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Academic English: A Conceptual Framework

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ABSTRACT

Learning academic English is probably one of the surest, most reliable ways of attaining socio-economic success in the United States today. Learners cannot function in school settings effectively without it. This variety of English entails the multiple, complex features of English required for success in public schooling and career advancement. It involves mastery of a writing system and its particular academic conventions as well as proficiency in reading, speaking, and listening. Unfortunately, academic English has often been ignored or under-emphasized in public school instruction. Many have not understood its importance in helping students function in school settings or have misunderstood its complex nature. This paper discusses approaches to the study of academic English and presents a multi-dimensional framework for analyzing it. The dimensions include linguistic, cognitive, and socio-cultural/psychological ones. The paper also describes the relationship between the English used in everyday situations and in academic ones. It concludes with a brief discussion of research implications pertaining to instruction, assessment, and professional development.

As director of a large English language program at the University of California at Irvine (UCI), professors sometimes complain to me about their students' communication skills. A while back, Professor Baker, a professor at UCI, forwarded me the following e-mail message from a student named Duy who wanted to work in his lab¹:

How do you do? My name is Duy Nguyen. I am a student in UCI currently on the freshman level. I am going to be attend Biology 5C next year, but during the summer, I would like to continue my study on the subject. Although my major is in Social Science, I am consider to have Biology as my second major. I am currently attending Professor Campbell lecture. He suggested to me that maybe I should seek around to for resarch projects, since it would be much more beneficial and interesting to have actual hands on experience. He suggest that maybe I should contact you to see would it be possible for you to provide me with some information. As I have understand that you are currently conducting a research on the subject of plasma, and I would like to know more about it, that is, if I am not costing any inconvenience. Thank you very much, and have a good day.

Professor Baker did not allow Duy to work on his research project, and he did not allow him to major in Biology in addition to Social Science. He forwarded Duy's message to me with the following comment about Duy's language use: "*Syntax, spelling, whew!*"

Certainly one reason that Duy failed to accomplish his objectives--obtaining work and switching from a single major in Social Science to a double major in Social Science and Biology-- is that Duy's message has a number of rhetorical problems. He does not know how to start a formal e-mail request, and he does not know that such requests are usually short and to the point (Swales, 1990).

Perhaps Duy should not have been expected to write a cogent request to a professor. Prof. Baker seemed to have unreasonable expectations of Duy, a first-year undergraduate student. While a graduate student might be expected to write a polished, persuasive request to a professor, it does not seem reasonable that secondary schools should have taught Duy this specialized knowledge. It is regrettable that Prof. Campbell did not mentor Duy in request-making before referring him to Prof. Baker. Prof. Campbell might have told Duy that requests to faculty members should be brief and include strong rationales. Duy never describes his research qualifications or the reasons that Prof. Baker should allow him to double major in Social Science and Biology. One might minimally expect Duy to mention his grade point average. His rationale

¹ The student and professors' names, disciplines and projects have been changed to maintain their anonymity.

for working on Prof. Baker's research project pertains only to the benefits he [Duy] will derive from the experience; Duy does not explain how his work might contribute to Prof. Baker's research agenda.

Nonetheless, Duy's message also reveals his lack of knowledge of spelling, grammatical structures, and vocabulary—knowledge that he might have obtained in secondary and elementary school. Note that Duy makes spelling errors (such as *atend* and *resarch*). He does not use the possessive correctly (he should have written *Professor Campbell's* in the sentence, *I am currently attending Professor Campbell lecture*). He does not always use conditional structures that begin with the word *if* correctly (it would have been more effective if he had written: *He suggested that I contact you to see if you could provide me with some information*). His email demonstrates a lack of the vocabulary necessary to explain himself effectively. For instance, he does not seem to know the idiom *to cause (not cost) an inconvenience*, and he uses the expression *on the freshman level* instead of *freshman*.

While e-mail messages clearly need not be free of standard English errors, it is apparent that Duy's spelling, grammar, and vocabulary problems were serious enough to bother the professor. It is equally clear that Duy needed to learn more academic English, the variety of language used by the educated and valued in educational settings in the United States.

Through no fault of his own, Duy is unable to obtain his academic goals. Most professors will not take the time to figure out his English problems. It is more likely that they will talk about his language behind closed doors or, like Prof. Baker, behind his back. It is not surprising that students like Duy will suffer the consequences of linguistic discrimination. (For other descriptions of second language learners like Duy who have had difficulty communicating with faculty in gate-keeping situations (see Casanave, 1992; Johns, 1997; and Gee, 2002).

By any measure, weaknesses in academic English are evident among English learners (ELs) like Duy. Inadequate writing skills become apparent when ELs enter institutes of higher education. Many ELs who enter these institutes lack sufficient academic English language proficiency even when they have completed their entire elementary and secondary educations in the United States. This is the case at UCI, where over 50% of the students in academic year 2001-2002 were born outside of the United States and speak a first language other than English (Analytical Studies, 2001). Wong Fillmore and Snow (2000) provide a more accurate picture of

how poorly California's college students are doing in English. They describe college students' English abilities at the 22 campuses of the California State University system:

All entering freshmen have to take a placement test in English and math. The failure rate of the English placement test across the 22 campuses in 1998 was 47%; at one campus, it was 85%. Students who fail the test are required to take and pass remedial English courses which focus on helping them acquire the language and literacy skills required for university level work.

Many public school teachers do not even know what academic English is, let alone what approaches are effective in teaching it (Wong Fillmore & Snow, 2000). Academic English and the problems students have acquiring it are often ignored (Ferris, 1995, 1997, 1999, 2002; Ferris & Hedgecock, 1998).

Learning academic English is probably one of the surest, most reliable ways of attaining socio-economic success in the United States today. This variety of English entails the multiple, complex features of English required for "long-term success in public schools, completion of higher education, and employment with opportunity for professional advancement and financial rewards" (Rumberger & Scarcella, 2000, p. 1). It involves mastery of a writing system and its particular academic conventions as well as proficiency in reading, speaking, and listening.

Although an extensive literature focuses on English for special purposes (see, e.g., Adamson, 1990; Dudley-Evans, 1998; Hutchinson & Waters, 1987; Johns & Dudley Evans, 1991; Master & Brinton, 1998; and Strevens, 1988) and academic discourse and literacy (Belcher & Braine, 1995; Bizzell, 1992; Elbow, 1991; Flowerdew, 2002; Kutz, 1986; Spack, 1988, 1997b; Zamel, 1993; and Zamel & Spack, 1998), this literature centers on university learners rather than on school children. Unfortunately, academic English has not been given enough attention in elementary and secondary schools (Baker, 2001; Gersten & Baker, 2000; Wong Fillmore & Snow, 2000; see Merino & Hammond, 2001, 2002, for interesting research). The growing literature on teaching English in the content areas (Brinton & Master, 1997; Crandall, Dale, Rhodes, & Spanos, 1989; Genesee, 1994, 1998; Grabe & Stoller, 1997; Master & Brinton, 1998; Met, 1991; Snow & Brinton, 1997; Snow, Met, & Genesee, 1989; and Shih, 1986) has often focused on techniques rather than on the acquisition of academic English.

Although in recent years teachers have been trained to teach phonics, many academic English problems revolve more around the students' deficiencies in academic English than around their ability to decode single words (Wong Fillmore & Snow, 2000). The emphasis in

English language arts on phonics in the early grades will need to be matched with an emphasis on the instruction of academic English in the upper grades if students, such as Duy, are to acquire a sophisticated use of English.

This paper discusses approaches to the study of academic English, presents a framework for analyzing it, and describes the relationship between academic English and everyday English. It then describes pedagogical implications pertaining to instruction, assessment and professional development.

NOTIONS OF ACADEMIC ENGLISH

Recently there have been many confusing reports concerning what constitutes literacy and academic English. New literacies (digital, electronic, and visual) have arisen to challenge traditional book literacy. Postmodernist views of literacy, which have examined its social and political consequences, have challenged more traditional perspectives of academic English. These differing notions of literacy and academic English have led to a difficult situation for teachers who have the daunting task of teaching students to read and write.

