

IMPROVING COGNITIVE/ACADEMIC LANGUAGE PROFICIENCY (CALP) OF  
LOW-ACHIEVING SIXTH GRADE STUDENTS: A CATALYST FOR IMPROVING  
PROFICIENCY SCORES?

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Masters of Education

By

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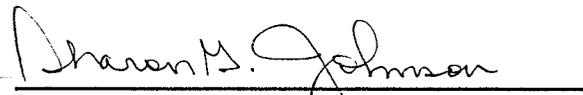
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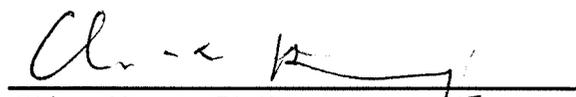
  
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## ABSTRACT

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Improving Cognitive/Academic Language Proficiency (CALP) of Low-achieving Sixth Grade Students: A Catalyst For Improving Proficiency Scores?

Cognitive/Academic Language Proficiency (CALP) is a construct developed by linguists that distinguishes everyday conversational language and language used in literature and on academic tests. The “No Child Left Behind Act” has created impetus for scientifically researched pedagogy that serves to increase academic achievement of groups who have been historically marginalized. Lack of CALP was identified as one factor that may prevent academic advancement among certain populations. An experiment was performed to demonstrate a causal relationship between increased CALP and improved Ohio Proficiency Test Scores. Twenty-three low-achieving sixth grade students, six of whom had IEPs, received an eight-week treatment program to improve their cognitive/academic language. Pre- and post-tests assessed changes in proficiency test scores. Differences in scores were statistically analyzed. Scores showed a significant positive treatment effect for students not on IEPs. The development of cognitive/academic language shows promise as a method for improving the proficiency test scores of low-achieving students.

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## I. INTRODUCTION AND PURPOSE

### Introduction

Current federal legislation requires that all students must perform well on state-issued proficiency tests in order that educational equity is realized and that high academic standards are upheld. Teachers are given the task of addressing the low achievement of certain populations that have been historically or practically marginalized. The challenge is to discover the particular gaps in knowledge or skill that keep these cognitively able students from excelling within the American public school system. In the past twenty years, a number of researchers have addressed one area that recurrently surfaces as a disparity between high achieving and low achieving students. Language proficiency has been identified by various authors, among various subgroups as a major factor.

One group of researchers has focused their efforts on the particular reasons that underlie the failure of bilingual students to negotiate western schooling successfully. Jim Cummins has developed a theoretical framework that relies on linguistic evidence and qualitative research in his articles, “Empirical and Theoretical Underpinnings of Bilingual Education,” (1981), “Language, Power and Pedagogy: Bilingual Children in the Crossfire,” (2000) and “Reading and the Bilingual Student: Fact and Friction,” (2003c). He makes a distinction between language that is commonly used in conversational English (Basic Interpersonal Communicative Skills or BICS) and language that is used in written academic contexts (Cognitive/Academic Language Proficiency or CALP) in his

articles “Putting Language Proficiency in Its Place: Responding to Critiques of the Conversational/Academic Language Distinction,” (2003b) and “BICS and CALP.” (2003a). David Corson, supports this understanding by his examination of written and spoken English language in *Language Diversity and Education* (2001). He describes that written and spoken English language are essentially different:

The Graeco-Latin vocabulary of English creates special difficulties for children from some sociocultural backgrounds. This academic vocabulary is different in important ways from the basic vocabulary of English. Apart from conceptual difficulty, academic words tend to be much longer; they tend to be different in shape; they are drawn almost entirely from Latin and Greek, rather than from Anglo-Saxon sources; they appear very rarely or not at all in everyday language use. Academic Graeco-Latin words are mainly literary in their rules of use. Most native speakers begin to encounter these words in quantity in their upper primary school reading and in the formal secondary school setting. So their introduction in literature or textbooks, rather than in conversation, restricts people’s access to them.

This difference in language explains the small difference in academic performance that is described between bilingual students and monolingual students in early elementary school, which rapidly widens in later elementary school and results in significant failure or drop out rates by high school. Even though a student may speak English so they are understood in conversation, they may not have the language proficiency to understand

and manipulate the language that is used and expected in the schools from fourth grade onward.

Other research indicates that other subgroups besides ESL students share the propensity to struggle with academic advancement, and connect language proficiency as a major culprit. Some key research in this area done by David Corson has made the connection between language ability in various groups (including aboriginal peoples, immigrants, urban poor and minority language groups) and low academic performance. Through the lens of a postmodern worldview, Corson gives an important explanation of the necessity for addressing the academic deficits of certain subgroups in order to provide justice and reduce partiality. Pertinent literature in this regard is *Changing Education for Diversity* (1998), *Language Policy in Schools: A Resource for Teachers and Administrators* (1999) and *Language Diversity and Education* (2001). A well-known longitudinal study that established the “fourth-grade gap” among poor students was *The Reading Crisis: Why Poor Children Fall Behind*, by Chall, Jacobs, and Baldwin (1990). Another critical study that verified that many low-achieving students have no access to formal language registers at home was “Discourse Features of Written Mexican Spanish: Current Research in Contrastive Rhetoric and Its Implications” by Montano-Harmon (1991) as quoted in the continuing research on linguistic ability related to academic achievement of low-income students conducted by Ruby Payne in *A Framework for Understanding Poverty* (2003).

Finally, the study relies on research by Anna Uhl Chamot and J. Michael O’Malley in *The CALLA Handbook: Implementing the Cognitive Academic Language Learning Approach* (1994) and Chamot, Sarah Barnhardt, Pamela Beard El-Dinary and

Jill Robbins in *The Learning Strategies Handbook* (1999) who have applied Cummins' framework by developing a method to implement the theory. The approach is designed specifically for language minority students, but has a chapter suggesting its application to a much wider population including compensatory and remedial programs and students with learning disabilities, though no research for those populations has been discovered. The program focuses on integration of three major components to improve performance: "language development; content area instruction; explicit instruction in learning strategies."

This study proposes to make the connection between the theory of Cognitive/Academic Language Proficiency (CALP) and achievement on Ohio Proficiency Tests, using a quasi-experimental model and a treatment of low-performing students with an intensive compensatory program utilizing the CALLA methodology. It proposes to use a small test group to show that Cognitive/Academic Language Proficiency explains one cause of poor performance. Because learning and students are complex and individual, it is not suggested that a language insufficiency will be the reason that *all* students fail to perform successfully. However, this research may shed light on one cause that will direct more effective instruction, thus leading to higher proficiency achievement.

#### Application to Current School

As an Intervention Specialist at a mid-western rural middle school, the researcher is being asked to address the significant failure rate of the students on 5th and 6th grade proficiency tests. Most significant are the large numbers of economically disadvantaged

students and students with disabilities that fail to meet the eighty percent proficiency score.

The federal law known as “No Child Left Behind” (“No Child Left Behind,” 2002, Title One, 1001.9) requires that there be scientifically-based instructional strategies instituted to address the problem and to provide guidance for remediation strategies. From the researcher’s experience with this population, it is apparent that many students speak in casual language registers, and rarely read beyond what they are required to do in class. Both of these observations suggest that many of them may lack the cognitive/academic language proficiency necessary to fulfill academic requirements of middle or high school. Further, many of these students performed adequately at lower grade levels, but began failing the tests at 5th grade. This would suggest that there are not significant cognitive problems, but that other factors would account for the failures. This research plans to determine whether inadequate language proficiency could be a major influence in this regard.

### Biblical Integration

The two most influential authors in the area of language research for the improvement of marginalized groups, Cummins and Corson, base their work on a postmodern worldview that seeks justice in diversity. This study would contend that justice and equality of opportunity are worthy goals and indeed the motivation for this study, but that justice, rather than being a response to social power inequalities, is an essential attribute of a Creator God (Deut. 32:4, Psalm 140:12), and that western postmodern thinkers actually developed this idea of justice from a Christian worldview. Further, the study becomes important as part of the biblical mandate to show no partiality

to any person (Romans 2:11) and to assist any person who is oppressed (Leviticus 19:15; Proverbs 21:2-3), because of the dignity and value that resides in each individual due to the fact that they were created in the image of God. A full interaction with the literature regarding the socio-political aspects of language is beyond the scope of this study, but a worldview that values each individual and respects them as precious, forms the basis for the study.

### Purpose of the Study

The purpose of this study is to establish a causal relationship between low-achieving students' Academic/Cognitive Language Proficiency and their scores on Ohio Proficiency Tests. It will utilize Cummins' and Corson's research with ESL students as a theoretical foundation regarding language ability as a necessary prerequisite to academic achievement within the social and cultural milieu of the public school system. They point out that educational achievement, especially in such areas as high-stakes testing, is a critical factor in restricting opportunity for economic and social advancement. It will use the CALLA methodology of Chamot, O'Malley, Barnhardt, El-Dinary and Robbins as a way to determine whether directed instruction in cognitive/academic language will improve proficiency test performance for sixth -grade students who have failed at least one subtest on the Ohio Reading Proficiency Test. A correlation of this type would suggest a wider use of language improvement methodology, which would allow improved academic performance on proficiency tests, and thus improve the educational prospects of low-achieving students.

## Educational Significance

From the year 2002, public school students have had an increased challenge. With the advent of “No Child Left Behind” (NCLB) legislation, the United States government intends to “close the achievement gap with accountability, flexibility, and choice, so that no child is left behind.” (No Child Left Behind Act of 2001, 2002) Future classes are facing more intensified and higher stakes proficiency testing than ever before. Not only are the stakes higher, but the legislation is designed to disaggregate scores and thereby increase achievement of specific groups who have been historically marginalized, including racial/ethnic minorities, ESL students, economically disadvantaged students and students with disabilities. This will force educational communities to direct specific efforts toward certain groups who have persistently failed to excel academically. The challenge among the educational community is to address the particular needs of these groups in relation to proficiency testing. The research of Cummins (1980, 2000, 2003a,b,c), as well as linguist David Corson (1998, 1999, 2000), has formed a theoretical basis for attributing this discrepancy to the students’ lack of a linguistic basis for dealing with the cognitive/academic language that is required for highly cognitive literary activities. These activities include state proficiency tests, but extend far beyond it to classroom expectations, college admission tests, literary texts of many kinds, and prerequisite reading ability for jobs.

Successful remediation for ESL students has been developed from this theoretical basis. This study proposes that Cognitive/Academic Language Proficiency (CALP) is also an issue in a broader population than second language learners, and may be one

significant factor that is causing low achievement on proficiency tests that utilize high level cognitive/academic language. This study proposes to show that improving students' level of CALP will improve Ohio Proficiency Test Scores. If a causal relationship can be established, instruction in research-tested methodology that has been developed for remediation of this problem with ESL students could be instituted as a solution for improving proficiency test scores in targeted populations. Further, this study would then work toward providing students with a more equal opportunity to develop their academic abilities, allowing them more success within the educational system and thereby reducing the effects of discrimination and separation that has kept certain persons from accessing educational and vocational options.

### Methodology

This study proposes to demonstrate a causal relationship between Cognitive/Academic Language Proficiency and Ohio Proficiency Scores using a quasi-experimental method. The selected students are sixth-grade students at Cedarville Middle School in Cedarville, Ohio. Students were selected for the study if they had completed Off-year Proficiency Tests in March 2003 and had failed at least one subtest on the Reading portion of the test. The group is composed of fifty-six students, of whom twenty-eight are male and twenty-eight are female.

