tackle the cognitive challenges of the classroom. Although many of these students may be able to function socially in the second language within a year or two, mastering academic tasks is usually more demanding. Ward (1998) reports multiple levels of college-level proficiency which typically include "performing academic tasks such as listening to lectures, taking notes, reading textbooks, and writing term papers" (p. 2). When one or both language forms are not functioning fully, the student's cognitive abilities and academic performance may be negatively affected.

Mulligan and Kirkpatrick (2000) conducted a study to explore the nature of difficulties that non-native-speakers of English encounter in comprehending lectures at an Australian university. Participants in this study were first-year students enrolled in two separate disciplines (Architecture & Construction, and Economics & Finance) with class sizes ranging from 29 to 450 students. Each class had at least 48% English second language students (Asian-born or Australian-born) making a total of 198 students who came from non-English-speaking-backgrounds (NESB).

Results from questionnaires, lecture observations, and interviews with lecturers and students showed that less than one out of every 10 NESB student was able to understand the content and the intent of lectures very well. Almost one quarter of

the students had not understood anything in the lectures at all. These difficulties in comprehension were not only due to the lecture model of teaching but also to the quality of the lectures. Most lectures did not provide a clear outline of topics to be covered or hand-outs, which meant that students had to listen and take notes at the same time about topics on which they had no schematic structures. These researchers concluded that students' difficulties in comprehension could be attributed to two main factors: linguistic and socio-cultural.

Flowerdew (1998) identified the linguistic difficulties as arising from the lack of adequate listening skills and other language skills of ELLs. Due to the heavy emphasis that is placed on speaking and reading in English language teaching programs, non-English speaking background students are often challenged in listening to lectures at Western universities. Flowerdew (1998) identifies such listening skills as *real-time processing,* requiring the listener to concentrate on extensive monologue and negotiate meaning without the benefit that facilitates interactive dialogue such as repetitions or questioning.

The lecture model further requires ELLs to not only use listening skills, but other language skills such as understanding new vocabulary words, thinking, and note-taking. Operating with these distinct language skills simultaneously requires a level of mastery that ELLs typically have not yet attained. Fitzgerald (1995) also contends that, despite the emphasis of many programs on reading, even second language learners who are proficient in English read more slowly than native English speakers. When ELLs are thus limited in so many aspects of language proficiency, their ability to comprehend course content is likewise hindered, and academic success becomes uncertain.

In a comprehensive ethnographic study conducted with Chinese students in Hong Kong, Flowerdew and Miller (1995) identified four dimensions of the cultural context of the lecture model of teaching that can potentially affect students' comprehension. They are (a) ethnic, (b) local, (c) academic, and (d) disciplinary. For example, Chinese students who come from the Confucian ethnic culture that emphasizes respect for elders may be reluctant to ask questions in class. Secondly, students are not versed in the local, social, political, or economic culture from which "local" lecturers and students can draw a shared experience that will enhance their comprehension. All these factors contribute to a challenging academic environment.

Literacy Skills Acquisition and Use in Second Language

Unquestionably, ELLs who wish to pursue higher education in the U.S. must master English to succeed in their academic endeavors. Although some of these students might have acquired social communicative skills in English, they may be unable to read and perform other literacy tasks at the university level. Although studies have shown that the process of learning to read is difficult for all learners, there are differences between native and non-native English readers, due to the cognitive, linguistic, and experiential resources that they bring to the reading task (Fitzgerald, 1995; Goodman, Goodman, & Flores, 1979). This is especially true when the reading task involves comprehension of subject matter. As earlier stated, the ELL needs to be adequately proficient in the target language, possess background knowledge of the related text, and have literacy abilities and some experiences in the first language (Peregoy & Boyle, 2000).

ELLs also need to use strategies to overcome their limited language proficiency skills and be able to independently acquire learning in the mainstream university classroom. Learning strategies refer to "techniques, approaches, or deliberate actions that students take in order to facilitate the learning and recall of both linguistic and content area information" (Wenden & Rubin, 1987, p. 71). Learning strategies may be observable or unobservable, conscious or unconscious, but whatever form they take, they are usually "problem oriented," and the learner utilizes them to "to facilitate the acquisition, storage, retrieval or use of information" (Wenden & Rubin, p.7).

Wenden and Rubin (1987) have identified some of the learning strategies commonly used by second language learners as: (a) guessing from context, (b) paying attention to pronunciation, (c) using gestures, (d) going to movies, and (e) making friends. However, due to the accelerated nature of college-level ESL courses, ELLs usually cannot tap into these strategies in order to attain the level of proficiency that is required for success in college.