Two Perspectives of Academic English

In the first view prevalent in the research, advanced by Cummins (1979, 1981a, 1981b, 1991, 1992, 2000), scholars attempt to distinguish academic English, which Cummins terms *Cognitive Academic Language Proficiency* (CALP), from conversational language, which Cummins terms *Basic Interpersonal Communicative Skills* (BICS). Cummins and others have extended his model (Chamot & O'Malley, 1994; Collier, 1987; Collier & Thomas, 1989; Cummins, 1991, 1992, 2000; Hamayan & Perlman, 1990; Mohan, 1986; O'Malley, 1992; Saville-Troike, 1984, 1991; Schleppegrell & Christian, 1986; Spanos et al., 1988; Valdéz Pierce & O'Malley, 1992). They argue that BICS is acquired earlier than academic English because it is more context-embedded than academic language. In BICS, unlike in CALP, meaning is accomplished through the assistance of contextual and paralinguistic cues. This means that students do not have to depend only on language in order to attain meaning; rather, to attain meaning, they can use a variety of cues, including body language and intonation. These cues are hypothesized to increase the comprehensibility of the input and facilitate language development. For Cummins (1979), both BICS and CALPS are influenced by context and cognitive load. His distinction was elaborated into two intersecting continua (Cummins, 1981b) that underscore the

variety of cognitive demands and contextual support associated with specific linguistic activities or tasks (context-embedded/context-reduced, cognitively undemanding/cognitively demanding). The distinction between the continua pertains to the degree to which the meaning that is conveyed is either supported by contextual or interpersonal cues (including gestures, body language, facial expressions, rhythm, and intonation) or dependent on linguistic signals that are primarily separate from the communicative context.

A second very different view—supported by Street (1985, 1996), McKay and Weinstein-Shr (1993), Valdéz (2000) and others—emphasizes multiple literacies. Zamel and Spack (1998), for example, suggest that efforts to teach academic English are limiting and counter-productive for these reasons: academic English is itself diverse and there are no widely accepted standards of academic discourse adhered to by all academicians, because academic English actually consists of multiple dynamic and evolving literacies. These researchers argue that schools should “accept wider varieties of expression, to embrace multiple ways of communicating” (Zamel & Spack, 1998, xi). In their view, it marginalizes students when the varieties of English the students use are not accepted in academic situations. This view is accepted by the National Association of English Departments and even some professional composition organizations (Valdéz, 2000). It has fueled a current movement among some second language pedagogues who argue that because of the diverse literacies constituting academic English and because of the changing nature of these literacies, instructors should not hold their ELs responsible for learning the conventional forms of academic English. Instead, instructors should grade their students’ language use leniently. Leki (1992) suggests for instance, that teachers who evaluate students’ papers should “learn to read more broadly, with a more cosmopolitan, less parochial eye” (p. 133). Note that this view is different from the first one in that researchers who accept the first view generally believe that the highly structured English associated with school-based tasks should be taught to students.

Criticism of Previous Frameworks

The alternative framework described below rejects Cummins’ BICS/CALP distinction. A central problem with the BICS/CALP distinction is that the dichotomous conceptualization of language that it presents is not useful for understanding the complexities of academic English or the multiple variables affecting its development. In the BICS/CALP perspective, the development of academic English is largely presented as a fixed choice: either it is acquired or it

is not. However, this binary view of language and its development rarely plays out in reality. Some aspects of BICS are acquired late, and some aspects of CALP are acquired early. Basic interactional communicative skills are not as monolithic as the distinction would lead us to believe. This perspective has led researchers to believe that certain variables help learners acquire either BICS or CALP. However, many variables encourage the development of both CALP and BICS. For instance, rudimentary phonemic awareness (sensitivity to sounds in spoken words) may facilitate the development of beginning oral proficiency (BICS), but it may also facilitate the development of advanced reading proficiency (CALP), since it aids learners in accessing difficult academic words when reading. Because Cummins' notion of BICS and CALP encompasses a degree of cognitive demand of particular tasks, it goes beyond a simple linguistic dichotomy that merely distinguishes between oral and literate forms of language; however, his notion is of limited practical value, since it fails to operationalize tasks and therefore does not generate tasks that teachers can use to help develop their students' academic English.

Those who accept the BICS/CALP distinction believe that basic conversational skills are usually acquired in the ELs' first few years in the United States, but academic English is usually acquired late, often after seven years in the United States (Collier & Thomas, 1989). What researchers have not said is that learners who live in communities that are linguistically isolated and who are not exposed to academic English in their communities—either in their homes or in their schools—often never acquire this English. If UCI is a reflection of the populations in California, there are probably thousands of public school children who have very little exposure to academic English, regardless of whether they are monolingual speakers or ELs. Unfortunately, many of these learners may never acquire it. Perhaps most importantly, the BICS/CALP perspective does not provide teachers with sufficient information about academic English to help their students acquire it. (For slightly different critiques of BICS and CALP that speak to issues such as the autonomous nature of language promoted by the BICS and CALP distinction, the legitimacy of the constructs of BICS and CALP, and the suggestion that CALP promotes a deficit theory (see, e.g., Edelsky et al., 1983; Martin-Jones & Romaine, 1986; Romaine, 1989; and Wiley, 1996; see also Cummins, 2000 for a rebuttal.)

The proposed framework also rejects the second view of academic literacy, the one which claims that academic English cannot be taught, because it consists of multiple, evolving discourses. Academic English is needed by all students for long-term academic success. It

represents the advanced forms of English that Duy will need to graduate from UCI, especially if he aspires to obtain a high paying position with opportunities for professional growth. Academic English is needed to challenge the tenets of those in power who use it. Without knowledge of academic English, individuals may be excluded from participation in educated society and prevented from transforming it. Like Duy, they may become marginalized in academic settings (Delpit, 1995, 1997, 1998).

An Alternative Perspective

Drawing upon research on classroom discourse, the proposed framework claims that academic English includes multiple, dynamic, inter-related competencies. It provides a compilation of a broad range of discrete linguistic items so that teachers and researchers are provided with sufficient information concerning what the language features of academic English are. It also provides information concerning the psychological, social, and cultural factors associated with academic English. It suggests that without detailed information, teachers have difficulty teaching their students and assessing their academic English proficiency.

The framework rejects strictly formal views of academic English that do not examine the personal, social and cultural factors that affect linguistic choices. It does not insist on a perfect, error-free, production of academic English or a single interpretation of linguistic features and texts. Nor does the framework embrace an exclusive focus on surface-level, formal descriptions of language features.

The framework suggests that in the earliest school-based tasks, teachers have explicit assumptions concerning the language that children should use (Schleppegrell, 2001; Unsworth, 2000). One example of a school task that has been studied extensively is *sharing time*, a task that is typical of kindergarten classrooms (see, e.g., Christie, 1986; 1999; Christie & Martin, 1997; Michaels, 1981, 1986; Michaels & Collins, 1984; and Michaels & Foster, 1985). Michaels and Collins (1984) have found, for instance, that children who have a literate style are able to name and describe objects, even when they are not in plain view, and they use nouns rather than gestures or pronouns when describing objects. They assume little background knowledge on the part of the audience during share time. Other researchers have looked at different functions of classroom discourse, including definitions. Snow, Cancini, Gonzalez, & Schriberg, 1989, for example, noted that children who had acquired a more school-based language tended to use more

formal definitions, consisting of an equivalency statement and some form of a superordinate, such as, *A poodle is a dog that...* (see also Snow, 1990).

The framework also suggests that some teachers fail to help their students lay the foundation for the development of academic English. There are several explanations for this failure. Teachers may not spend much time engaging their students in tasks that develop their students' academic English; they themselves may not use the features of academic English and may, therefore, not expect their children to use these features; or they may fail to articulate their expectations to children or explicitly teach their students how to use academic English.

Researchers of classroom discourse generally believe that teachers are unaware of the highly structured nature of the talk they expect of young children. Teachers do not normally tell their students how to use language to complete specific school tasks (Michaels & Cook-Gumperz, 1979, p. 658).

Unfortunately, in classrooms that are restricted to the basic, frequently occurring patterns of everyday English, academic English is used erratically in teacher-student and student-student interactions. Many teachers do not teach children how to perform school-based tasks. Teachers of older learners rarely understand the importance of teaching the features of academic English that students need to learn to communicate well in specific academic contexts. By the time children reach high school, academic tasks require students to have acquired an extensive range of competencies. Teachers who assign research papers might fail to teach students how to use quotations, to switch verb tenses effectively, or to express themselves authoritatively through, for instance, the lexical and clause-structuring strategies of condensation and embedding. (Schleppegrell, 2001). They might not teach students the critical thinking goals and disciplinary values associated with research papers. They may not teach students how to write objectively, removing themselves emotionally and personally from their texts to take an unbiased, guarded stance (e.g., Geertz, 1988). School-based tasks become increasingly complex and academic in nature in the later elementary school years. As children develop, the nature of academic English comes to rely more heavily on the features of written discourse.