Sixth-grade students will be divided into two groups, with the twenty-four lowest performing students targeted for an eight-week intensive language instruction program developed from *The CALLA Handbook: Implementing the Cognitive Academic Language Learning Approach* (1994) and *The Learning Strategies Handbook* (1999). All students will be given pre- and post-tests, utilizing the Ohio Proficiency Reading Test Forms from

2003. One group of twenty-four students will receive a treatment two times per week for eight weeks during the regularly scheduled one-half hour Intervention period, utilizing the CALLA method in the form of a compensatory/remedial program. The control group will be scheduled for other activities during that time period. All students will attend the same general education classes. At the end of eight weeks, students will be retested using the same test. Changes in test scores will be compared. If cognitive/academic language is a causal factor for proficiency test achievement, it is expected the differences between pre- and post-test scores among the experimental group will be greater than differences among the control group.

Because of the school's request and the state's requirement for all low-achieving students to receive the remedial program, the treatment group will include six students who have been identified with special learning problems and who have Individualized Education Plans (IEPs). These students will receive treatment along with the 18 other students who have been identified as low achievers because of their previous proficiency test results, but who have not been identified as students with learning disabilities.

Prior to the beginning of the treatment program, the researcher will run a brief pilot program with students in the fifth, sixth and seventh grades who live in the same town, but who are not attending public school. The purpose of the pilot program is to test several of the lessons that will be used in the treatment, and receive feedback from the students on content, lesson difficulty and efficacy, as well as subjective opinions about the program in general. The pilot program will involve four one-hour sessions which will include two lessons each. The students will have an opportunity at the end to anonymously fill out a questionnaire.

## Summary

The desire of this research is to provide one link in the chain of ways for low-achieving students to improve proficiency test scores. The reasons for poor academic performance are complex, and this author has no illusions that identifying one underlying problem will be the panacea for all students. However, if there is a significant link between Cognitive/Academic Language Proficiency and proficiency test performance, it will allow teachers to improve instruction and bridge one of the educational gaps which have prevented certain students from reaching their academic potential. It will also serve as a method to meet the core rationale behind such legislation as No Child Left Behind, which is to provide a more just and equitable system of education for all children, particularly those who have historically been deprived. Because all students are endowed with value and dignity, and because we have a mandate to avoid partial behavior, it may provide a way for teachers to level access to learning.

## Definition of Terms

*Cognitive/Academic Language Proficiency (CALP)*– “Knowledge of the less-frequent vocabulary of English as well as the ability to interpret and produce increasingly complex written (and oral) language...far more low-frequency words (primarily from Greek and Latin sources), complex syntax (e.g., passive voice), and abstract expressions that are virtually never heard in everyday conversation.” (Cummins, 2003c)

*Basic Interpersonal Communication Skills (BICS)*– “The ability to carry on a conversation in familiar face-to-face situations...It involves the use of high-frequency words and simple grammatical constructions. Communication of meaning is typically

supported by cues such as facial expressions, gestures, intonation, and the like.”

(Cummins, 2003c)

*Low-achieving students* – for the purpose of this study, low-achieving students are defined as a student who has failed one or more subtests of the fifth grade off-year Ohio Reading Proficiency Test.

*Economically disadvantaged students* – for the purpose of this study, this group is defined by the definition for “economically disadvantaged” established by the Ohio Department of Education for the disaggregation of student results on Proficiency tests which is students who qualify for free or reduced price lunch.

*Students with disabilities* - for the purpose of this study, this group is defined by the definition for “students with disabilities” established by the Ohio Department of Education for the disaggregation of student results on Proficiency tests which is students who have an IEP (Individual Education Plan) or 504 Plan. Excluded for the purpose of this study are those students who have an IEP, but qualify for alternate assessment according to standards established under P.L.107-110 (NCLB).

*ESL* – “English as a Second Language” – Students with this designation are also referred to by some authors as LEP (Limited English Proficient) or bilingual students.

*NCLB* – “The No Child Left Behind Act, or the Reauthorization of Elementary and Secondary Education Act (ESEA) was enacted January 8, 2002, to expand choices for parents, focus resources on proven educational methods, and provide accountability for results.” (“No Child Left Behind,” 2002)

## CHAPTER II: LITERATURE REVIEW

### Introduction

This research project proposes an intervention treatment for low-achieving sixth-grade students as a way to improve their Ohio proficiency test scores. The treatment is based upon previous research that gives evidence for a strong connection between language ability and academic success. This literature review first presents linguistic research related to cognitive/academic language (CALP). This serves to limit the focus of the treatment to the development of language ability, and highlights the critical nature of academic language proficiency as a key component for achievement on academic assessments. This research comes from researchers studying bilingual students, and who were seeking to improve their academic performance. Secondly, findings regarding the socio-political foundations of the linguistic research are considered in order to place the research with regard to worldview, and to compare it to a biblical worldview. Thirdly, research related to the educational implications of the cognitive/academic language theory is articulated. This serves to connect the theory with practices that have been demonstrated to improve language ability, and which are an application of the linguistic research. Next, additional research concerning other populations whose academic patterns mirror those of bilingual students will be examined as a link between the linguistic/educational research on bilingual students and the application of the research to a different target population. Related literature in relation to implications for classroom

practice, specifically with the Cognitive Academic Language Learning Approach (CALLA) will be discussed. Though CALLA was specifically designed for English as a Second Language Students, it forms the basis for the proposed treatment. Finally, the laws and regulations concerning state proficiency tests will be examined in order to understand the reasons for applying CALLA for the purpose of improving proficiency test scores.

### Linguistic Theory

Jim Cummins has developed both a linguistic and socio-political theory concerning the education of bilingual students. He begins with an established understanding that language plays a central role in a child's educational development, and seeks to uncover ways that language can be developed to allow educational success. After synthesizing a large number of bilingual research studies, Cummins has recognized that multiple language proficiencies are required for various needs within various contexts, and that the educational system has requirements related to a literary form of language that is different from the language that is used in everyday conversation.

He makes a distinction between "basic interpersonal communicative skills" or BICS and "cognitive/academic language proficiency" (CALP). BICS refers to the language that students use for casual, face to face communication, while CALP refers to the specific literary language that is required in academic settings.

It is clear that in a monolingual context, with the exception of severely retarded and autistic children, everybody acquires basic inter-personal communicative skills (BICS) in L1 [first language], regardless of IQ or academic

aptitude, yet there are large individual differences in the extent to which literacy skills are developed. (Cummins, 1981, 21)

Colin Baker has expanded and illustrated Cummins' description of the difference between BICS and CALP:

BICS is said to occur when there are contextual supports and props for language delivery. Face-to-face '**context embedded**' situations provide, for example, non-verbal support to secure understanding. Actions with eyes and hands, instant feedback, cues and clues support verbal language. CALP, on the other hand, is said to occur in **context reduced** academic situations. Where higher order thinking skills (e.g. analysis, synthesis, evaluation) are required in the curriculum, language is '**disembedded**' from a meaningful, supportive context. Where language is 'disembedded', the situation is often referred to as '**context reduced**'. (Baker, 2001, 169-170, emphasis in original)

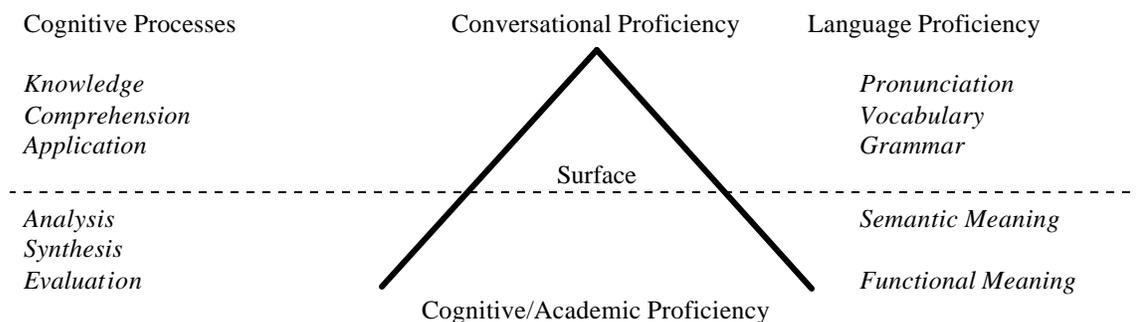


Figure 1. Iceberg image depicting Cummins' distinction between BICS and CALP (Baker, 2001, 170)

The distinction between BICS and CALP is aided by an image of an iceberg (see Cummins, 1984b). Above the surface are language skills such as comprehension and speaking. Underneath the surface are the skills of analysis and synthesis.

Above the surface are the language skills of pronunciation, vocabulary and grammar. Below the surface are the deeper, subtle language skills of meanings and creative composition. (Baker, 2001, 169-170, emphasis in original)

Cummins supports the BICS/CALP distinction by citing a long history of related research:

The conversational/academic language distinction addresses similar phenomena to distinctions made by theorists such as Vygotsky (1962) (spontaneous and scientific concepts), Bruner (1975) (communicative/analytic competence), Canale (1983a) (communicative/autonomous proficiencies), Donaldson (1978) (embedded and disembedded thought and language), Olson (1977) (utterance and text), Bereiter and Scardamalia (1981) (conversation and composition), Snow et al. (1991) (contextualized and decontextualized language) and Mohan (1986) (practical and theoretical discourse). (Cummins, 2000, 60)

In order to further describe the differences in the language ability of students, and to explain the necessary components that would depict cognitive/academic language, Cummins developed a four part diagram that makes distinctions between BICS and CALP, incorporating the concepts of “context-embedded” communication versus “context reduced” communication. The diagram is designed to represent a continuum of language proficiency that is determined by the communication situation and the amount of support that is provided. He also establishes a second continuum extending from “cognitively undemanding communication” to “cognitively demanding communication,” related to the complexity of and the level of linguistic skill that is required in communicating. He describes the distinctions in the following way:

The distinction was elaborated into two intersecting continua (Cummins, 1981b) which highlighted the range of cognitive demands and contextual support involved in particular language tasks or activities (context-embedded/context-reduced, cognitively undemanding/cognitively demanding). The BICS/CALP distinction was maintained within this elaboration and related to the theoretical distinctions of several other theorists . . . The terms used by different investigators have varied but the essential distinction refers to the extent to which the meaning being communicated is supported by contextual or interpersonal cues (such as gestures, facial expressions, and intonation present in face-to- face interaction) or dependent on linguistic cues that are largely independent of the immediate communicative context. (Cummins, 2003, 2)

Baker relates the concepts of BICS and CALP to Cummins' diagram:

	<b>Cognitively Undemanding Communication</b>		
	<b>1<sup>st</sup> Quadrant</b>	<b>2<sup>nd</sup> Quadrant</b>	
<b>Context Embedded Communication</b>			<b>Context Reduced Communication</b>
	<b>3<sup>rd</sup> Quadrant</b>	<b>4<sup>th</sup> Quadrant</b>	
	<b>Cognitively Demanding Communication</b>		

Figure 2. Cummins' two dimensions of Cognitive/Academic Language (Baker, 2000 79)

Surface fluency or basic interpersonal communication skills will fit into the first quadrant (see diagram). That is, BICS (basic interpersonal communication skills) is context embedded cognitively undemanding use of a language. Language that is cognitively and academically more advanced (CALP) fits into the fourth quadrant (context reduced and cognitively demanding). (Baker, 2001, 173)

This theory has been developed within a sociopolitical theory that has sought to identify the multiple reasons that bilingual or minority language students frequently perform poorly in school, and often fail to advance to higher education. It has been developed within the time period of political debate regarding the best educational approach for bilingual students in the United States, Canada and UK. Additionally, it has also been developed during the rise of postmodern thinking that promotes diversity and seeks to eliminate historical inequities toward certain minority groups within western educational systems in an effort to shift social and political power away from dominating social/political groups.