In a study with Chinese Masters of Business Administration (MBA) students in a Canadian university, Parks and Raymond (2004) suggested that strategy used to enhance comprehension in post-secondary contexts should emphasize the social domain. In order to enhance ELLs' participation in class discussions and contribute to their comprehension of subject matter, teachers needed to create

a socio-constructivist classroom environment where students could work in small groups. In such settings, the teacher and peers could develop positive attitudes that would make foreign students feel respected and validated.

Another method that empirical and anecdotal evidence has proved to be sound in facilitating subject matter acquisition is content-based ESL instruction (Kasper, 1994, 1999; Snow & Brinton, 1988). The content-based ESL instruction model recommends teaching ELLs English through the use of content area textbooks that are used in the mainstream university classrooms. Through this method, students are expected to learn not just social communicative skills but also academic language competency.

Yet many factors make acquiring this level of competency uncertain. These factors include: (a) length of exposure to the target language, (b) learners' age, (c) learning environment, (d) learners' lack of background knowledge, and (e) experience in the first language. Learners also vary in personal areas such as: prior educational experiences, cultural heritage, socio-economic status, and country of origin, as well as interests, desires, aptitudes, and levels of both primary and English language development (Peregoy & Boyle, 2000).

Length of Exposure and Age Factor

Because acquiring a second language is a complex process that usually takes several years, any attempt to shorten the process in the hope that hard work and persistence will triumph over nature is a myth (Ward, 1998). The expectation for university students taking ESL classes to begin to cope academically within two years of starting to learn English is unrealistic. Two years is insufficient time to acquire a satisfactory level of proficiency, because many classroom interactions are dominated by teacher-talk. Thus, the amount of interaction that goes on between the teacher and the students in a typical ESL class is not enough to guarantee that students will develop oral language proficiency (Belasco, 1983).

Linguists further believe that the age of ELLs at the university level could be a barrier to rapid language acquisition. This aspect of age as it relates to language acquisition is commonly referred to as the *Critical Period Hypothesis* (Brown, 1991a; Dulay, Burt & Krashen, 1982; Gass & Selinker, 2001; Krashen, 1987). The critical period hypothesis states that children can more easily become more proficient in a language than adults and acquire native-like accents faster. This is because

maturational changes in the human brain during puberty make it impossible for adults to reach native-like proficiency in the grammar of a foreign language (Chomsky, 1965; Cummins, 1994). Although the reason for this is not clear, some linguists (Chomsky, 1965; Lenneberg, 1967; McNeil, 1966) have attributed this phenomenon to the laterization of the part of the brain that is used for language acquisition.

Other researchers challenge this point of view, finding that although younger children perfect pronunciation better, older students and adults perform at a higher level in controlled language learning studies (Marinova-Todd, Marshall & Snow, 2000; Snow & Hoefnagel-Hoehle, 1978). Older learners have been known to catch up to those who started learning the L2 at a younger age. This may be due to the cognitive maturity of older learners (Harley, 1986). Krashen (1987) suggested that a high level of anxiety in adults might be the cause of seemingly lower levels of competencies and performance. ELLs at the university, who may be beset with various challenges ranging from socio-cultural, financial, and academic are at risk of experiencing certain anxieties that may hinder them from mastering the second language adequately enough for academic use.

Learning Environment

Other differences in language-learning environments can also result in differences in the success rate of second language acquisition. Harley (1986) stated that children who learn the language in natural settings as they interact with speakers of the native language at play or other more relaxed social environments are more successful.

This is especially true in regard to acquisition of accent, whereby younger learners' accents are seen to be closer to that of native speakers of the language. College students do not have this advantage and are often limited to studying the pronunciation, vocabulary, and structure of the English language only in the classroom environment.

Relationship of Text to Cultural Knowledge

It is interesting to note that background knowledge of the content of a text can make comprehension easier. Studies have shown that students do better in comprehension on passages that reflect their cultural traditions (Moje, Dillon & O'Brien 2000; Steffenson & Joag-Dev, 1984). In this instance, culture refers to a people's language, ways, beliefs, laws, and customs. Carrell (1987) illustrated the effects of prior knowledge on comprehension

in a study involving two groups of ESL university students from Catholic and Muslim backgrounds. These students were assigned two reading passages; one of the passages had Muslim-oriented content and the other had a Catholic-oriented content. Both groups did better in comprehension on the passage that reflected their cultural tradition.

As Kornienko (2000) states, "every act of communication includes one's knowledge of the world" (p. 3). Lack of background knowledge therefore, makes a text more difficult to comprehend. This is because every reader draws inferences from a text that may lead them to either interpret the writer's intention from their own previous experiences or fail to grasp a meaning intended by the author. "If the author and the reader have very little in common, as may happen when they live in different cultures or have different belief systems, then the likelihood of true communication is low" (Kornienko, 2000, p. 3).