WHAT DOES IT MEAN TO BE PROFICIENT IN ACADEMIC ENGLISH?

In this section, I describe a framework for analyzing academic English. I begin by giving broad definitions of academic English and literacy. I then turn to a discussion of the various

dimensions and components of academic English and the relationship between everyday, ordinary English and academic English.

Definitions

Academic English is a variety or a register of English used in professional books and characterized by the specific linguistic features associated with academic disciplines. The term “register” refers to a constellation of linguistic features that are used in particular situational contexts (Halliday & Hasan, 1989; Martin, 1990). Academic English tasks include reading abstracts, getting down the key ideas from lectures, and writing critiques, summaries, annotated bibliographies, reports, case studies, research projects, expository essays. It includes a wide range of genres (Saville-Troike, 1984; Swales, 1990). Here I define genre as a discourse type having “identifiable formal properties, identifiable purposes, and a complete structure (that is, a beginning, middle and end)” (Grabe & Kaplan, 1996, p. 206). Examples of everyday or “homely” genres include recipes (Miller, 1984). Academic genres include political texts and university essays. Academic English includes many diverse sub-registers associated with different disciplines such as science, economics, and mathematics (Johns, 1997). It is not possible to “do” science, “do” economics or “do” mathematics with only ordinary language (Halliday & Martin, 1993; Lemke, 1990). One must “do” discipline-specific work with academic and discipline-specific language.

English is not monolithic. It varies with respect to such factors as topic, purpose, and situation as well as with respect to region, social class, and ethnicity. Varieties of English are characterized by distinctive linguistic characteristics and rule-governed systems of communication. Some varieties of English are more effective than others in specific situations and are more valued within particular communities. For example, academic English is more useful in institutes of higher education than it is on the street. Not all varieties of English are of equal status. Academic English is ranked highly in the United States, where it is used by the educated and those in power in academic and business settings as well as in courts of law.

Academic English is dynamic in the sense that it is continually evolving, shaping meaning in educational contexts that are themselves ever-changing. Changes in educational contexts reflect new advances in technology and research discoveries; the language shifts to meet changing literacy tasks and purposes. Academic English is not, then, acquired once and for all. Each discipline evolves its own literacy, and within a discipline, individuals must continually

acquire new literacy resources to cope with the demands of the developing discipline (see Johns, 1997 and Schleppegrell & Colombi, 2002 for similar views). This view of academic English is not the same as the second view discussed earlier. Although in the present framework academic English is viewed as dynamic and comprising various sub-registers (such as the language of science, the language of biology, etc.), I will argue that academic English should be taught, since there are regular features of academic English that are well defined and teachable.

It is useful here to define *literacy*, since it is through literacy that academic English is advanced. Traditionally, literacy was narrowly defined as the ability to read and write that involved decoding and encoding. However, today most researchers take a much broader view of literacy, suggesting that it involves mechanics such as decoding as well as higher-order thinking—conceptualizing, inferring, inventing, and testing. They argue that literacy encompasses oral communication skills as well as reading and writing skills (see, e.g., August & Hakuta, 1997 and Wong Fillmore & Snow, 2000).

To communicate in a range of ordinary, everyday situations and in academic situations, all learners must develop advanced levels of proficiency in each of the following four language skills—reading, writing, speaking, and listening. Reading, while an important component of academic English, is just a part of it. Academic English requires not only the development of those advanced reading skills which enable learners to access complex words, but also the advanced skills which enable learners to understand and use these words in spoken and written communication. Proficiency in reading and writing are especially related to long-term academic success (Schleppegrell & Colombi, 2002).

Academic English encompasses many diverse sub-registers, involving different fields such as science, economics, and mathematics (Johns, 1997). It entails multiple inter-related dimensions, components, and features. The framework explained here fits into a theoretical model of academic literacy proposed by Kern (2000). He describes three different dimensions of academic literacy: linguistic, cognitive, and sociocultural/psychological. He basically argues that it is not possible to understand or study literacy without investigating it from all three of these perspectives; anything less is insufficient. As Kern cogently argues, language practices are always embedded in social and cultural practices, “From a sociocultural perspective, reading and writing are communicative acts in which readers and writers position one another in particular ways, drawing on conventions and resources provided by the culture” (p. 34). The present

framework is consistent with Kern's because it identifies competencies for academic English in all three domains that Kern argues are important. While Kern provides a conceptual framework for studying literacy that is particularly pertinent to foreign language instructional contexts I provide a framework for investigating academic English that is relevant to K-12 teaching situations.

The Linguistic Dimension of Academic English

The linguistic dimension is critical in learning academic English. Within each skill (reading, writing, speaking, and listening), learners must develop proficiency in diverse, often overlapping linguistic components. In a model of *communicative competence*, Canale (1983) and Canale and Swain (1980), propose that the linguistic components minimally include grammatical competence, sociolinguistic competence, discourse competence, and strategic competence. The present framework extends Canale and Swain's model (see also Bachman, 1990; Celce-Murcia, 1995; Scarcella, Andersen, & Krashen, 1990; and Scarcella & Oxford, 1993). In the framework I am proposing, the linguistic dimension includes the following components: phonological, lexical, grammatical, sociolinguistic, and discourse. Each of the linguistic components entails a large number of *features*. These components and features are summarized in Table 1.

The Phonological Component. To participate in everyday situations, all learners must know the English sounds and the ways these sounds are combined. This knowledge constitutes the phonological component. In speech, the phonological component encompasses knowledge of the pronunciation of consonants, vowels, and consonant clusters, as well as stress and intonation patterns.

To use academic English, learners must learn the phonological features of everyday English and new phonological features—including stress, intonation, and sound patterns. When learners are exposed to new academic words such as *demography*, *demographic*, *cadence*, *generic*, *casualty*, and *celerity*, they must learn their distinct stress patterns. They may be familiar with most sound patterns of the English language, but they must learn new patterns when they learn academic words, particularly words borrowed from other languages, such as *de jure*, *antebellum*, *tegument*, and *facile*.

Table 1
A Description of the Linguistic Components of Academic English and Their Associated Features Used in Everyday Situations and in Academic Situations

Linguistic Components of Ordinary English	Linguistic Components of Academic English
<u>1. The Phonological Component</u>	
<p>knowledge of everyday English sounds and the ways sounds are combined, stress and intonation, graphemes, and spelling</p> <p>Examples: <i>ship</i> versus <i>sheep</i> /ʃ/ - /i/ <i>sheet</i> versus <i>cheat</i> /sh/ - /ch/</p>	<p>knowledge of the phonological features of academic English, including stress, intonation, and sound patterns.</p> <p>Examples: <i>demógraphy</i>, <i>demográphic</i>, <i>cádence</i>, <i>genéric</i>, <i>casualty</i>, and <i>celerity</i></p>
<u>2. The Lexical Component</u>	
<p>knowledge of the forms and meanings of words occurring in everyday situations; <i>knowledge</i> of the ways words are formed with prefixes, roots, suffixes, the parts of speech of words, and the grammatical constraints governing words</p> <p>Example: <i>find out</i></p>	<p>knowledge of the forms and meanings of words that are used across academic disciplines (as well as in everyday situations outside of academic settings); knowledge of the ways academic words are formed with prefixes, roots, and suffixes, the parts of speech of academic words, and the grammatical constraints governing academic words</p> <p>Example: <i>investigate</i></p>
<u>3. The Grammatical Component</u>	
<p>knowledge of morphemes entailing semantic, syntactic, relational, phonological, and distributional properties; <i>knowledge</i> of syntax; <i>knowledge</i> of simple rules of punctuation</p>	<p>knowledge that enables ELs to make sense out of and use the grammatical features (morphological and syntactic) associated with argumentative composition, procedural description, analysis, definition, procedural description, and analysis; knowledge of the grammatical co-occurrence restrictions governing words; knowledge of grammatical metaphor; knowledge of more complex rules of punctuation</p>
<u>4. The Sociolinguistic Component</u>	
<p>knowledge that enables ELs to understand the extent to which sentences are produced and understood appropriately; <i>knowledge</i> of frequently occurring functions and genres</p>	<p>knowledge of an increased number of language functions. The functions include the general ones of ordinary English such as apologizing, complaining, and making requests as well as ones that are common to all academic fields; knowledge of an increased number of genres, including expository and argumentative text</p>
<u>5. The Discourse Component</u>	
<p>knowledge of the basic discourse devices used, for instance, to introduce topics and keep the talk going and for beginning and ending informal types of writing, such as letters and lists</p>	<p>knowledge of the discourse features used in specific academic genres including such devices as transitions and other organizational signals that, in reading, aid in gaining perspectives on what is read, in seeing relationships, and in following logical lines of thought; in writing, these discourse features help ELs develop their theses and provide smooth transitions between ideas</p>

In reading, the phonological component includes knowledge of graphemes (symbols) and arbitrary sound-symbol correspondences. Graphemes have a regular, but not entirely simple, relation to the sounds that must be learned in order to read. The phonological component also includes spelling, which can be troublesome for learners, since in English spelling is often irregular. Recall that Duy spelled the word *research* *r-e-s-a-r-c-h*. Wong Fillmore and Snow (2000) point out that learners do not know why the English *sh* sound in the word *sugar* begins with the letter S and not SH, while the *s* sound in the word *electricity* is spelled with a C. They do not understand the many strange spellings of high frequency words such as *although*, *might*, and *could*. When they misspell words, they might be viewed as sloppy, uneducated, or inept (Delpit, 1998).