Cummins (Cummins & Swain, 1983; Cummins, in press) pointed to the elaborated sociopolitical framework within which the BICS/CALP distinction was placed (Cummins, 1986, 1996) where underachievement among subordinated students was attributed to coercive relations of power operating in the society at large and reflected in schooling practices. He also invoked the work of Biber (1986) and Corson (1995) as evidence of the linguistic reality of the distinction. Corson highlighted the enormous lexical differences between typical conversational interactions in English as compared to academic or literacy-related uses of English. Similarly, Biber's analysis of more than one million words of

English speech and written text revealed underlying dimensions very consistent with the distinction between conversational and academic aspects of language proficiency. (Cummins, 2003, 4)

This reference ties the research to another educational linguist, David Corson, who comes at the issue of bilingual education from a different angle, but who collaborates with Cummins to elaborate both his linguistic and socio-political theories. In addition, Corson provides evidence that the linguistic research that was directed specifically toward the education of bilingual students, may be directly applicable to a much wider group of students, which Corson describes as language-minority students.

Cummins leans heavily on the linguistic studies of Corson, as well as the related work of Coxhead and Nation, to show that the language that is used as the academic/literary language within educational institutions is, in actuality, a different form of English than that used in conversation.

The English lexicon derives from two main sources. The Anglo-Saxon language (of Germanic origin and related to other languages of northern Europe) had established itself as the major language in England from about the 5th century AD. In the 11th century the Normans invaded, and their language (derived from Old French, Greek, and Latin) became the high-status language of the society, used among the nobility and in the courts. The Anglo-Saxon language continued to be spoken among peasants and those in lower status positions in the society. From the 12th through 16th centuries the two languages merged with each other to form the core of what we now call "English." The lexicon of each language did not "lend evenly across all domains and functions of language, however. The

Anglo-Saxon lexicon continued to be used predominantly in everyday conversation; the Greco-Latin lexicon became the language of literacy and governed the more formal functions of the society (e.g., legal transactions). Corson's (1993, 1995, 1997) detailed analysis of this process highlights the fact that today the academic language of texts continues to draw heavily on Greco-Latin words, whereas everyday conversation relies more on an Anglo-Saxon-based lexicon. Greco-Latin words tend to be three or four syllables long, whereas the high-frequency words of the Anglo-Saxon lexicon tend to be one or two syllables in length. Corson (1997) points out that "academic Graeco-Latin words are mainly literary in their use. Most native speakers of English begin to encounter these words in quantity in their upper primary school reading and in the formal secondary school setting. So the words' introduction in literature or textbooks, rather than in conversation, restricts people's access to them. Certainly, exposure to specialist Graeco-Latin words happens much more often while reading than while talking or watching television.... Printed texts provided much more exposure to [Graeco-Latin] words than oral ones. For example, even children's books contained 50% more rare words than either adult prime-time television or the conversations of university graduates; popular magazines had three times as many rare words as television and informal conversation."(p. 677) (Cummins, 2003, 23-24)

Cummins further supports this linguistic distinction by Coxhead's study.

A listing of 570 word families that are commonly found in academic texts in English but that are not among the most frequent 2,000 words of the language is provided by Coxhead (2000). (Cummins, 2003, 24)

Cummins then cites Paul Nation to follow up on this idea of “academic language” in relation to education.

Paul Nation (1990, 1993) and his colleagues have carried out the most comprehensive research on the nature and learning of English vocabulary. Like Corson, he points out that most low-frequency vocabulary comes to English from Latin or Greek. He estimates that about two thirds of the low-frequency words in English derive from these linguistic origins. Nation (1990) further points out that high frequency vocabulary consists mainly of short words which cannot be broken into meaningful parts. Low frequency vocabulary, on the other hand, while it consists of many thousands of words, is made from a much smaller number of word parts. The word, impose, for example, is made of two parts, im- and -pos, which occur in hundreds of other words - imply, infer, compose, expose, position. This has clear implications for teaching and learning vocabulary. (p. 18) (Cummins, 2003, 25)

Nation emphasizes that learners must be given the opportunity to use the language if vocabulary is to develop to its full potential: "If learners have a sufficiently large vocabulary but they are not given the opportunity to put this vocabulary to use and develop skill in using it, their growth in knowledge and further vocabulary growth will not be achieved" (1993, p. 132). Commenting on the relation between vocabulary and reading, Nation and Coady (1988) point out that "vocabulary difficulty has consistently

been found the most significant predictor of overall readability" (p. 108). Once the effect of vocabulary difficulty (usually estimated by word frequency and/or familiarity and word length) is taken into account, other linguistic variables, such sentence structure, account for little incremental variance in the readability of a text. They summarize their review as follows: "In general the research leaves us in little doubt about the importance of vocabulary knowledge for reading, and the value of reading as a means of increasing vocabulary" (p. 108). (Cummins, 2003, 26)

### Socio-political Foundations

Corson's work in the nature of the English language establishes a foundation for developing the concept of "academic language," but he goes further in defining the sociopolitical framework that he explicitly espouses. Cummins seems to assent to this framework and refers to aspects of it in his writings, though it is never explicitly elaborated. Corson justifies his work in developing the area of language education based on his postmodern worldview that is driven by values of diversity and social justice. Corson begins his book, *Language Diversity and Education* (2001) by describing the worldview from which his theories proceed.

In the first chapter Corson explains that the book is written to educators who are working in a new socio-political milieu created because of the coming of postmodernism. He recognizes that language is key to education, and suggests that the time is right for a new attitude toward language within education because of the worldview shift.

As my opening paragraph hints, in recent decades the search for objectivity and for absolutes in understanding social life has gradually been replaced by a much more skeptical conception of discovery that is more in tune

with the real social world. Accordingly, but gradually, human science disciplines are transforming themselves to take account of this diverging view. Furthermore, this quite different understanding of what people can really know about the human condition is slowly filtering into school curricula, into the pedagogies that teachers choose to use, and into the new modes of administration and evaluation that schools are introducing.

In this different social climate, which many call “postmodernity”, people are living increasingly in social spaces where orthodoxies of all kinds are losing their influence. While this development is worrying for some, it is welcomed by many others who see it as overdue recognition of the way the social world actually is. A spirit of tolerance about matters of diversity is becoming a necessary part of modern life: a recognition of diversity in world view and behaviour is gradually becoming more acceptable these days. And it is much more taken-for-granted as well. Alongside this development, we are seeing a rapid decline in the influence of positivism as a guiding ideology in social research. (Corson, 2001, 1-2)

In his research, Corson is explicitly reacting to a positivist worldview which has been reflected in much of the social science research of the twentieth century. During this time period of modernity, many researchers held to a mechanistic view of human beings that saw them as complex machines that could be studied and categorized. It believed that people could be influenced and directed primarily by behavioral controls. It also held to a very optimistic view, regarding this research as a way to identify and solve many social

and individual problems. He believes that this position is being replaced by a postmodern point of view:

By the end of the twentieth century, an 'interpretative alternative' was beginning to replace positivism. Here, the very possibility of reaching theoretical neutrality in observations is discounted. Looking out from inside a language game, the knower is always a contributor to the construction of knowledge, and this colours any understanding of the social world that we have. It also places severe limits on research, as Max Weber (1969) observed. On the one hand, the complex nature of 'interpretative understanding' offers an opportunity to go into social and cultural questions much further than a natural scientist could possibly penetrate the inanimate world. But on the other hand, this deeper penetration comes at a price: it means a loss in objectivity, precision and conclusiveness. So when people accept the challenge of 'interpretation' as a better way of understanding the social world, they also accept its inevitable 'fallibility'. Like the verdict of a jury, our interpretations can be overturned by new evidence. But even an overturned interpretation leaves us with only another interpretation of a text. As Charles Taylor (1979) puts it: "We are trying to establish a reading for the whole text, and for this we appeal to readings of its partial expressions; and yet because we are dealing with meaning, with making sense, where expressions only make sense or not in relation to others, the readings of partial expressions depend on those of others, and ultimately of the whole. (p. 28) (Corson, 2001, 5)

Corson directs this line of thinking to question assumptions that have been intact concerning the type of language that is used and required for success within western

educational systems. He draws upon Wittgenstein's idea of "language games." "For Wittgenstein (1953, 1972), humans are participants in many different 'language games' that are all played within fairly closed linguistic circles. When we have knowledge or belief, we have it according to the linguistic rules that obtain in a given circle or game: in some discipline or theory, for instance, or in some other ideological framework, like culture, a social group, a religious sect, and so forth." (Corson, 2001, 4) This philosophical commitment then is used by Corson to question the "language game" that is placed upon students who attend school. He suggests that the linguistic requirements of the school system create an hegemony toward certain parts of the student population. Corson explains his position.

This [the invisible, culturally agreed upon pressure of schools that requires conformity to certain language and behavior norms] is hegemony at work, a notion that Frederick Erickson (1996) spells out a little more fully:

Hegemonic practices are routine actions and unexamined beliefs that are consonant with the cultural system of meaning and ontology within which it makes sense to take certain actions, entirely without malevolent intent, that nonetheless systematically limit the life chances of members of stigmatized groups. Were it not for the regularity of hegemonic practices, resistance by the stigmatized would not be necessary." (p. 45) (Corson, 2001, 18)

Corson then points out that hegemony occurs not only in the school system, but more broadly throughout populations because of differences in linguistic ability. He cites the sociolinguistic studies that enlighten this concept:

Another example of this appears in sociolinguistic studies. William Labov (1972a) found that stigmatized features of speech are judged most harshly by the same people whose speech most exhibits those features. This, too, is hegemony at work, and it allows formal organizations like schools to feel more legitimate when they stigmatize different features of speech, non-standard varieties, languages, or other aspects of people's identities.

In fact, this working out of hegemony is nowhere more evident than in the restrictive cultural environments that most schools create for children from diverse backgrounds. Jim Cummins (1996) sees these schools as places where children who are different in some educationally relevant way are unable to 'negotiate their own identities'. They begin to lose their identity as human beings, before they ever gain it. For him, real change in the education of culturally diverse students means a shift from coercive to collaborative relations of power. Teachers need to re-define their roles and the types of structures at work in schools. These are the things that determine the micro-interactions that go on between educators, students, and communities. However, they are never neutral. Either they contribute to the disempowerment of culturally diverse students and their communities; or they enable teachers, students, and communities to challenge the operation of unwanted power structures. (Corson, 2001, 18-19)

From such an understanding, flows the need for placing language and language diversity as a vehicle to correct the historic hegemony of schools and to provide social justice. Corson defines this through his "critical reality" approach to social justice.