The study of cultural background and its effects on reading comprehension was pioneered by Sir Barlett in 1932. Barlett's study (as cited in Kornienko, 2000) found that when English college students heard American tales, their remembrance of these tales was greatly influenced by their cultural experiences and expectations. This research suggested that a reader's knowledge prior to reading a text had a strong interaction with the details of the story. From this theory it can be deduced that memory and cultural influence play an active role in reading comprehension.

ELLs in U.S. universities unfortunately do not often have the cultural background knowledge or schemata that may facilitate comprehension of subject matter. This is because they are often new arrivals to the host country and since their length of exposure has not been long, they are still learning the new culture. Since education is one of the vessels by which a people's culture is handed down from generation to generation, American textbooks and other instructional materials would obviously contain cultural knowledge that foreigners may not be familiar with.

Lack of knowledge of the culture consequently makes comprehension of some content area texts more difficult. Although sometimes people may successfully comprehend texts for which they have no background knowledge, it is recommended that these texts be properly structured and well written for comprehension to occur (Kornienko, 2000).

Experience in the First Language

Often, a student who is literate in

another language, even one whose writing system is different from English such as Chinese, Arabic, or Russian, has stores of information that will help that student in English instruction (Moll, 1994). Since ELLs at the university already speak another language, they are linguistically more experienced and can use rules more readily. The native language of these students can be a source of reference to learn the rules of a second language (Richard-Amato, 1988; Richard-Amato & Snow, 1992).

Although as adults ELLs may have lost the intuition of acquiring language spontaneously the way children do when exposed in a natural setting, they have the analytical ability to comprehend grammar rules based on the knowledge gained from their first language experience. These rules provide adult ELLs with general guidance to better understand the structure of the foreign language they are seeking to master. They can then apply the rules and practice them, thus improving their general output. If linguistic fluency and accuracy are achieved, comprehension skills in content area could be enhanced (Richard-Amato, 1988).

This apparent advantage should, however, be pursued with caution, since it could become a further source of challenge to the student who may now be faced with the task of learning the similarities and the differences between two writing systems, those of English and the primary language.

Conclusion

The literature indicates that for ELLs at the university level to be successful in their academic endeavors, they need to be proficient in the target language. Acquiring the level of proficiency that would guarantee such success involves overcomning several challenges. This process includes many factors: (a) the learners' age, (b) the learning environment, (c) the learners' lack of background knowledge, and (d) the fact that, by natural processes, proficiency in any given language takes several years.

ELLs must therefore use a number of cognitive and learning strategies to succeed. Unfortunately, a review of the literature indicates a dearth of available resources that would provide these students with such skills. More research, followed by appropriate program development at postsecondary institutions, is needed to both explore and implement effective strategies to insure that ELLs can successfully master English and access the subject matter of mainstream college and university courses.

References

Ambe, E. A., Falconer, R., & Leewer, S. L. (2004). Content area reading: A case study of an English second language college student. *Journal of Content Area Reading, 3*(1), 37-69.

Au, K. H., & Carroll, J. H. (1997). Improving literacy achievement through a constructivist approach: The KEEP demonstration classroom project. *The Elementary School Journal, 97,* 203-221.

Beebe, L. M. (Ed.). (1988). *Issues in second language acquisition: Multiple perspectives.* Boston: Heinle & Heinle.

Belasco, S. (1983). Time, proficiency, and the best method: An editorial. [Electronic version]. *Modern Language Journal, 67*(3).

Blachowicz, C. L., & Fisher, P. (2000). Vocabulary instruction. In M. Kamil, P. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (pp. 503-523). Mahwah, NJ: Lawrence Erlbaum Associates.

Brown, H. D. (1991*a*). *Breaking the language barrier: Creating your own pathway to success.* Yarmouth, ME: Intercultural Press.

Carrell, P. L. (1987). Content and formal schemata in ESL reading. *TESOL Quarterly, 21*(3), 461-81.

Chomsky, N. (1965). *Aspects of theory of syntax.* Cambridge, MA: The M.I.T. Press.

Cummins, J. (1984*b*). Wanted: A theoretical framework for relating language proficiency to academic achievement among bilingual students . In C. Rivera (Ed), *Language proficiency and academic achievement* (pp. 83-102). Clevedon, UK: Multilingual Matters.