The Lexical Component. To communicate in everyday situations, learners must also have knowledge of the vocabulary that is used in a variety of frequently occurring, everyday situations. They must learn when to use these words and how to use them. They must learn how words are formed with prefixes, roots, and suffixes. They must also learn the parts of speech of words and the grammatical constraints governing words. They must learn, for instance, that the word *day* is related to the word *daily*.

To communicate well in academic situations, it is important to know a large number of academic words, though the precise number that researchers suggest varies widely. Nagy & Anderson (1984) argue that there may be 180,000 distinct vocabulary words used in school English; an average 12th grader may know 80,000 of them and students may learn 4,000 to 6,000 new words each year. Nagy and Herman (1987) report that the average 12th grader knows about 40,000 words and that the average student in elementary or secondary school learns 2,000 to 3,000 new words each year (see also Anderson & Nagy, 1992). Nation (1990) contends that lexical competence entails a minimum of 20,000 words, the number of words that monolingual high school freshmen normally know (see also Nation, 2001). Many researchers maintain that the following types of words are characteristic of academic English: general words that are used across academic disciplines (as well as in everyday situations outside of academic settings), technical words that are used in specific academic fields, and nontechnical academic words that are used across academic fields (see Table 2).

Table 2
Words Occurring in Academic Settings

<i>Type of Words</i>	<i>Meaning</i>	<i>Domain</i>	<i>Examples</i>
General Words	Nonspecialized	Used across fields	<i>already, busy</i>
Technical Words	Specialized	Used in specific fields	<i>fulcrum, pivot</i>
Academic Words	Both specialized and nonspecialized	Used across fields	<i>assert, research</i>

Fixed expressions are particularly important in English, largely because they occur so frequently and convey important semantic information. These are expressions that tend to stick together and cannot be changed in any way (one says, *Her clothes are in style* and not, *Her clothes are in her style*). The fixed expression “in style” cannot be changed. Fixed expressions can be very difficult for ELs, who sometimes analyze them or change their grammatical features (remember the difficulty Duy had using such the expression, *to continue my studies of the subject*. He wrote: *to continue my study on the subject*).

The Grammatical Component. Participating in ordinary situations also requires extensive knowledge of English grammar. Without competence in English grammar, learners produce sentences such as *He was runned over by a car*. Grammatical competence for everyday English includes the accurate use of frequently occurring morphological and syntactic features as well as the functions of these features. For instance, it includes the ability to form such commonly occurring sentence structures as the following: *John hit the ball; I like Mary and I like my cousin; and I like Mary, but I don't like John*. It also includes the ability to subordinate: *You're my friend because you are nice*. Knowledge of this type of agreement entails knowing the noun system. The noun system includes the plural endings added to nouns (*There are five books*); the formation of irregular plurals (such as: *fish/fish, tooth/teeth, mouse/mice, man/men, woman/women, knife/knives, person/people, foot/feet, child/children*); and the use of definite articles (*Here is the book*), indefinite articles (*Here is an apple; Here is a book*), and demonstrative adjectives (*this, these, that, those*).

In everyday English, grammatical competence also includes knowledge of the English verb system. This system includes the use of present and past tense verbs, both regular and irregular, as well as the future tense. Although not exactly a verb tense, the verb system also includes the present perfect (*John has played Nintendo for five hours*) and the present continuous (*John is playing Nintendo*). It includes phrasal verbs such as *hand out* (distribute), *run into* (meet/encounter), *take off* (remove), and *calm down* (relax); particular uses of verbs, such as the use of *would* + the base form of a verb to indicate habitual past tense events in conversation (as in the sentence, *When I was a child I would sleep in late*); and contractions of all kinds, for instance, with *be* (*I'm, he's, she's, it's, we're, they're*).

The verb system in everyday English also includes the various kinds of complements that follow main verbs and that serve syntactically as direct objects:

Infinitive complements	Juan Pablo wants <u>to ski</u> .
Gerund complements	Thuy enjoys <u>skiing</u> .
That-clause complements	I think <u>that she is kind</u> .

This is not even the bare minimum of grammatical features that comprise the grammatical component of everyday situations in English. It takes a tremendous amount of grammatical competence to use English in even basic, informal contexts.

The grammatical component of academic English entails all the knowledge of the grammar of everyday English and, in addition, knowledge of additional structures—such as parallel clauses, conditionals, and complex clauses. Passive structures (*The book was written by Shakespeare*) and ergative structures (*The rate decreased*) are also characteristic of academic English (Celce-Mercia, 2002). Conditionals (*If you were to add X, you would get Y*) also constitute a main part of academic English, a part of English that Duy has not learned. The noun, reference, verb and modality systems are important in academic English. Academic English involves the ability to use these systems accurately and effectively.

The grammatical component of academic English entails knowledge of the grammatical co-occurrence restrictions that govern the use of nouns. Each time students learn new nouns, they must acquire their grammatical features. Every time that they study a new subject at school, they must learn the nouns associated with the subject and their associated grammatical features. Thus,

although they know the basic subject-verb agreement rules of everyday English, they have to learn new subject-verb agreement rules when they encounter new noun forms. For instance, they must learn that the verb following *bacterium* is singular, not plural. They must learn that a number of irregular plurals such as *criterion* have irregular plural forms like *criteria*, that certain adjectives such as *impotent* are generally used to describe people not countries, and that certain nouns such as *discrimination* are generally followed by prepositional phrases, as in *discrimination against someone* (Wong Fillmore & Snow, 2000).

In learning the reference system of academic English, students must learn to reference explicitly. They cannot use pronouns such as *it* that do not have identifiable noun referents. Whenever comparatives (such as *more*) are used, they must specify the words to which the comparatives refer. Recall Duy's difficulty using comparatives when he states: *He suggested to me that maybe I should seek around to for resarch projects, since it would be much more beneficial and interesting to have actual hands on experience*. Note that Duy never explains what *more* refers to. In informal spoken interaction, it is sometimes unnecessary to make reference to the words that the comparative *more* refers to. Interlocutors understand their addressees so well that the interlocutors can guess what they are comparing.

The grammatical component of academic English also entails expanded features of the English verb system. Students need to learn that knowing a verb means knowing all of its forms (word families) as well as common grammatical collocations. This means that they must learn that the word *assume* can be used in a range of ways and has a finite verb form (*assume*) and a noun form (*assumption*). They must learn that verbs such as *sanction* are generally transitive and require objects (*He could not sanction her behavior*) and that verb + preposition combinations (fixed expressions such as *I disagree with you* and *He discriminates against her*) cannot be changed. For example, it is not possible to *disagree against* or *discriminate with* a person. Verb tenses that occur frequently in academic settings include the present tense, the past tense, and the present perfect.

The modality system also plays a key role in the grammatical component of academic English. Modal auxiliaries, *will/would*, *can/could*, *may/might*, *should*, *must*, *have to*, and *ought to* are particularly important. Students need to learn that there are many modal auxiliaries—not just those, such as *can* and *would*, that occur frequently in everyday English. *Can*, used to indicate ability, as in the sentence *I can go* is often acquired early on by many learners, and *would*, which

can be used to indicate habitual past activities, as in the sentence *When I was a child, I would sleep in late* is often used to replace the past tense (see Scarcella, 1996). Students must not only develop the meanings and functions of modal auxiliaries but also their correct use in indicating appropriate time frames (present, past, and future). Students must learn that modals sometimes have different meanings in contrast to their meanings in everyday English (Hinkel, 1995). In addition, they must learn that modals are followed by the simple base form of a verb: *He can go*, not *He can goes*.