A critically real approach to social justice recognizes that diversity is part of the reality of the human condition; language diversity no less than other forms of diversity. Because human groups and individuals have distinctly different language interests, those differences often need to be addressed in different ways if public justice is to be served. (Corson, 2001, 26-27)

The implications of Cummins' and Corson's linguistic and sociopolitical theories related to language within schools are enormous. Corson describes what he perceives to be basic changes that would have to be made within the system. He calls his approach "an emancipatory conception of social justice."

[This conception] sees the needs of different groups as quite different needs that arise from different group interests, and which often require different forms of treatment. In other words, to treat people equally and fairly, we do not treat them as if they were all the same, or even potentially the same. (Corson, 2001, 30)

Corson and Cummins argue that social oppression is related to the type of language that is used and required in academic settings. Corson utilizes Bourdieu's theories of "social and linguistic capital" to justify the claim that certain students face discrimination from the point at which they enter the school system because of their language.

In Bourdieu's view, people in possession of 'appropriate' linguistic capital in any context are more favourably placed than others to exploit the situation . . . Accordingly, using Bourdieu's metaphor, there are many linguistic markets in which rare or high status forms bring profit to the user, and where non-standard or

low-status language use has a limited value, because it is not viewed from within the dominant modes of apprehension that dispose influential people to award it value. To such people, for example, a non-standard variety's different 'rules' of use seem inappropriate within that marketplace, unless someone contests the prevailing rules and modifies them in some way. As a result, children from non-dominant backgrounds are often silent within those 'markets', or they are forced to withdraw from taking part in them. And teachers in schools everywhere are very familiar with responses like these, especially from students of diversity.

Bourdieu argues that while the cultural or linguistic capital valued in schools is not equally available to children from different backgrounds, schools, as upper middle class institutions, still operate as if all children had equal access to it. By basing their assessments of school success and failure and their award of certificates and qualifications on children's possession of this high status capital, which is unequally available, schools act in such a way as to reproduce the social arrangements that are favourable to some social groups, but unfavourable to others. In this way, the value of the dominant cultural capital that is passed to the next generation, is reinforced yet again. This complex social process is described by Bourdieu as the application of 'symbolic power' by dominant social groups, who inflict 'symbolic violence' in this way upon non-dominant groups. (Corson, 2001, 21-22)

Corson also argues that the use of 'high status vocabulary' is the key tool for discriminating between students in the academic marketplace (Corson, 1995b, 1999), and

that vocabulary diversity is the most consistent proficiency marker used within educational settings (Corson, 2001, 21-22)

I argue that education fails to take account of the fact that many children's discursive relations, before and outside schools, are inconsistent with the kinds of lexico-semantic demands that schools and their high-status literacy place upon them, often unnecessarily. Partly, as a result of this, many English-as-a-first language and English-as-a-second language students, from some cultural, linguistic and social backgrounds, are almost guaranteed to fail in the middle levels of present-day education, before they have a chance to show that they can succeed . . . Despite this, schools still operate as if all children had equal access to the capital valued in formal education. (Corson, 2001, 23)

#### Educational Implications

Though Cummins and Corson both agree that significant changes need to be made within the educational structure to offer justice and equity to linguistically diverse students, both are aware that culturally-established, high level cognitive and linguistic demands are made upon students. They seek a change in attitude and policy among educators that would value the linguistic diversity of all students, but which would also address the special needs of linguistically diverse student to help them access the academic language that may be keeping them from excelling within the existing structure and which are promoting or extending the current form of hegemony.

Clearly, following a critical realist account of social justice, more critical awareness of variety is badly needed, especially by people associated with education. Indeed, the power and justice issues involved here for schools are

complex in the extreme. To give non-standard varieties the respect they deserve, as regular and systematic varieties of language that mean a great deal to their speakers, non-standard varieties need to be valued in schools, in much the same way as community languages other than English need valuing . . . At the same time, non-standard varieties can rarely be used as the school's vehicle of instruction. (Corson, 2001, 67-68)

While all aspects of children's cultural and linguistic experience in their homes should form the foundation upon which literacy instruction in school builds, it is important not to romanticize the literacy and linguistic accomplishments of particular communities. These accomplishments form the basis for future development but in our current technologically oriented societies, specific forms of literacy and numeracy are required for educational success and career advancement. Instruction in school, as well as active engagement with books (Krashen, 1993), extends students' basic knowledge of syntax, semantics, and phonology, and their community-based literary practices into new functional registers or genres of language. Access to and command of these academic registers are required for success in school and for advancement in many employment situations beyond school. (Cummins, 2000, 75)

The next step then, would be for schools to recognize the discrepancy between the “academic” language that is required for school success and the “everyday” language, which is the only language to which many students have access. To this end, Cummins and Corson situate *academic language proficiency* within a particular context, and

describe a relationship between low levels of cognitive/academic language proficiency and school achievement.

Thus, the social practice of schooling entails certain 'rules of the game' with respect to how communication and language use is typically organized within that context. In short, in the present context the construct of *academic language proficiency* refers not to any absolute notion of expertise in language but to the degree to which an individual has access to and expertise in understanding and using the specific kind of language that is employed in educational contexts and is required to complete academic tasks. Drawing on the categories distinguished by Chapelle (1998), academic language proficiency can be defined as the language knowledge together with the associated knowledge of the world and metacognitive strategies necessary to function effectively in the discourse domain of the school . . . Thus, in the context of schooling, discussions of greater or lesser degrees of language proficiency or 'adequacy' of an individual's proficiency refer only to the extent to which the individual's language proficiency (CALP) is functional within the context of typical academic tasks and activities. As noted above and elaborated below, the characteristics of instruction (context) will determine the functionality or 'adequacy' of an individual's proficiency in the language of instruction as much as the degree of proficiency in any absolute sense. (Cummins, 2000, 67)

At this point, the concept of language register should also be established.

Linguists have established an understanding of different forms or styles of the English

language that are used by the same people in different contexts. The idea relates and is intertwined into the BICS/CALP distinction.

In this regard, it is helpful to introduce the notion of register . . . Register is defined in the Concise Oxford Dictionary of Linguistics (Matthews, 1997: 314) as 'a set of features of speech or writing characteristic of a particular type of linguistic activity or a particular group when engaging in it . . . journalese is a register different from that in which sermons are delivered, or in which smutty stories are told.' Registers are the linguistic realizations of particular discourse contexts and conventions. Academic language proficiency thus refers to the extent to which an individual has access to and command of the oral and written academic registers of schooling.

In summary, as students progress through the grades, the academic tasks they are required to complete and the linguistic contexts in which they must function become more complex with respect to the registers employed in these contexts. Not only is there an ever-increasing vocabulary and concept load involving words that are rarely encountered in everyday out-of-school contexts but syntactic features (e.g. passive rather than active voice constructions) and discourse conventions (e.g. using cohesive devices effectively in writing) also become increasingly distant from conversational uses of language in non-academic contexts. (Cummins, 2000, 67)

Both authors are careful to describe academic proficiency as only one of a group of causal factors that could contribute to school success or failure. Since language is

socially situated, it is described as only one of many complex features that may affect academic progress.

When language proficiency or CALP is discussed as part of a causal chain, it is never discussed as an isolated causal factor (as Edelsky et al. consistently depict it) but rather as one of a number of individual learner attributes that are determined by societal influences and which interact with educational treatment factors in affecting academic progress (Cummins & Swain, 1983;31). In other words, language proficiency was always seen as an intervening variable rather than an autonomous causal variable; it develops through social interaction in home and school. (Cummins, 2000, 92)

#### Extensions to Educational Target Populations

Though the focus of Cummins' and Corson's studies originally was bilingual students, it would seem apparent that their research has surfaced certain principles that would apply to a much broader population – those students who utilize any type of non-standard variety of English language as their first language. Corson extends his theories of linguistic diversity and educational social justice in describing the position of persons who use non-standard varieties.

This chapter uses the term language variety to cover any standard or non-standard form of a language, whether a geographical or social dialect, a patois, a creole, or some other code of a language. All these varieties are much more than language that are chosen only for affect. Most speakers of a language use a variety that differs in recognizable ways from the standard variety; none of these varieties is in any sense inherently inferior to the standard variety in grammar,

accent, or phonology. At the same time, these sociocultural and geographical variations within a language are signalling matters of great importance to those who use them. Varieties serve valuable group identity functions for their speakers; they express interests that are closely linked to matters of self-respect and other psychological attributes. It follows that different language varieties deserve respect and recognition in education.

Nevertheless, in many settings the non-standard language of socially marginalized people is often used unjustly as a guide to their potential for achievement and even to their worth as human beings. This occurs in stratified societies where many variations in vocabulary, syntax, accent, and discourse style are socially marked, so that even a basic communicative exchange between individuals can suggest their place in the social structure. (Corson, 2001, 67)

Formal educational policies for the treatment of non-standard varieties in schools are conspicuous by their absence in most educational systems . . . many children arrive in schools with little or no contact with the more standard variety used as the language of formal education. Often these children are penalized for having a language variety that is different from the high status linguistic capital of the school. (Corson, 2001, 68)

Other researchers investigating the substantial academic failure of persons who use non-standard forms of English have come to similar conclusions. Cummins refers to the work of Jeanne Chall, et al (1990) who relate school failure of poor children to their linguistic and literary deficiencies. The pattern that has been observed among economically disadvantaged children is that they can often achieve at an average or

above average level in the early elementary grades, but then begin a decline in academic achievement around grade 4, which continues and accelerates through the high school years. Chall and her associates have completed extensive longitudinal studies of various aspects of academic abilities as well as associated social factors to determine significant causal factors of this phenomenon.

Frequently, low-income students who have acquired discrete language skills in the early grades experience what has been termed "the grade 4 slump." This phenomenon refers to the sudden drop in reading achievement between grades 4 and 6 among low-income students who appear to have been making good progress in the early grades. Chall, Jacobs and Baldwin (1990) who highlighted the phenomenon, point out that "the reading task changes around grade 4 from a focus on reading familiar texts where the task is one of recognizing and decoding words to one of comprehension of harder texts that use more difficult, abstract, specialized, and technical words." (p. 49) Thus, students who have developed fluent decoding skills can still experience changes from learning to read (grades 1-3) to using reading as a tool for learning (grades 4 and up). (Cummins, 2003, 4)

The pattern among students with low-socio-economic status (SES) that Chall's book describes, has also been observed among bilingual students. Further, the divergence between the academic progress of middle-class and low SES students continues to increase as years pass until the low SES students fall far below the achievement levels of other students.

The patterns of test scores for the seventh, ninth, and eleventh grades were similar to those we found when the students were in the intermediate and upper elementary grades. On most tests the scores were below norms, and the discrepancies grew larger in each succeeding grade. By grade 11, the students' reading scores were considerably below norms, as low as the 25th percentile. When one recalls that in grades 2 and 3 these children tested on grade level (that is, at about the 50th percentile, or within the norms) on similar tests, the extent of the deceleration by grade 11 is overwhelming. (Chall, 1990, 42-43)

Chall suggests that the reason for this pattern was the difference in the literary demands that began in the later elementary years, and accelerated through high school. She suggests that low SES students did not have access to the academic language and/or reading ability that was required for academic success.