Cummins, J. (1994). The acquisition of English as a second language. In K. Spangenberg-Urbschat & R. Pritchard (Eds.), *Kids come in all languages: Reading instruction for ESL students* (pp. 36-62). Newark, DE: International Reading Association.

Cummins, J. (2000). Language, power and pedagogy: Bilingual children in the crossfire. *Bilingual Education and Bilingualism, 23.* Clevedon, UK: Multilingual Matters.

Debruin-Parecki, A., Paris, S. G., & Seindenburg, J. (1997). Family literacy: Examining practice and issues of effectiveness. *Journal of Adolescent & Adult Literacy, 40*(8), 596-606.

Dulay, H., Burt, M., & Krashen, S. (1982). *Language two.* Oxford, UK: Oxford University Press.

Fitzgerald, J. (1995). English-as-second-language learners' cognitive reading processes: A review of research in the United States. *Review of Educational Research, 65*, 145-190.

Flowerdew, J., & Miller, L. (1995). On the notion of culture in L2 lectures. *TESOL Quarterly, 29*(2), 345-373.

Fung, I. Y. Y., Wilkinson, I. A. G., & Moore, D. W. (1999). L1-Assisted reciprocal teaching for ESOL students to improve their comprehension of English expository text. Paper Presented at the Joint Conference of Australian Association for Research in Education and New Zealand Association for Research in Education, Melbourne. http://www.aare.edu.au/99pap/fun99531.htm

Gass, S. M., & Selinker, L. (2001). *Second language acquisition: An introductory course.* London, UK: Lawrence Erlbaum.

Goodman, K.S. (1967). Reading: A psycholinguistic guessing game. *Journal of Reading Specialist, 6.* 126-35. [Reprinted in H. Singer & R. B. Ruddell (Eds.), *Theoretical models and processes of reading* (pp. 497-519). Newark. DE: International Reading association.]

Goodman, K. S., Goodman Y., & Flores, B. (1979). *Reading in the bilingual classroom: Literacy and biliteracy.* Rossyln, VA: National Clearinghouse for Bilingual Education.

Harley, B. (1986). *Age in second language acquisition.* San Diego, CA: College-Hill.

Harley, B., Allen, P., Cummins, J., & Swain, M. (Eds.). (1990). *The development of second language proficiency.* New York: Cambridge University Press.

Hernandez, J. S. (1991). Assisted performance in reading comprehension strategies with non-English proficient students. *Journal of Educational Issues of Language Minority Students, 8*, 91-112.

Higher Education in Europe. (1987). Available at http://www.tandf.co.uk/journals/titles

Institute of International Education. (2007). International student enrollment in U.S. rebounds. Retrieved January 20, 2008, from http://opendoors.iienetwork.org/?p=113743

Kasper, L. F. (1994). Developing and teaching a content-based reading course for ESL students. *Teaching English in the Two-Year College, 21*(1), 23-26.

Kasper, L. F., & Petrello, B. A. (1996). Responding to ESL student writing: The nonjudgmental approach. *Community Review, 14,* 5-12.

Kasper, L. F. (1999). *Content-based college ESL instruction: An overview.* Mahwah, NJ: Lawrence Erlbaum Associates.

Klingner, J. K., & Vaughn, S. (1996).Reciprocal teaching of reading comprehension strategies for students with learning disabilities who use English as a second language. *Elementary School Journal, 96,* 275-293.

Klingner, J. K., Vaughn, S., & Schumm, J. S. (1998). Collaborative strategic reading during social studies in heterogeneous fourth-grade classrooms. *Elementary School Journal, 99,* 3-21.

Kornienko, E. (2000). Foreign text perception and comprehension. [Electronic version]. *IRAL: International Review of Applied Linguistics in Language Teaching, 33*(3/4).

Krashen, S. D. (1981). *Second language acquisition and second language learning.* London, UK: Pergamon.

Krashen, S. D. (1982). *Principles and practice in second language acquisition.* London, UK: Pergamon.

Krashen, S. D. (1985). *The input hypothesis.* New York: Longman.

Krashen, S. D. (1987). Applications of psycholinguistic research to the classroom. In M.H. Long & J. C. Richards (Eds.), *Methodology in TESOL: A book of readings.* Boston: Heinle & Heinle.

Lenneberg, E. (1967). *Biological foundations of language.* New York: Wiley.

Long, M. H. (1983). Does second language instruction make a difference? A review of research. *TESOL Quarterly, 17*(3), 359-382.

Marinova-Todd, S., Marshall, D., & Snow, C. (2000). Three misconceptions about age in L2 learning. *TESOL Quarterly, 34*(1), 9-34.