The Sociolinguistic Component. To participate in everyday situations, learners also must acquire competence in the sociolinguistic component. The sociolinguistic component enables learners to understand the extent to which sentences are “produced and understood appropriately” (Swain & Lapkin, 1990, p. 189). Labov (1963, 1966, 1970, 1972), noted that “there are no single-style speakers” (1970, p. 46), since all speakers adjust their speech style according to the social situation and the topic of discussion. Labov’s work builds upon Reid’s (1956) who first used the term *register* to describe systematic modifications in speech tied to contexts of use. This notion was later more fully elaborated upon by Ellis and Ure (1969) and by Halliday, McIntosh, and Stevens (1964) who noted that language varies in response to different types of situations. A conversation between strangers and a chat with a friend are linguistically quite distinct. Even in basic ordinary conversation, speakers are able to vary their language styles and registers so that they speak appropriately in a number of different contexts. For instance, they know when to use politeness terms such as *please* and *thank you* and when not to use them. They also know that they can bring up some topics with friends that they would never discuss with strangers. Recall that Duy’s email lacked the demonstrated ability to vary his language appropriately according to the audience. He (seemingly) lacks knowledge of his audience—professors in general, and Prof. Baker, an eminent scientist, in particular—as well as the language features needed to address Prof. Baker effectively. While it is unreasonable to expect Duy to have known how to make a polished request to a professor, it does seem that a college student should know not to begin a written message with the words *How do you do?* – a useful expression in certain formal situations, such as wedding lines, but hardly appropriate in a written e-mail message or letter.

As suggested above, Duy seems to lack knowledge of the difference between the language associated with formal written e-mail messages and informal conversation. Consider,

for example, his display of friendliness (“*Have a good day*”) at the end of his message. While informal e-mail messages often do end with such words, giving the impression that the messages are informal and chatty, formal e-mail messages do not. Like many ELs, Duy mixes informal oral English with formal written English.

Critical features of the sociolinguistic component are functions, including directives (*Come here*) and apologies (*I’m sorry*). These features enable ELs to signal levels of politeness and formality and to establish their credibility. Like Duy, students sometimes fail to realize that the language they use may be offensive. For instance, when Duy states: *I am consider to have Biology as my second major*, he probably does not realize that “*consider*” is not the best choice of words. The word suggests that Duy might possibly reject Prof. Baker’s offer to allow him to major in Biology; it implies that Duy might even have in mind a better second major.

Academic English builds on and extends the learners’ developing competence in the sociolinguistic component. It involves knowing an increased number of language functions. The functions include the general ones of everyday English such as apologizing, complaining, and making requests as well as the more academic ones, such as signaling cause and effect, hypothesizing, generalizing, comparing, contrasting, explaining, describing, defining, justifying, giving examples, sequencing, and evaluating. Recall how difficult it was for Duy to make his request in a formal letter. He did not know that it was important to inform Prof. Baker that Prof. Campbell had *encouraged* him to contact Prof. Baker concerning the possibility of working on Prof. Baker’s research. Instead, Duy implies that Prof. Campbell merely *suggested* that he contact Prof. Baker to request a job working on his research. Duy states: *Although my major is in Computer Social Science, I am consider to have Biology as my second major. I am currently attending Professor Campbell lecture. He suggested to me that maybe I should seek around to for resarch projects, since it would be much more beneficial and interesting to have actual hands on experience. He suggest that maybe I should contact you to see would it be possible for you to provide me with some information.* Duy does not seem to understand that a request to work on a professor’s research project should include a description of the reasons the student is qualified to work on the project as well as the student’s potential contributions to the research.

Sociolinguistic competence also includes the ability to write cohesively. Halliday and Hasan (1976) use the term *cohesion* to refer to the linguistic features that relate sentences to one another. They analyzed five linguistic devices that writers use to compose cohesively: reference,

substitution, ellipsis, conjunction, and lexical cohesion. Halliday and Hasan's original inventory of cohesive devices has been expanded somewhat in Cook (1989), Halliday and Hasan (1989), and McCarthy (1991) to include other devices such as the use of parallel structure and the sequencing of verb tenses. In addition, sociolinguistic competence involves knowing how to use those more complicated genres that commonly occur in academic fields, such as expository essays, argumentative papers, research papers, abstracts, and dissertations (Freedman & Medway, 1994; Johns, 1997; Kaplan, Cantor, Hagstrom, Kamhi-Stein, Shiotani, & Zimmerman, 1994; Swales, 1990).

The Discourse Component. The discourse component enables students to use linguistic forms and meanings to communicate coherently in an organized way (Canale & Swain, 1980, p. 188). In speech, it enables students to start a conversation by using appropriate greetings (*Hi! How are you?*) and to keep a conversation going by using appropriate pause fillers (*ya know, um, er, as I was saying*). In writing, it enables students to use appropriate introductory remarks (*Dear John, ...*) and closings (*Love, María*). In reading, it enables students to identify instances in which the writer of a reading passage uses such openings as *Once upon a time...*, and closings such as *And they lived happily ever after*.

The discourse component of academic English not only includes knowledge of the basic discourse devices used in ordinary English, but also includes specific introductory features and other organizational signals. In reading, these discourse features help students to gain perspective on what they read, to understand relationships, and to follow logical lines of thought. In writing, these discourse features help students to develop their theses and to provide smooth transitions between ideas.

Had Duy had competence in the discourse component of academic English, he would more appropriately have begun his letter *Dear Prof. Baker:* and not *How do you do?* He would have ended his letter: *Thank you for your time*. In addition, he would have used the proper ending, "*Sincerely,*" not "*Thank you very much and have a good day.*" The words Duy uses in the beginning and the ending of his letter immediately mark him as a non-native speaker.

The discourse component enables writers to write coherently. The term *coherence* is used to refer to the unity and organization of ideas within a text. Charrolles (1978) suggests that to be coherent, the writers' presentation of ideas must be orderly and convey a sense of direction. The writing must reveal, "consistency of facts, opinions, and writer perspective, as well as reference

to previously mentioned ideas” (p.11). Charrolles also suggests that newly introduced ideas must be relevant and balanced with “a relative emphasis (whether main or supportive)” accorded to each idea (p.12). The ideas presented must provide a sufficiently thorough discourse. In other words, writers must supply a complete coverage of their topics. Note that Duy is unable to present sufficient evidence in support of his request to double major and work on Prof. Baker’s research. He makes the request, but he lacks the discourse competence needed to write an effective e-mail message to a professor.

The following texts demonstrate the differences between the linguistic features of English used in everyday situations and the linguistic features of English used in academic situations. Text 1, from a poem by Joyce Guy, typifies the type of everyday text read in lower elementary school grades, and Text 2, from The Hidden Lives of Dogs by Elizabeth Marshall Thomas, typifies the type of academic text read in upper elementary grades.

Text 1: My Friend
by Joyce Guy

I have a little pet
That sits and cries with me;
When I am sad or lonely,
He loves and comforts me.

When I cry his eyes look sad,
As we sit there all alone;
And when I speak my problems
He begins to howl and moan.

I love my mom and daddy,
But I love my puppy too;
He is my friend and helps me
With everything I do.

Text 2: The Hidden Life of Dogs
by Elizabeth Marshall Thomas

The dog who adopted a human mannerism is my husband’s dog, who amazed us all one hot day this past summer after my husband had bought himself an ice cream cone. As my husband took the first taste, he noticed that the dog was watching. So he offered the cone, expecting the dog to gobble it. But to everyone’s astonishment, the dog politely licked a little ice cream just as my husband had done. My husband then licked a little more, and again offered it to the dog, who also licked a little more. In this way, taking turns, they ate the ice cream down to the cone. Then my husband took a bite. The dog watched him. Assuming that the dog would bolt the rest of the cone, my husband passed it on

for what he thought would be the last time. But drawing back his lips to expose his little incisors, the dog took the most delicate of nibbles. Twice more my husband and the dog took turns biting the cone, until only the tip remained. Astounding? Not really. For eight years, my husband and this dog have built a relationship of trust and mutual obligation, neither making unreasonable demands on the other or patronizing the other, or trying to subordinate the other, but each doing exactly what he wants, usually in the other's company. Only in such a setting, only when both participants consider themselves equals, could this scene have taken place. Only a dog who thought for himself, a dog who wasn't brainwashed by excessive training, a dog who depended on his own observations and imagination for guidance, would ever figure out the very human method of taking alternate bites as a form of sharing. After all, when two dogs share food, they eat simultaneously while respecting each other's feeding space, which is a little imaginary circle around the other's mouth. But the idea of taking alternate bites is totally human. Even so, the dog fathomed it, *and without ever having seen it done*. Who ate the tip of the cone? My husband ate it. The dog let him have the last turn.