The general trend of decreasing gains with increasing grades is reminiscent of findings from other studies. The landmark study of Coleman and his associates (1966) found both that the verbal achievement of children from lower-income families was lower than that for the general population and that the discrepancies increased with increasing years in school. The National Assessments of Educational Progress for reading from 1971 to 1986 report the same trends: while the typical disadvantaged urban students at age 9 are about one year below the overall national average, they are four to five years behind at age 17 (Applebee, Langer, and Mullis, 1988).

Chall explains the trend of increasing deceleration in school achievement as students increase their years in school, is due to the developmental model of reading that

is utilized within the school system. She points out that, “Essentially, the major learning task for reading in kindergarten through grade 3 is recognition and decoding of words seen in print - words that the children already know when they are heard or spoken.” (Chall, 1990, 44) The language task in the early grades then is to use the existing knowledge base to learn to read. “It is significant that most children in the primary grades (1 to 3), even those with limited English, are more advanced in language and thinking than in reading skills.” (Chall, 1990, 44) The students that Chall selected for her longitudinal study were all students that showed no cognitive deficits, and who scored at or above grade level in tests of reading.

The fact that, in grades 2 and 3, our sample of low-SES children scored on grade level on the tests of word recognition, oral reading, and spelling indicates that they were making good progress in these beginning reading tasks. These skills are usually learned in school, and the school did indeed provide a strong instructional program in beginning reading for most of these children.

These children were also on grade level in word meaning when they were in the second and third grades. The words they were asked to define in these grades were, in general, common, familiar, concrete words. When asked to define these words, the low-SES children did as well or better than other children in the same grade. This is of particular importance because various language theories have attributed the low literacy achievement of poor children to language differences originating in preschool. Although we found a slump in word meanings at about grade 4 and above, it is important to note that the low-SES children had the word knowledge that other children had when they were in

grades 2 and 3. Thus, in both beginning reading skills and knowledge of word meanings, these students were on a par with the general population in the primary grades. (Chall, 1990, 44-45)

Chall then discovered that the reading focus changed from fourth grade through college levels. The students were then required to utilize unfamiliar texts as the primary tool for learning.

At these advanced stages the reading materials become more complex, technical, and abstract and are beyond the everyday experiences of most children. Beginning in about fourth grade, readers must cope with ever more complex demands upon language, cognition, and reading skills. Whereas the major hurdles prior to grade 4 are learning to recognize in print the thousands of words whose meanings are already known and reading these fluently in connected texts with comprehension, the hurdle of grade 4 and beyond is coping with increasingly complex language and thought. If students' word recognition, decoding, or fluency are weak, they will be unable to meet the demands of reading at the higher stages, even if they have good meaning vocabularies and can do higher-order thinking. (Chall, 1990, 45)

Ruby Payne, a researcher with economically disadvantaged students reiterates these findings. Payne relates three factors of language that serve to separate students of poverty from the middle class students: registers of language, discourse patterns and story structure. Payne refers to the research of Joos (1967) which indicates that every language in the world has five registers: frozen, formal, consultative, casual and intimate. The ability to use the appropriate register at the appropriate time gives access to a variety of

situations. Failure to be able to speak in the appropriate register limits such access.

Payne cites the work of Dr. Maria Montano-Harmon (1991) who “found that the majority (of the students in her research) of minority students and poor students do not have access to formal register at home. As a matter of fact, these students cannot use formal register.” (Payne, 2003, 42-43) The consequences of this, according to Payne are enormous.

Ability to use formal register is a hidden rule of the middle class. The inability to use it will knock one out of an interview in two or three minutes. The use of formal register, on the other hand, allows one to score well on tests and do well in school and higher education.

This use of formal register is further complicated by the fact that these students do not have the vocabulary or knowledge of sentence structure and syntax to use formal register. When student conversations in the casual register are observed, much of the meaning comes not from the word choices, but from the non-verbal assists. To be asked to communicate in writing without non-verbal assists is an overwhelming and formidable task, which most of them try to avoid. It has very little meaning for them. (Payne, 2003, 43)

#### Implications for Classroom Practice

Thus, academic language proficiency can be concluded to be a major contributing factor to school achievement. Especially if there is a history of early school progress that is followed by a slump in later elementary school, research suggests that instruction in academic language would improve school performance. Cummins’ linguistic theory then becomes not only an explanation for poor performance, but leads to applications to remediate the problem.

If academic language proficiency or CALP is accepted as a valid construct then certain instructional implications follow. In the first place, as Krashen (1993) has repeatedly emphasized, extensive reading is crucial for academic development since academic language is found primarily in written text. If bilingual students are not reading extensively, they are not getting access to the language of academic success. Opportunities for collaborative learning and talk about text are also extremely important in helping students internalize and more fully comprehend the academic language they find in their extensive reading of text.

Writing is also crucial because when bilingual students write about issues that matter to them they not only consolidate aspects of the academic language they have been reading they also express their identities through language and (hopefully) receive feedback from teachers and others that will affirm and further develop their expression of self.

In general, the instructional implications of the framework can be expressed in terms of the three components of the construct of CALP:

*Cognitive* - instruction should be cognitively challenging and require students to use higher order thinking abilities rather than the low-level memorization and application skills that are tapped by typical worksheets or drill-and-practice computer programs;

*Academic* - academic content (science, math, social studies, art, etc.) should be integrated with language instruction so that students acquire the specific language or registers of these academic subjects

*Language* - the development of critical language awareness should be fostered throughout the program by encouraging students to compare and contrast their languages (e.g. phonics conventions, grammar, cognates, etc.) and by providing students with extensive opportunities to carry out projects investigating their own and their community's language use, practices, and assumptions (e.g. in relation to the status of different varieties and power relations associated with language policies and practices). (Cummins, 2000, 98)

These applications relate back to the four-quadrant diagram developed by Cummins. The diagram serves as a description of the continua for language development, but goes beyond that to serve as a framework for instructional methodology to improve academic language proficiency.

In order to provide a better basis for analyzing the language demands underlying academic tasks, the BICS/CALP distinction was elaborated into a framework that explicitly distinguished cognitive and contextual demands . . . The framework outlined in Figure 3.1 [p. 68] is designed to identify the extent to which students are able to cope successfully with the cognitive and linguistic demands made on them by the social and educational environment in which they are obliged to function in school. These demands are conceptualized within a framework made up of the intersection of two continua, one relating to the range of contextual support available for expressing or receiving meaning and the other relating to the amount of information that must be processed simultaneously or in close succession by the student in order to carry out the activity. While cognitive demands and contextual support are distinguished in the framework, it is not

being suggested that these dimensions are independent of each other. In fact, as Frederickson and Cline (1990) point out, increasing contextual support will tend to lessen the cognitive demands - in other words, make tasks easier. (Cummins, 2000, 66)

The diagram also serves as an instructional planning and assessment tool.

Educators can use the diagram to compare a student's present level of language ability to the level they would need to attain for successful academic achievement, then use the parameters as guidelines for effective instruction. "The quadrants can act as a guide for instructional planning. A teacher valuably takes into account students' linguistic development and experience, as well as their understanding of the topic. Then the teacher can create activities or experiences that are cognitively challenging and contextually supported as needed." (Baker, 2001, 173)

Baker presents an example appropriate for early elementary students.

<b>Cognitively undemanding</b>	
<b>Context embedded</b>	<b>Context reduced</b>
Greeting someone	Reciting nursery rhymes
Talking about the weather today	Listening to a story or poem on cassette
Make their own books based on their own spoken or written stories	Describe stories heard or seen on TV
Giving instructions about making a painting	Listening to the news
Use simple measuring skills	Reading a book and discussing the contents
Role play	Relate new information in a book to existing knowledge
Dramatic stories	Discuss ways that language is written; styles and conventions
Solution seeking	Reflecting on feelings
Explaining and justifying	
<b>Cognitively demanding</b>	

Figure 3 Sample application of Cummins' matrix for elementary students (Baker, 2001, 178)

Deryn Hall has utilized the matrix to map the cognitive processes as outlined in Bloom's Taxonomy, and then used it as a structure to direct and differentiate the education of secondary bilingual students. This application is an example of the way the theory can be conceptualized into practical classroom application.

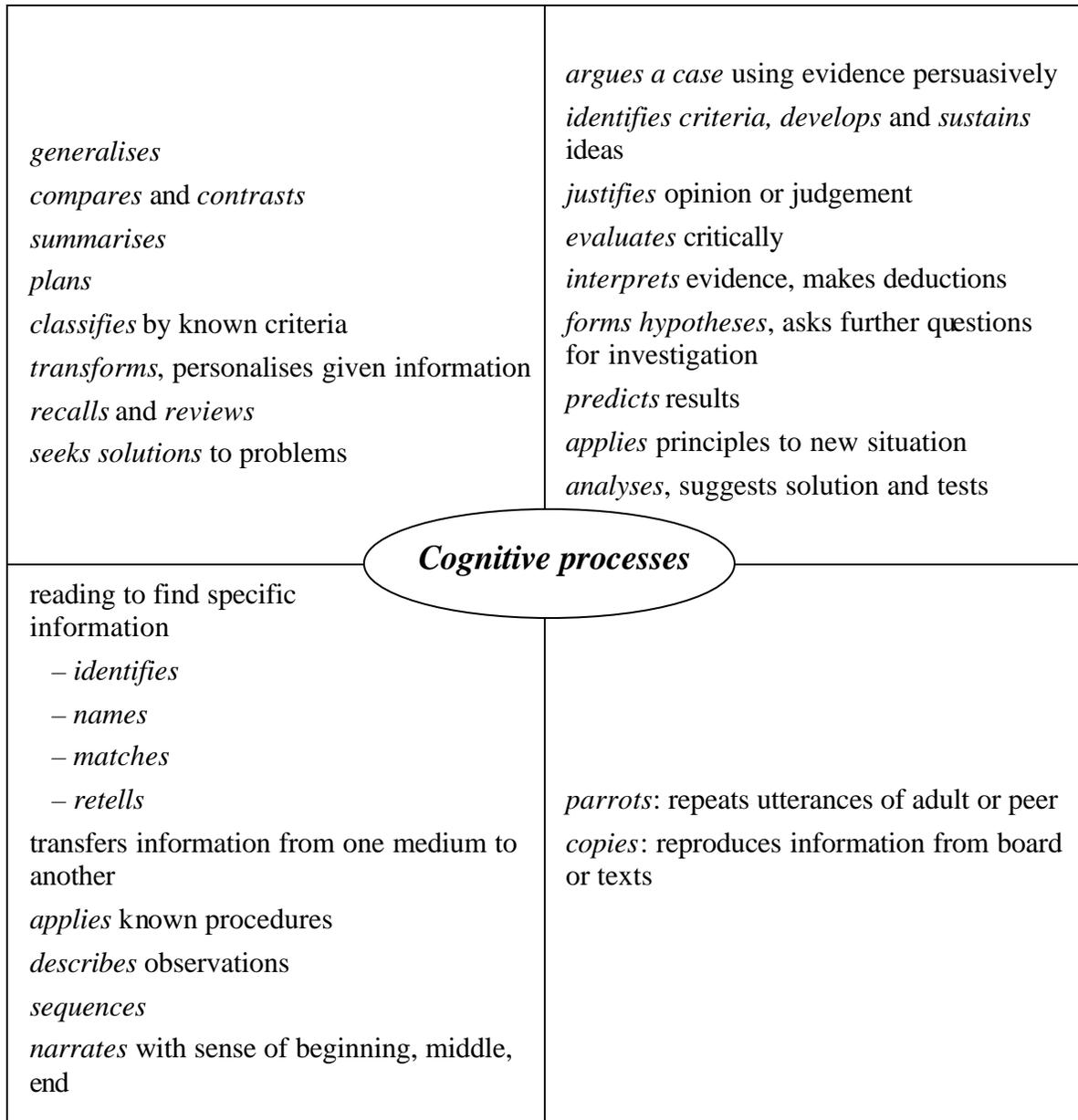


Figure 4. Mapping Cognitive Processes (Cline, 1996, 68, Figure 4.4)