McNeil, D. (1966). Development psycholinguistics. In F. Smith, & G. A. Miller, (Eds.), *The genesis of language: A psycholinguistic approach* (pp. 68-96). Cambridge, MA: The MIT Press.

Menken, K., & Look, K. (2000). Meeting the needs of linguistically and culturally diverse students. *Schools in the Middle,* Feb., 20-25.

Moje, E. B., Dillon, D. R., & O'Brien, D. (2000). Reexamining roles of learners, text, and context in secondary literacy. [Electronic version]. *Journal of Educational Research, 93*(3).

Moll, L. C. (1994). Literacy research in community and classrooms: A socio-cultural approach. In R.B. Ruddell, & M.R. Ruddell (Eds.). (pp.179-207).

Mulligan, D., & Kikpatrick, A. (2000). How much do they understand: Lectures, students and comprehension. [Electronic version]. *Higher Education Research and Development, 19*(3).

Palinscar, A. S., & Brown, A. L. (1984).The reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. *Cognition and Instruction, 1*, 117-175.

Parks, S., & Raymond, P. (2004). Strategy use by non-native English-speaking students in an MBA program: Not business as usual. *Modern Language Journal, 88*(3), 374-391.

Peregoy, S. F., & Boyle, O. F. (2000). English learners reading English: What we know, what we need to know. [Electronic version]. *Theory into Practice*, *39*(4).

Rance-Roney, J. (1995). *Transitioning adult ESL learners to academic programs.* (Report No. RR93002010). Washington, DC: National Clearinghouse for ESL Literacy Education. Retrieved October 2, 2002, from EBSCO Masterfile database.

Richard-Amato, P. A., & Snow, M.A. (Eds.). (1992). *The multicultural classroom: Readings for content area teachers.* Reading, MA: Addison-Wesley.

Seliger, H. (1988). Psycholinguistic issues in second language acquisition. In Beebe, L. M. (Ed.), *Issues in second language acquisition: Multiple perspectives* (pp. 17-40). Boston: Heinle & Heinle.

Slavin, R. E., & Yampolsky, R. (1992). *Success for all: Effects on students with limited English proficiency: A three-year Evaluation.* Report No.14. Baltimore, MD: John Hopkins University, Center for Research on Effective Schooling for Disadvantaged Students. Eric Document Reproduction Service No. 331294.

Slavin, R. E., & Cheung, A. (2005). A synthesis of research on language of reading instruction for English Language Learners. *Review of Educational Research, 75*(2), 247-284.

Snow, C., & Hoefnagel-Hoehle, M. (1978). The critical period for language acquisition: Evidence from second language learning. *Child Development, 49,* 1114-1118.

Snow, M. A., & Brinton, D. M. (1988). Content-based language instruction: Investigating the effectiveness of the adjunct model. *TESOL Quarterly, 22*(4). 553-574.

Steffenson, M. S., & Joag-Dev, C. (1974). A cross-cultural perspective on reading comprehension. *Reading Research Quarterly, 15*(1), 84-93.

U.S. Department of Education, National Center for Education statistics. (2002). *Common Core Data (CCD), Public Elementary/Sec-*

ondary School Universe Survey 2001-2002 and Local Education Agency Universe Survey 2001-2002. Washington, DC: Author.

Vacca, R., & Vacca, L. (2005). *Content area reading: Literacy and learning across the curriculum* (8th ed.). New York: Addison-Wesley.

Vaughn, S. (2001). Collaborative strategic reading as a means to enhance peer-mediated instruction for reading comprehension and content-area learning. [Electronic version]. *Remedial & Special Education, 22*(2).

Vaughn, S., & Bryant, D. P. (2002). *Reading comprehension interventions that enhance outcomes for English language learners with LD, 10/01/98-09/30/02*. Final Report. Austin, TX: University of Texas (ED477879).

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Cambridge, MA: Havard University Press.

Vygotsky, L.S. (1997). The problem of the development of higher mental functions. In R. W. Rieber (Ed.). *The collected works of Vygotsky: Vol. 4. The development of higher mental functions* (Ist ed., pp.1-26). New York: Plenum.

Ward, M. (1998). Myths about college English as a second language. [Electronic version]. *Education Digest, 63(*5).

Watts-Taffe, S., & Truscott, M. D. (2000). Using what we know about language and literacy development for ESL students in mainstream classroom. *Language Arts, 77*(3), 258-263.

Wenden, A., & Rubin, J. (1987). *Learner strategies in language learning.* Cambridge, UK: Prentice.

Wright, W. D. P., Wright, P. D., & Heath, W. S. (2003). *Wrigtslaw: No Child Left Behind.* Hartfield, VA: Harbor House Law.