In Text 1, simple words are used to convey a sense of informality, whereas in Text 2, words are used to foreground and background information and to organize ideas. Wong Fillmore (2000) provides the following discussion of the linguistic features in the text. She notes that the author of the second text uses very specific words such as "incisors" rather than "teeth" to intensify the image of the dog's concern in taking the daintiest of nibbles on the cone. "*But drawing back his lips to expose his little incisors, the dog took the most delicate of nibbles.*" Wong Fillmore also points out notable uses of grammatical constructions and devices in the second text:

The use of relative clauses that specify or add additional information about the noun phrase it modifies:

"the dog [who adopted a human mannerism]"

[who amazed us all . . .]

[who also licked a little more]

Preposed (left branching) adverbial clauses giving attention to backgrounded context:

"As my husband took the first taste, he noticed . . ."

"Assuming the dog would bolt the rest of the cone, my husband passed it on . . ."

The Cognitive Dimension of Academic English

The texts above illustrate the differences between the linguistic features of everyday English and academic English. However, academic English entails more than the linguistic dimension. It also involves cognition. For instance, readers must think about text in order to interpret it. They must do more than associate sounds, graphemes, meanings, and words. They must predict, infer, and synthesize meaning to create and transform knowledge. To understand and use text, they must obtain factual information as well as what is often called *critical literacy*, the ability to read for intentions, to question sources, and to identify others' and one's own assumptions. The cognitive dimension of academic English minimally includes knowledge, higher order thinking (*critical literacy*), cognitive, and metalinguistic strategies.

The Knowledge Component. Knowledge (whether declarative: *knowing that*, or procedural: *knowing how*) plays a central role in academic English (McCarthy Young & Leinhardt, 1998; Spack, 1997a, 1997b). Students who have acquired academic English have extensive knowledge of the world that is primarily built upon their previous reading. They have accumulated more than just facts. They also have accumulated ideas, concepts, definitions, and stories that they can draw upon to make sense of text and explain themselves. As Kern (2000) explains, it is impossible to read a text on astrophysics without sufficient knowledge of the subject. This knowledge helps readers to fill in gaps in communication and interpret ambiguous messages. One of Duy's problems seems to be his lack of knowledge of Prof. Baker's research. Had he referred to it specifically in his letter, he would have appeared more knowledgeable of the subject and more qualified to participate in Prof. Baker's study.

It is important to point out that knowledge is not monolithic, it is dynamic. Students can lose knowledge, gain knowledge, and partially acquire knowledge. Knowledge is not just facts; it provides a means to evaluate experiences, as well as the physical world, critically.

Schema theory explains how the students' experiences and knowledge of the world contribute to their everyday English language proficiency. This theory is concerned with students' internal knowledge structures, or *schemata*. Carrell and Eisterhold (1983), Carrell (1984, 1998), and Spack (1997b) have pointed out the tremendous impact that learners' own background knowledge—captured mentally in their schemata—has on learning to read and write. Schema theory, which has been around since the turn of the century, has become popular in

education because it helps explain why some learners comprehend and remember more than their classmates do.

In short, schema theory suggests that comprehension is an interactive relationship or process involving the learners' background knowledge and the text (be it written or oral). Students cannot comprehend anything for which they do not have some existing knowledge structure or schema. The comprehension process involves, among other things, assimilation of new knowledge into existing schemata and accommodation of existing schemata to fit new knowledge.

Background knowledge is critically important in academic literacy (McCarthy Young & Leinhardt, 1998; Spack, 1997b). Students who have acquired academic literacy have extensive knowledge of the world that is primarily built upon their previous reading. Knowledge gained through reading is transferred from academic discipline to academic discipline.

The Higher Order Thinking Component. Higher order thinking is not absent in everyday conversation. Certainly, learners rely upon their ability to think critically in conversations between friends. However, higher order thinking plays an even more important role in academic English.

Higher order thinking is involved in interpreting, evaluating, and synthesizing the claims and citations in reading. Readers must determine the credibility of the sources cited in the texts. They cannot overlook cartoons, illustrations, graphs, or charts. They must be able to relate the readings to the realities of specific disciplines—whether political, social, or scientific. They must be able to interpret what the readings state and what they do not state. They must also be able to determine how the claims and evidence in the readings can be accounted for in different ways. In addition, they must be able to distinguish fact from skewed opinion. Strong proficiency in academic English, coupled with higher order thinking, enables learners to read academic texts critically. Without strong proficiency in academic English, their ability to interpret and analyze their reading is compromised (Spack, 1984).

To speak persuasively, individuals must speak cogently, using their mental resources to convey their best points effectively. To write coherently, writers must make a number of difficult decisions. They must determine which ideas are relevant to their texts, how to accord each idea with appropriate emphasis, and how to balance these ideas. When writing some types of academic essays, learners must be able to support thesis statements, remain focused on these

statements, and frequently refer back to them. When learners write persuasive essays, they must critically analyze a number of issues related to the use of citations, claims, and evidence. They must decide, for instance, what constitutes relevant, valid citations, claims, and evidence. Then they must figure out how to analyze and evaluate them, when to suggest that they counter or delimit others, whether to provide background knowledge pertaining to them, how much background information to provide, how to logically arrange them, and how to integrate them effectively (McCarthy Young & Leinhardt, 1998).

When writing a request to a professor, students should state their request precisely and then provide compelling reasons for making the request. Recall that Duy made a very weak case for working on Prof. Baker's research. His lack of knowledge of campus politics also undermined his success. Biology is a popular major at UCI, and there is considerable difficulty transferring into this major.

The Strategic Component. The strategic component includes those strategies that may be called into action either to enhance the effectiveness of communication or to compensate for breakdowns in communication due to limiting factors in actual communication or to insufficient competence (Swain, 1989, p. 189). Strategies can also include "specific actions, behaviors, steps, or techniques that students (often intentionally) use to improve their progress in developing L2 skills" (Oxford, 1993, p.18). They help students attend to information, organize their study of English, and monitor their errors, and assess their progress (Iran-Nejad, Oxford, & Kawai, 1999). Strategies are intentionally used and consciously controlled by the learner (Pressley, 1995, p. 28); they are "actions that learners select and control to achieve desired goals and objectives" (Winograd & Hare, 1988, p. 123; see also Bialystok, 1990; Iran-Nejad, Oxford, & Kawai, 1999; Oxford, 1990, 1996; Tudor, 1996).

The nature of the language task—conversation and informal letter-writing, versus formal presentations and official memoranda—has an effect on the strategies an individual uses (Bialystok, 1981; Gopal, 1999; O'Malley & Chamot, 1990; Oxford, 1990; Tyacke & Mendelsohn, 1986). More cognitively demanding tasks involving grammar and comprehension involve numerous strategies (Gopal, 1999).

Knowledge of cognitive and metacognitive strategies for reading, writing, speaking, and listening as related to academic contexts is another part of academic English. Important strategies for academic reading include underlining, highlighting, paraphrasing in the margins, outlining,

idea mapping, and using the dictionary. Crucial in academic English are strategies such as identifying key ideas and using context and word attack strategies to determine meaning. In oral communication, academic strategies help learners pose questions, anticipate and answer questions, and establish themselves as authorities in various specific ways. In writing, learners find the following strategies helpful: brainstorming, comparing their experiences with the texts they are writing about, giving examples, citing experiences, and providing evidence from other texts on the subject. Had Duy given strong reasons for his desire to double major, adding Biology as a second major, described his research experiences, and provided references, Prof. Baker may have been more inclined to allow him to add Biology as a second major and work on his research.

The Metalinguistic Awareness Component. Metalinguistic awareness, the ability to think about language use, plays some role in everyday English. Even when learners write lists of words, casual letters to friends, or informal invitations to parties, they sometimes fall back on their conscious knowledge of the language to edit their writing. Even when they speak, learners can consciously use grammar rules to correct their speech (Krashen, 1984).