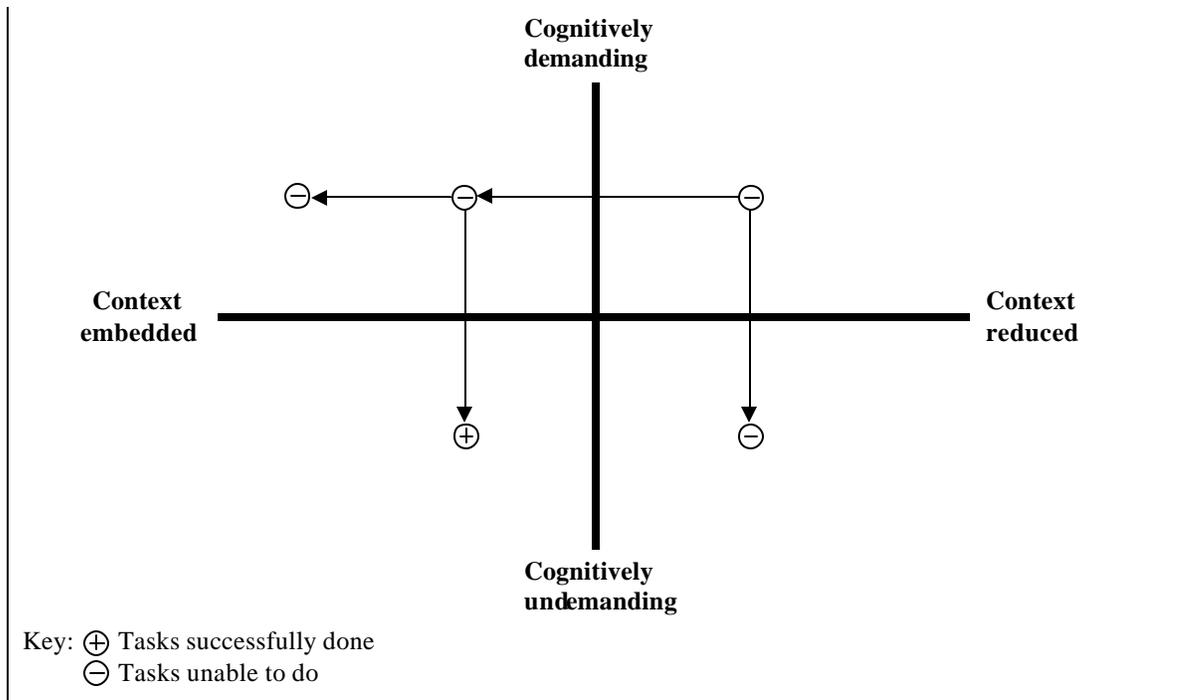


Figure 8. Profile of a bilingual child with learning needs (Cline, 1996, 80, Figure 5.3)

Use of Cummins' diagram provides suggestions on ways to decrease cognitive demand and increase context cues to move students to higher levels of cognitive and language usage, however the ultimate goal of the educator would be to bring students to proficiency at the language ability that is described by Cummins in Quadrant D. These skills describe the functions that are required in higher academic settings.

Mastery of the academic functions of language (academic registers or Quadrant D), on the other hand, is a more formidable task because such uses require high levels of cognitive involvement and are only minimally supported by contextual or interpersonal cues. Under conditions of high cognitive demand, it is necessary for students to stretch their linguistic limit to function successfully. In short, the essential aspect of academic language proficiency is the ability to make complex meanings explicit in either oral or written modalities by means of

language itself rather than by means of contextual or paralinguistic cues (e.g. gestures, intonation etc.). As students progress through the grades, they are increasingly required to manipulate language in cognitively demanding and context-reduced situations that differ significantly from everyday conversational interactions. (Cummins, 2000, 68-69)

One group of researchers in the United States have taken the theory of Cummins and developed a curriculum series and teacher training resources designed to promote cognitive/academic language proficiency among second language learners. Anna Uhl Chamot and J. Michael O'Malley began by developing CALLA, The Cognitive/Academic Language Learning Approach, in 1994. The curriculum was designed to meet the objectives that had been established by Cummins (1980) for promoting the development of CALP.

The Cognitive Academic Language Learning Approach (CALLA) is an instructional model designed to increase the achievement of English-language-learning (ELL) students and other students who are learning through the medium of a second language. The model was developed in 1986 and has continued to be expanded and refined as it has been implemented in classrooms (Chamot & O'Malley, 1986, 1987, 1989, 1994). (Chamot, 1996, 259)

The CALLA method was designed to utilize research based theories to develop cognitive abilities, linguistic abilities and metacognitive strategies.

CALLA fosters the achievement of ELL students by integrating content-area instruction with language development and explicit instruction in learning strategies. The model is based on cognitive learning theory in which learners are

viewed as mentally active participants in the teaching interaction. The mental activity of learners is characterized by the application of prior knowledge to new problems, the search for meaning in new information, higher-level thinking, and the developing ability to regulate one's own learning. (Chamot, 1996, 260)

Its three major theoretical foundations are 1) language development, 2) content area instruction and 3) explicit instruction in learning strategies. (Chamot, 1994, 11)

CALLA is designed to be integrated into curriculum areas, as Cummins asserts that students progress better when the tasks they are asked to perform are authentic.

By focusing on important content in academic subjects, language teachers can help students acquire the vocabulary and linguistic structures they will need to perform successfully in these subjects. A second rationale for the emphasis on content is that, to become genuinely strategic, students must experience authentic content with which they will subsequently use strategies (Duffy, 1993). That is, the work students do in classrooms must represent applications of strategic approaches to learning. (Chamot, 1996, 263)

Language development is targeted for students who have had limited access to cognitive/academic language.

The second component of CALLA, academic language development, includes all four language skills (listening, speaking, reading and writing) in daily lessons on the content subject. Language is used as a functional tool for learning academic subject matter. Students learn not just the vocabulary and grammar of the content area but also learn important concepts and skills using academic

language. Students learn the language functions that are important for performing effectively in the content area, such as analyzing, evaluating, justifying, and persuading. Students develop academic language skills in English through cognitively demanding activities in which comprehension is assisted by contextual supports and in which scaffolded instruction guides the acquisition of content. (Chamot, 1994, 10)

It focuses on literary language through the medium of reading. Extensive reading has been shown to be the most effective way to develop high levels of vocabulary and reading comprehension. Cummins emphasizes the importance of reading in developing academic language.

In short, all the research evidence suggests that reading extensively in a variety of genres is essential for developing high levels of both vocabulary knowledge and reading comprehension. This is particularly the case for ELL students, because they are attempting to catch up to students who are continuing to develop their English (L1) academic language proficiency.

The important role that extensive reading itself plays in fueling reading development does not mean that teacher-directed instruction is unimportant. On the contrary, students will become more effective readers if they acquire efficient strategies for text interpretation and analysis and if the teacher directs their attention to how the language of text works (e.g., the role of transitional words such as however, although, etc.). This is illustrated by the strong showing of comprehension instruction in the Postlethwaite and Ross (1992) study. Fielding and Pearson (1994) similarly rank "teacher-directed instruction in comprehension

strategies" second to "large amounts of time for actual text reading" in their review of the implications of reading research for instruction (see Chamot, Barnhardt, El-Dinary, & Robbins, 1999, and Chamot & O'Malley, 1994, for comprehensive reviews of the significance of learning strategies for ELL students' academic learning). (Cummins, 2003, 26-27)

Thirdly, students are explicitly instructed in metacognitive strategies that will give them the skills to utilize prior knowledge, organize information, retain and apply knowledge in various contexts, and reflect upon their own involvement in the learning process.

The early CALLA model has been researched by at least five researchers. "CALLA is being implemented in a number of school districts nationwide. Evaluations report substantial gains in student achievement (Chamot, 1996; Galland, 1995; Mayberger, 1994; Perrin, 1992; Thomas, 1990, 1991, 1992)" (Chamot, 1998, 188). More recently, the CALLA model was used by Chamot and Cummins along with Kessler, O'Malley and Fillmore to develop an ESL curriculum series for ScottForesman based on Cummins' theories and Chamot's methodology. The program philosophy is laid out in the teachers' editions and reflects the revised CALLA method. "ScottForesman ESL follows the principles of CALLA: it teaches grade-level topics from the major curriculum areas; it develops academic language skills; and it provides explicit instruction in learning strategies for both content and language acquisition." (Chamot, 1997) The curriculum expresses the need for instruction in academic language in the following way.

There are at least five reasons for focusing on academic language skills in the ESL classroom.

-For ESL students, the ability to use academic language effectively is a key to success in grade-level classrooms.

-Academic language is not usually learned outside of the classroom setting.

-Grade-level teachers may assume that all of their students already know appropriate academic language when, in fact, ESL students in their classes have often acquired only social language skills.

-Academic language provides students with practice in English as a medium of thought.

-Students may need assistance in using learning strategies with academic language, just as they do with content knowledge and skills. (Chamot, 1997, xvi)

The academic language learning has been refined to help students independently learn from literary text. In the foreword, Cummins comments:

ScottForesman ESL introduces language and concepts through a wide variety of scaffolding devices and learning strategies. This linguistic and contextual support gives students access to the language of text, a language very different from the language of interpersonal conversation. In the language of text, the vocabulary usually consists of words that are less frequent than those in everyday conversation; grammatical constructions are more complex because meanings must be made more explicit; and meaning is not supported by the immediacy of context and interpersonal cues (e.g., gestures, intonation). A wide

variety of learning strategies is presented to help students become independent interpreters of this language. ..

Academic success depends on students gaining access to and comprehending the language of books and school discourse. ScottForesman ESL provides the support students need as they learn school English as a source of comprehensible input. (Chamot, 1997, vii)

Finally, CALLA is suggested as a viable and productive method for use with low-achieving students as well as ESL or bilingual students. At various points, the authors propose the CALLA model as one that would be effective as a component for meeting the needs of other populations of students who may be under-achieving because of a cognitive/academic language deficiency.

The CALLA instructional model can be used by both ESL and grade-level classroom teachers to enable students to develop academic language, subject-matter knowledge, and how-to-learn procedures. Although all students can benefit from instruction that promotes the use of language and learning processes that lead to greater academic success in school, students who do not speak English as their native language, *low-income students, and all other at-risk students* are in critical need of such instruction. (Chamot, 1996, 27, italics mine)

Chamot goes on to suggest specific ways that CALLA can be applied to instruction targeted at remediation for low-achieving students.