Learners cannot function effectively in academic settings without metalinguistic awareness, which allows them to improve their linguistic performance and is particularly useful in revising and editing (Ferris, 2002). Revising often involves a conscious understanding of rhetoric. This understanding entails, for instance, addressing rhetorical problems in a given discipline, identifying content that should be addressed or removed from a text, and moving text to make it more effective. In terms of editing, metalinguistic awareness is helpful in choosing correct word forms (*agitated* or *agitating*, *nominal* or *nominalization*), checking subject-verb agreement, pronoun reference, and verb sequencing. Editing also involves checking conventions pertaining to headings and subheadings, margins, footnotes, and tables. It enables writers to use their own stored knowledge of English as well as dictionaries, writing handbooks, and grammar reference books—not to mention the spell check function on the computer. Recall that Duy failed to edit his e-mail message or even use spell check. This undoubtedly made a bad impression on Prof. Baker.

Having described the linguistic and cognitive dimensions of academic English, it is now possible to explore the relationships between the various components of academic English and the relationship between everyday English and academic English.

Since the same linguistic components are involved in academic and everyday English, they can be placed along a continuum (see Table 1). However, the notion of a continuum is not intended to suggest that the development of academic English is necessarily continuous or gradual; it may occur in rapid spurts or with considerable backtracking. It may be possible to acquire features of academic English without having acquired features of everyday English. Also, the development of language features within any one component often draws on the development of features in other components. For instance, the ability to explain—a part of the sociolinguistic component—depends upon the development of subordinators such as *because* and relative clauses, a part of the grammatical component. In addition, within any single linguistic component, the development of one feature may require the previous development of others (see, for instance, Schleppegrell & Colombi, 1997, for a description of the ways that function and meaning are linked with syntactic expression in academic English). It is difficult for learners to acquire the articles *a*, *an*, and *the* if they have not first figured out that some nouns cannot be counted and therefore cannot take plural endings and are not usually preceded by the word *a*. Consider, for instance, the word *hydrogen*, which does not generally end in an *-s* or follow the word *a*. It is also possible for learners to acquire features from some components of academic English before they have acquired others.

Some components play a more important role in academic English than they do in ordinary English. The accurate use of grammar, vocabulary, and higher order thinking are more critical in academic writing (Figure 1) than in everyday conversations (Figure 2).

Figure 1
Linguistic and Cognitive Features Entailed in Writing an Expository Essay

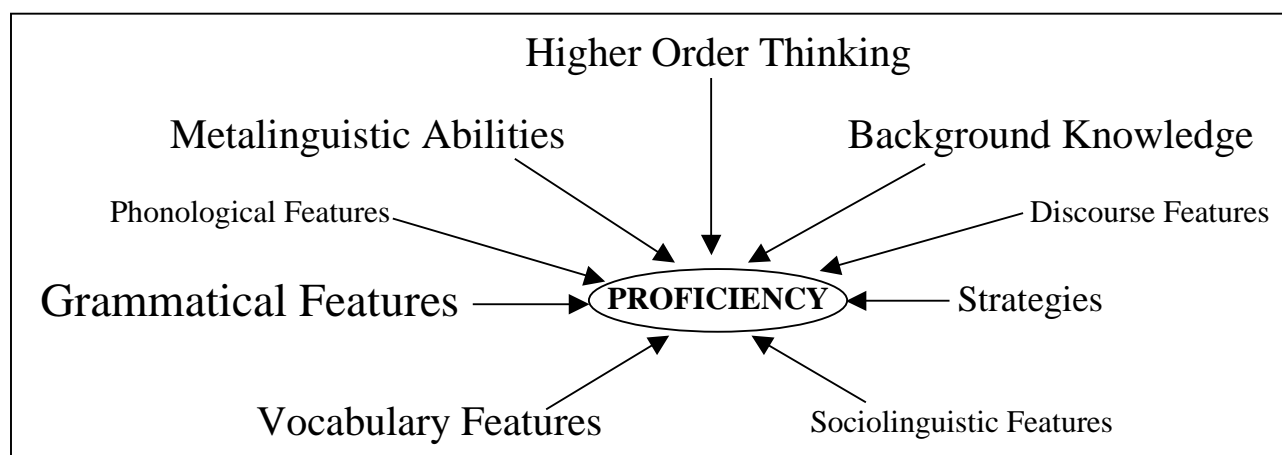
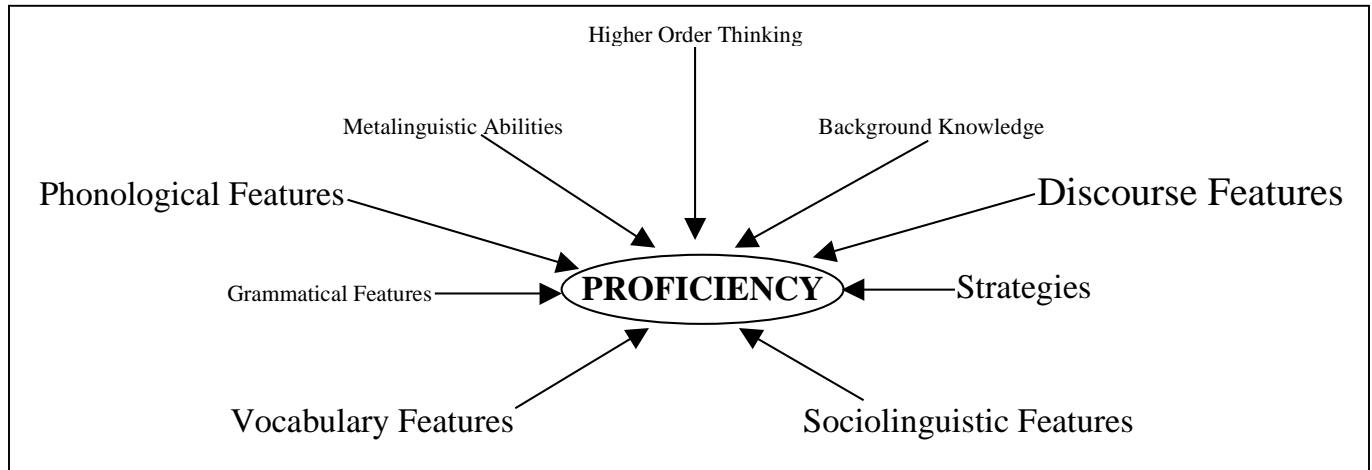


Figure 2
Linguistic and Cognitive Features Entailed in Participating in Everyday Conversations



The linguistic features that enable students to use English in everyday situations and in academic situations are acquired differentially at varying rates over time. Some are easily acquired and some are not. Most features of academic English depend upon the development of the basic English proficiency that is required to participate in everyday situations. However, other features such as some very simple word forms (not functions) do not depend on this development.

Although the boundaries between the components associated with everyday and academic English are fuzzy and overlap, there are many differences between the two. Within the various components, some features are more important than others. For instance, in academic English, specific linguistic functions, such as persuading, arguing and hypothesizing, are more important than other functions, such as narratives, characteristic of everyday English (Halliday, 1994). Also, although both academic English and everyday English entail reading, writing, speaking and listening, academic English makes more extensive use of reading and writing, and ordinary English makes more extensive use of listening and speaking (Hornberger, 1989). In contrast to ordinary English, academic English is cognitively demanding and relatively decontextualized (Cummins, 1984, 2000). Students must rely on their prior knowledge of words, grammar, and pragmatic conventions to understand and interpret academic English. However, perhaps most importantly, academic English requires a much greater mastery of a range of

linguistic features than ordinary English. The key word here is *mastery*. While words and phrases may be used inaccurately in ordinary conversation, academic English requires their accurate use.

Those who have a relatively low proficiency in everyday English grammar and vocabulary may be able to convey the gist of their messages in everyday situations, but their communication is often limited. They are handicapped when they try to acquire the English needed for academic situations. This is because academic English requires the development of advanced grammar and vocabulary.

The acquisition of academic vocabulary and grammar is necessary to advance the development of everyday vocabulary and grammar. Academic situations push learners to use language accurately. These situations expose learners to a range of linguistic features that learners do not normally encounter in their day-to-day interactions. For instance, learners are not normally exposed to a range of modal auxiliaries (*can, could, may, must, might, shall, and should*) or verb forms (such as the past perfect or the present perfect continuous) in their ordinary interactions. They are not normally exposed to the use of verbs such as *increase* and *decrease* with inanimate subjects (such as *volume, price, and rate*) that are measurable and used in special grammatical structures (Celce-Murcia, 2002; Vongpumivitch, 1999). However, there are occasions in everyday English when these features are needed—for example, when learners need to say *The prices just decreased*. When learners have acquired these features, they can communicate more precisely and effectively in their everyday interactions.

Those who are highly proficient in academic English have extensive knowledge of the vocabulary of everyday, ordinary situations (see, for instance, Nagy, 1988; Nagy & Anderson, 1984; Stanovich, 1986; 2000; refer to Fitzgerald, 1995, for a review). When acquiring academic words such as *arise* (as in the phrase, *a question might arise concerning...*), they already know that the past tense form of *rise* is *rose*, and they are usually able to figure out through analogy that the past tense form of *arise* is probably the irregular *arose*. Many native English speakers do not have to be taught these features of everyday English, since they acquire them subconsciously through their home and community environments (Chall, 1983, 2000).

To develop academic English, learners must have already acquired a large amount of basic proficiency in the grammar of everyday English. Without this proficiency, they will have difficulty communicating effectively in academic contexts. Recall Duy's letter to his professor. Note that he deletes the *-ing* ending of the present progressive verb form "consider" when he

states, *I am consider to have Biology as my second major*. The present progressive is an indispensable feature of everyday conversations. Knowledge of the present progressive, a fundamental component of general proficiency, is also required in academic English.

The Sociocultural/Psychological Dimension of Academic English

Learners must develop more than the linguistic and cognitive dimensions of academic English. They must also acquire sociocultural and psychological features. Social and cultural norms, values, beliefs, attitudes, motivations, interests, behaviors, practices, and habits constitute the sociocultural/psychological dimension of academic English (see Table 3). Academic English arises not just from knowledge of the linguistic code and cognition, but also from social practices in which academic English is used to accomplish communicative goals. The Russian psychologist Lev Vygotsky (1962, 1978) helps to explain the social basis of academic English. A major premise of his theoretical framework is that social interaction plays an indispensable role in cognitive development. He states:

Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relationships between individuals (p. 57).

One implication of Vygotsky's work is that academic English is created by individuals within a speech community and is shared and changed by these individuals. Part of acquiring academic English, then, is acquiring the particular conventions and norms that characterize the people who use it. According to the sociolinguist James Gee (1996, 2002), this involves apprenticeships in particular ways of being. Gee (1996, 1998) argues that literacy involves larger social practices that go far beyond linguistic and cognitive processing. It entails ways of "valuing and believing."

Gee (1996) believes that one simply does not learn to read and write, but learns to read within a larger Discourse associated with a specific set of values and beliefs. For Gee, there are primary Discourses, which are learned in the home, and secondary Discourses, which are associated with institutions of education. For Gee, academic English is a secondary Discourse that is socially dominant and used by those in positions of power, often to exclude others who have not acquired it.

Table 3
The Socio-Cultural/Psychological Dimension of Academic English

<i>Attribute</i>	<i>Example</i>
Norms	Research is conducted in specific ways.
Values	Empirical research is valued; anecdotal information is questioned.
Beliefs	A researcher's work is respected if it informs or tests theory, advances knowledge in significant ways, and influences practice. A researcher's work is reputable if it is cited in peer-reviewed, scholarly journals.
Attitudes/Motivations/Interests	Alternative perspectives must be considered asking pointed questions is necessary
Behaviors/Practices/Habits	Researchers review the literature to establish what is known about a problem and how other researchers have studied the problem to avoid mistakes.

Individuals who have mastered the linguistic and cognitive dimensions of academic English fail to communicate effectively if they have not also mastered the socio-cultural/psychological dimension. These overlapping attributes often work together to determine the effectiveness of a person's communication. Gee (2002) discusses a Korean graduate student who was unable to complete her graduate studies because she did not know how to behave in academic settings. She did not know when and how to ask her advisors for support, how to emphasize the key points of her personal research, and how to persuade professors to help her. For the most part, she had the linguistic and cognitive dimensions of academic English to carry out these tasks, but she lacked knowledge of the sociocultural/psychological dimension. Her personal views of institutes of higher education and faculty-student relationships and her attitudes toward learning prevented her from using the specific academic behaviors that her professors in the United States both expected and preferred. Gee (1996, 2002) notes that individuals acquire such behaviors by participating in specific ways of being and acting in academic contexts.

Like the Korean graduate student described by Gee, Duy did not understand faculty-student relationships. Prof. Baker most likely expected Duy to point out his strengths as a student

researcher and the contributions that he might make to Prof. Baker's study succinctly and convincingly. Instead, Duy used multiple hedges: *I would like; I am consider; He suggested to me that maybe I should . . . He suggest that maybe I should contact you to see would it be possible, would like to know more about it, that is, if I am not costing any inconvenience.* Prof. Baker was not expecting these hedges. Rather, he expected Duy to point out his strengths as a student researcher and the contributions that he might make to Prof. Baker's study. Duy, on the other hand, probably expected the professor to provide him with information about the investigation and invite him to work on it.

Gee (1996) argues that academic behaviors cannot be overtly taught, particularly in institutional or school settings. In his perspective, they can only be acquired through enculturation in the home or by apprenticeship into academic social practices. He also argues that learners' value systems frequently come into conflict with values associated with academic communities. To participate in these communities effectively, learners need to comply with values that might conflict with their home values. If they conflict too greatly, they may decide not to participate. In Kohl's (1994) perspective, learners choose to "not-learn" what is inconsistent with their values and beliefs.

Not-learning tends to take place when someone has to deal with unavoidable challenges to her or his personal and family loyalties, integrity, and identity. In such situations, there are forced choices and no apparent middle ground. To agree to learn from a stranger who does not respect your integrity causes a major loss of self. The only alternative is to not-learn and reject the stranger's world (pp. 15-16).

However, understanding new values and beliefs does not necessarily involve losing previously acquired ones. As Delpit (1998) points out, acquiring the ability to function in academic communities does not mean that one must reject one's home identity and values. It does not even mean accepting all of the values associated with academic English. Individuals can learn the norms, values, beliefs, attitudes, and behaviors of academic English without endorsing all of them. While not easy, students are also capable of becoming multi-literate, multicultural, and multidialectal. They can learn about the many different values and norms associated with diverse varieties of English without losing their home languages and the cultural values and norms associated with them (for a different view, see Zamel & Spack, 1998.).

IMPLICATIONS FOR FURTHER STUDY

The research on the development of academic literacy is in its infancy. The proposed framework is designed to promote informed dialogue to practitioners and researchers that will stimulate further investigation. Additional research should explore the limitations of the framework and consider the ways it facilitates the development of testable hypotheses. It should also focus on elaborating the description of academic literacy in developmentally age-appropriate ways for English learners. For instance, while the framework provides a global understanding of the general language components and features young children must develop to acquiring academic English, it does not specify the precise language features children should learn at different grade-levels. If the framework is to be helpful, it would be useful to understand the specific language features (e.g., phonological, lexical, grammatical, and discourse features) English learners should be taught in different grades and at different English proficiency levels. This will entail investigating the teachability of language features as well as the factors that affect their teachability (e.g., practice, input, corrective feedback). It will also be important to explore the extent to which English language learners of diverse proficiency levels are able to acquire the features of academic English. For instance, just because native English speakers are able to narrate at the third grade, we cannot necessarily expect English learners of specific proficiency levels to be able to narrate. In brief, there is a need to collect data on what English learners in different sets of circumstances and contexts are able to do. Longitudinal research particularly is essential. In terms of instruction, teaching academic English should probably include a consideration of the three dimensions of academic English. However, the extent to which the various dimensions are emphasized in different grades and to learners of different proficiency levels should be explored.

In terms of assessment, the framework suggests the need for reliable, valid measurements of academic English that systematically test the key features of academic English that learners have difficulty acquiring (Bachman, 1990; Durán, 1989; Stevens, Butler & Castellón-Wellington, 2000). It will also be important to explore assessments that provide learners with rich, constructive information that will advance the learners' language learning rather than providing students with limited or unhelpful information about their English language development. Finally, if the framework is shown to be useful, teacher professional development programs will be required to provide teachers with the knowledge base required to teach the

various dimensions and features of academic English. Larger issues should also be considered in the instruction of academic English. For instance, the huge gap in working conditions and wages paid to teachers in poor and affluent communities lead to enormous gaps in the teachers' knowledge of academic English and probably the ability to teach it.

Because academic English is complex and dynamic, entailing linguistic, cognitive and socio-cultural/psychological dimensions, it may be very difficult to research. Despite these difficulties, academic English merits investigation. The major features of academic English can and should be made clear. This paper has attempted to add to this clarity.

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