Academic language is inextricably tied to academic language functions and to higher-order thinking skills. Instruction for students in remedial and compensatory programs relies heavily on individual seat work and completion of

low-level worksheets. Students working on their own with drill and practice materials do not have opportunities for communicating about their learning experiences. CALLA's focus on cooperative learning and the development of academic language skills for higher-order thinking skills can make a positive contribution to the progress of remedial students. (Chamot, 1994, 179)

Though suggestions for use of CALLA with a broader, low-achieving population are presented, no research has been discovered that documents its use in such an application. However, since academic language is tied closely to academic language functions and higher order thinking skills, and since traditional compensatory programs are often a reiteration of previously ineffective teaching approaches, CALLA offers a promising alternative. Chamot offers specific suggestions for application of the CALLA model to students with disabilities and to compensatory and remedial programs.

Special programs that provide supplementary instruction to improve the education of economically disadvantaged and low-achieving students are to be found in most school districts. The largest of these programs is the federally funded Chapter 1 program, which serves one out of every nine children in school. Many of the students in Chapter 1 programs are ESL students. The quality of instruction provided for compensatory and remedial students has been criticized for lack of correlation with regular programs, low teacher expectations of student success, and an emphasis on basic skills and facts over the development of higher-order thinking skills. As a result, most students in Chapter 1 programs remain in compensatory and remedial education throughout their school careers, never attaining the achievement levels needed to exit from the program. We believe the

instruction based on the CALLA model could be effective in improving the quality of programs for at-risk students in compensatory and remedial programs. (Chamot, 1994, 19, 179)

Instruction in effective learning strategies could be the single most powerful tool that remedial teachers can give to their students. By teaching students strategies for understanding, remembering, and expressing information, teachers make it possible for students to become autonomous learners. Autonomous learners are able to take responsibility for their own learning, and their self-esteem and feelings of academic efficacy increase proportionately to their ability to deploy appropriate strategies for different learning tasks. (Chamot, 1994, 179)

#### Cognitive/Academic Language and Proficiency Tests

In January of 2002, a significant new educational law was enacted which is entitled, “No Child Left Behind Act of 2001” or NCLB and is the revision of “Title I – Improving the Academic Achievement of the Disadvantaged.” The law is extensive and institutes the following policies that are germane to the discussion of cognitive/academic language proficiency.

The purpose of this title is to ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging State academic achievement standards and state academic assessments. This purpose can be accomplished by –

(1) ensuring that high-quality academic assessments, accountability systems, teacher preparation and training, curriculum, and instructional materials

are aligned with challenging State academic standards so that students, teachers, parents, and administrators can measure progress against common expectations for student academic achievement;

(2) meeting the educational needs of low-achieving children in our Nation's highest-poverty schools, limited English proficient children, migratory children, children with disabilities, Indian children, neglected or delinquent children, and young children in need of reading assistance;

(3) closing the achievement gap between high- and low-performing children, especially the achievement gaps between minority and nonminority students, and between disadvantaged children and their more advantaged peers;

(4) holding schools, local educational agencies, and States accountable for improving the academic achievement of all students . . .

(6) improving and strengthening accountability, teaching and learning by using State assessment systems designed to ensure that students are meeting challenging State academic achievement and content standards and increasing achievement overall, but especially for the disadvantaged; . . .

(9) promoting schoolwide reform and ensuring the access of children to effective, scientifically based instructional strategies and challenging academic content . . . (*No Child Left Behind Act of 2001, 2002*)

The federal directive and the consequent state mandates require that teachers address the significant differences in achievement between various sub-groups. Many of these subgroups are the ones that have been addressed by various researchers in

connection with low-achievement related to cognitive/academic language proficiency (CALP). Cummins relates his research to areas addressed by NCLB.

A recurring issue for educational policy in many countries has been the extent and nature of support that second language learners require to succeed academically. Students must learn the language of instruction at the same time as they are expected to learn academic content *through* the language of instruction. An obvious issue that arises is ‘How much proficiency in a language is required to follow instruction through that language?’ Clearly, this is not just a matter of students’ language proficiency considered in isolation; rather, proficiency will interact with the instruction that students receive . . . A related issue concerns state-mandated standardized assessment. In an increasing number of educational jurisdictions, students at various grade levels are required to take tests designed to assess the adequacy of their academic progress. These results are frequently published in the media and are interpreted by the public as reflecting the quality of schools and, by implication, instruction. This interpretation is highly problematic in contexts where there is wide divergence in the proportions of ELL students in different schools. (Cummins, 2000, 57)

Cummins (2000) continues to present his framework for academic language learning that points out a number of questions related to educational and assessment policy. First, he establishes the difference between BICS and CALP, and asserts that students must be instructed and become proficient to a certain degree in CALP before an assessment can reliably determine their academic progress. Students who never have access to the language of the tests are being systematically discriminated against.

Cummins places his theory within an applicational framework that must be considered when speaking of any type of high-risk testing.

[In] describing the framework, it is important to place it in an appropriate context of interpretation and to define some of the terms associated with it. In the first place, the framework, and the associated conversational/academic language proficiency distinction, focuses only on the sociocultural context of schooling. Thus, we are talking about the nature of language proficiency that is required to function effectively in this particular context. The framework was not intended to have relevance outside of this context . . . Thus, the social practice of schooling entails certain 'rules of the game' with respect to how communication and language use is typically organized within that context. In short, in the present context the construct of academic language proficiency refers not to any absolute notion of expertise in using language but to the degree to which an individual has access to and expertise in understanding and using the specific kind of language that is employed in educational contexts and is required to complete academic tasks. (Cummins, 2000, 66)

Related to proficiency tests, or state assessments, Cummins theory would mean that in order for students to be successful on the cognitive/achievement assessments, a high level of language proficiency in the academic/literary language used on the tests, as well as expertise in understanding and using the language for test-taking purposes, is required. Students would need to be instructed in and practice 'the rules of the game.'

Research related to deficits in cognitive/academic language proficiency has been related to many of the populations targeted in NCLB, including limited English proficient

children, children with disabilities, minority (students with non-standard varieties of language), and disadvantaged (poor, SES) children. Since the *No Child Left Behind Act* targets specific populations for intensive instruction, utilizing “effective, scientifically based instructional strategies and challenging academic content” (NCLB, 2001, 1) for the purpose of improving academic achievement, and since this academic achievement is assessed through State testing, it logically follows that instruction in CALP would be a way to meet the requirements of the law, while improving the potential of many students for academic success and advancement.

### III. DESIGN AND PROCEDURE

#### Presentation of the Problem

The literature has demonstrated a link between a deficit in cognitive/academic language proficiency and failure to perform both in the classroom and on standardized tests by students with English as a Second Language. In addition, poor language proficiency has been indicated as a key factor related to poor academic performance by other groups of students, including economically disadvantaged students and students who use non-standard English. The use of the CALLA (Cognitive Academic Language Learning Approach) has shown to be effective in improving class and test grades for ESL students. From this, it is concluded that the CALLA program may improve the cognitive/academic language ability of any students who are academically low-achievers, as identified by low performance on Ohio state proficiency examinations.

#### Presentation of the Hypothesis

This study proposes to demonstrate a causal relationship between cognitive/academic language proficiency and Ohio Sixth-grade Reading Proficiency Test scores. In order to determine whether CALLA will improve performance by low-achieving students on the Ohio Reading Proficiency Test, the researcher has based her experiment on the following hypothesis:

H<sub>1</sub>: There will be more improvement between pre- and post-test scores of students in the treatment group who receive eight-weeks of CALLA instruction than in those of the control group who do not receive CALLA instruction.

## Participants

The project used the Cognitive Academic Language Learning Approach (CALLA) as a compensatory treatment with sixth-grade students who have failed at least one subtest on the fifth grade off-year 2004 Ohio Reading Proficiency Test. Students for this quasi-experiment were sixth-grade students at Cedarville Middle School in Cedarville, Ohio. The sixth grade class had fifty-six students and of those students, thirty-one of them failed at least one subtest on the Reading test of the 2004 Ohio Proficiency Tests. The remaining twenty-five came within three points of failing, so the entire group was targeted for the development of a remediation program. The group consisted of twenty-nine female students and twenty-seven male students.

Seven of the students had an IEP or 504 Plan. All of these students are required to participate in state assessments without alternate assessment. None of these students with identified learning disabilities passed the Reading test, and seven of the eight failed all four subtests.

## Variables

### *Independent Variable*

The independent variable in this study was an eight-week intervention treatment based upon the CALLA program that was presented to the treatment group for one-half hour, two times per week. During the eight weeks of the experiment, all students attended general education Reading classes as part of their regular curriculum. The group was

divided between two sixth-grade Reading teachers for Reading class. The twenty-four lowest achieving students based on the off-year Reading Proficiency Test scores were chosen as the treatment group. The remainder of the class served as the control group. The control group continued with the previously scheduled options for the Intervention time period which included study halls, group activities such as intramurals, or meeting with teachers for study help or make-up work.

### *Dependent Variable*

The dependent variable in the study was the difference between pre- and post-tests using the 50 point, 2004 Ohio Sixth Grade Reading Proficiency Test. Both treatment and control groups were given the same test before and after the eight-week treatment during their regularly scheduled Reading class. They were administered both times by the general education Reading teachers and scored by the researcher based on the answer key provided by the State of Ohio Department of Education. Pre- and post-test difference scores for the treatment and control group were compared statistically.

### *Procedures*

The researcher began the project by conferring with the Middle School principal, to present the hypothesis and to discover a practical application for the hypothesis that would both shed light on the testing effectiveness of the CALLA program to improve cognitive/academic language, and help the school meet its goal of providing a treatment to sixth-graders that would improve their proficiency test scores.

Because the test scores from the 2004 Sixth-grade Proficiency Tests had caused the school to fall into a “Continuous Improvement” status, it was necessary for the school

to provide research-based interventions for students. The proposed treatment also needed to be administered by existing personnel, fit into existing time structures, and target the most academically needy students. The use of the existing Intervention period was identified as a time when the research could be carried out, and the principal gave permission for the Reading teachers and the Intervention Specialist to be freed up for two Intervention periods per week to carry out the treatment program. The time frame was set for the first ten-week period of the school year.

After receiving permission from the administrator, and working out the details for the program, the researcher sent a letter home to parents with fifty-four students during the first week of school. The letter informed parents about the Intervention program, and requested their informed consent to use their child's test results for this research. One family denied permission. The lessons were carried out in the school by the Middle School reading teachers and Middle School Intervention Specialist (the researcher).

Lessons were developed by the researcher based upon the *Cognitive Academic Language Learning Approach* (CALLA) (Chamot and O'Malley, 1994, 1999). Utilizing research involving linguistics and learning theories, the CALLA method was developed primarily to improve the cognitive/academic language of bilingual students, but may prove effective for a wide range of low-achieving school students. Each lesson involved the three components of the construct of Cognitive/Academic Language Proficiency (CALP):

*Cognitive* - instruction should be cognitively challenging and require students to use higher order thinking abilities rather than the low-level

memorization and application skills that are tapped by typical worksheets or drill-and-practice computer programs;

*Academic* - academic content (science, math, social studies, art etc.) should be integrated with language instruction so that students acquire the specific language or registers of these academic subjects

*Language* - the development of critical language awareness should be fostered throughout the program by encouraging students to compare and contrast their languages (e.g. phonics conventions, grammar, cognates, etc.) and by providing students with extensive opportunities to carry out projects investigating their own and their community's language use, practices, and assumptions (e.g. in relation to the status of different varieties and power relations associated with language policies and practices). (Cummins, 2000, p. 98)

Sixteen lessons were prepared based on the study of the CALLA method, and using reading selections either taken directly from previous Ohio Reading, Citizenship, or Science Proficiency Tests or selected to mirror the reading selections and questions used for the testing. Because of the time limitation, five cognitive strategies were selected for instruction and practice: 1) Activating Prior Knowledge, 2) Using Imagery, 3) Predicting, 4) Inferencing, and 5) Summarizing.

## IV. RESULTS

### Pilot Study

Lesson plans for the sixteen lessons were scripted, then a pilot study was conducted, utilizing five fifth- sixth- and seventh- grade home-schooled students who lived within the same school district, but who were not attending the public school where the experiment was being conducted. There were three girls and two boys. The pilot group met twice for one-hour sessions. During each meeting they completed two of the lessons. They were instructed on four of the lessons, and then completed written evaluations of their experience as well as making verbal comments to the researcher. The pilot study indicated that the lessons were of appropriate length and difficulty. Two students indicated that the lessons they enjoyed the most were the ones that were more academically challenging. The fifth-grader indicated that two of the lessons were difficult for her, while two of the seventh-graders felt that two of the lessons were too easy. This seemed to indicate that the difficulty was in the proximal level for average sixth-graders. Four of the five students said that the lessons had helped them learn strategies that they would use in taking standardized tests. One student expressed a desire to learn more of the strategies, and a wish to be involved in the year-long program.

### The Experiment

All students were given pre-tests utilizing the publicly published portion of the Ohio Reading Proficiency Test Forms from 2004 (04-6). The students were retested using

the identical test after eight weeks. During the experimental time period all students attended the same core courses (Reading, English, Mathematics, Science and Social Studies). With the exception of Reading all sections of sixth-grade were taught by the same instructors. Two sections of reading were taught by one teacher, while the third was taught by a different teacher. All students attended regular education classes with the exception of two students who attend Mathematics class in the Resource Room. The treatment group received an 8-week intensive language instruction program developed from Chamot and O'Malley's CALLA method (1994). They met on Tuesday and Wednesday during the regularly scheduled one-half hour Intervention Period. During that time period, the control group was scheduled for other activities, unrelated to language development. The treatment group was established with twenty-four students, but one student who was enrolled never reported to school and consequently transferred out of the district, so the project continued with twenty-three students in the treatment group.

The pretest was given during the first full week of school. Tests were administered by regular classroom Reading teachers, and test conditions followed the policies established for taking Ohio Proficiency Tests. The test was scored by the Intervention Specialist (the researcher) utilizing the state's published answer key, with the possible highest score of fifty points.

Because of two classes that were cancelled because of special programs, the treatment actually was carried out over a period of nine-weeks. The post-test was given during the week following the completion of sixteen lessons.

Calculation of the difference score was based on the change in scores from the pre-test to the post-test. It was expected that all scores would improve due to the general

instruction that all students received, and/or because of repetition of the same assessment, however observing the change in scores would reflect whether or not the treatment improved the scores more for the treatment group than for the control group. The difference in scores was then statistically evaluated to determine whether or not the treatment made a significant difference in proficiency test scores. The improvement rates of students with disabilities (which is one of the sub-groups that is disaggregated for the Proficiency Tests) was analyzed separately to determine whether the program improved the scores for the sub-group at the same rate at which it improved the scores for the treatment group in general. Following the initial ten-week period, the CALLA program was continued with the initial group, but expanded to the remainder of the class. Follow-up testing after each of the ten-week grading periods will indicate whether or not test scores continued to improve with additional practice with the program, as well as whether or not the program proved more effective with certain groups compared with others over a longer term.

The research used SPSS 12.0 program to perform multivariate analysis of repeated measures on the pre-test and post-test scores. Because the fifth grade scores of students on IEPs placed them in the lowest performing group and therefore into the treatment group, a condition was placed on students with IEPs since there was no equivalent group of students with IEPs in the control group.

#### Analysis

The resulting set of pre- and post-test scores were statistically analyzed. The total number of subjects was 54, with 23 in the treatment group and 31 in the control group. Scores from students with IEPs were considered separately. It was noted that the

students with IEPs showed no improvement between the two tests. (The mean pre-test score was 19.00 with a SD of 7.21, and the mean post-test score was 19.00 with a SD of 7.24).

The scores of the students with IEPs were excluded and the mean scores were re-compared, to determine whether the treatment made a significant improvement for students who were low-achievers, but who had not been identified with a specific learning deficit.

Repeated measures ANOVA showed a significant difference between pre- and post-test scores:  $F(1, 46) = 54.39, p < .001$ , and a squared partial eta of .54. Significant interaction between type of test and treatment condition was also found:  $F(1, 46) = 4.17, p < .05$ , suggesting that there was a larger difference between the pre- and post-test in the treatment group than in the control group.

Table 1. *Mean Pre- and Post-test Scores and Standard Deviation on Ohio Sixth-grade Reading Proficiency Test for the Two Groups*

		Test	
<u>Group</u>	<u>n</u>	<u>Pre-test</u>	<u>Post-test</u>
Treatment	17	30.71 (4.79)	36.06 (5.64)
Control	31	38.52 (5.65)	41.55 (4.37)

## V. SUMMARY AND CONCLUSIONS

The results indicate that an eight-week modified CALLA program was effective in improving Ohio Reading proficiency test scores for low-achieving students without identified learning disabilities. Many of these students significantly improved their scores after a very minimal exposure to the treatment, which sought to develop cognitive/academic language ability. This may indicate that language ability is an important factor in improving academic performance as evaluated by standardized tests for all students, and especially for those who are failing to thrive within an American public school system.

Because the research was carried out on only two-days per week in a one-half hour treatment program, the contact time for students was minimal. It is expected that a more extensive and integrated program to develop cognitive/academic language that is incorporated into general education classes would be much more effective in improving language abilities, and therefore test scores.

The treatment program did not prove effective for students with disabilities. The number of students was very small, but the mean test scores did not change at all between pre- and post-tests. The researcher however, believes this was due to a floor effect of the test scores rather than ineffectiveness of the treatment. Because the student's present functioning level is far below the academic level of the tests, it may be that the test was too difficult to be an indicator of change. Instruments that would test students with

disabilities at their functioning level would be more effective in demonstrating academic progress. Secondly, because these students have been identified with cognitive and/or learning disabilities, it would be expected that their progress would be much slower than students without disabilities, so a longer treatment would be necessary to show progress. Finally, in informal qualitative assessments of affect, the students with disabilities all indicated more confidence in completing the post-test than they had in completing the pretest, and indicated they were using the strategies in class as well as on tests after receiving the treatment. Therefore, the researcher would suggest the proficiency test itself is not an appropriate instrument to assess the cognitive/academic language progress for students with disabilities, and further time and research would be required to determine whether development of cognitive/academic language would increase proficiency scores.

On a more subjective level, most teachers at the school where the treatment was instituted were encouraged by academic progress among members of the treatment group, and were excited to institute pedagogy in the classroom to develop cognitive/academic language in the content areas. An in-service meeting was held at the middle school, and teachers individually identified vocabulary terms that were used on proficiency tests within their content area, and began utilizing some of the suggested methodology to incorporate language instruction into each content class. A parent meeting was held where the rationale and research base for the program was elucidated. Though only nine parents attended, those that did seemed interested and motivated to use aspects of the program at home.

The treatment has now been expanded for use in the content area classes, with all students receiving periodic directed instruction during regularly scheduled Intervention

periods. All sixth grade students will take the Ohio Sixth-grade Proficiency Exams in March of 2005 in the areas of Reading, Writing, Math, Science and Citizenship.

If the researcher would repeat this project, she would have the treatment group meet at least three days during each week, and run the treatment for a longer period of time. Ideally, there would be more students with disabilities in the group, so that the progress of these students might be better evaluated. Students in the treatment and control groups would attend classes taught by the same reading teacher to minimize the effect on the improvement that could be accounted for by classroom teaching. In addition, the sequence of the lessons should be adjusted so that initial lessons worked with material that was more concrete and less conceptual, leading students into lessons that required more higher-level thinking processes.

The program has also served to surface some of the “hidden” or unintentional inequalities present within public schools. Corson (1998, 1999, 2001) and Cummins (2000, 2003) put forward a strong position on social justice from a postmodern understanding that social institutions primarily serve to promote and extend the influence of groups in power, while subjugating and dominating minority groups. The use of cognitive/academic language as the language of high stakes tests serves to form a hegemony of the educated, standard English speaking populace over those who do not have access to academic language, or speak in a non-standard English dialect or register. Because student’s academic advancement is now based on written assessments in formal register of language, students must be explicitly taught the cognitive/academic language of the classroom in order to avoid an implicit discrimination against certain sub-groups.

The researcher comes to the same conclusions, but from a very different philosophical position. The researcher holds a biblical worldview that leads to a strong stand on social justice. According to the Bible, each person is created by God, and therefore possesses intrinsic value. In the biblical narrative of Genesis 1-2, God creates the world and all of nature. Lastly He creates humans. Humans are the only part of His creation that are formed in the image of God, and He thereby gives humans the greatest value among all creation. The Bible expresses that human beings are all intrinsically flawed because they choose individually and corporately to live in rebellion against God and His standards. These standards have their source in the character of God and are communicated in the Bible. One attribute that God clearly demonstrates is that of justice expressed especially toward the oppressed. The prophet Jeremiah writes, “‘But let him who boasts boast of this, that he understands and knows Me, that I am the Lord who exercises lovingkindness, justice and righteousness on earth; for I delight in these things,’ declares the Lord” (Jeremiah 9:24). The psalmist describes God in a similar way: “I know that the Lord will maintain the cause of the afflicted and justice for the poor” (Psalm 140:12). The prophet Zephaniah spoke of the Lord in this way, “He [the Lord] will do no injustice. Every morning He brings His justice to light; He does not fail” (Zephaniah 3:5). Numerous other scriptures echo this truth (Deuteronomy 10:17-19, 32:4; 2 Chronicles 19:7; Job 34:17; Psalms 33:5, 37:28, 89:14, 97:1-2, 99:4-5, 101:1, 103:6, 111:7; Isaiah 30:18, 51:4, 61:8, Daniel 4:37; Acts 10:34). Further, Romans 2:11 expresses succinctly another principle about God’s character, “For there is no partiality with God.” It is clear that God does not see anyone as worth more or less than another person. He holds the same standards of holiness for all.

With this understanding of the nature of God, it would be expected that His rules and laws would require people to value and pursue justice. The scriptures do just that. In the Old Testament, God chose the people of Israel to be His people in order to prepare this group for the coming of the Messiah. In order to do so, He established a strict set of laws for living that would distinguish them from surrounding nations by their holy living based on the character of God. Justice to all people was a key teaching. Further, this justice was specifically concerned with groups who were disadvantaged, either because of physical adversity (children, ill) or those who held little influence in the social structure (widows, poor, aliens). Leviticus 19:15 explains, “You shall do no injustice in judgment; you shall not be partial to the poor nor defer to the great, but you are to judge your neighbor fairly.” Proverbs 21:2-3 describes the problem and the instruction related to it: “Every man’s way is right in his own eyes, but the Lord weighs the hearts. To do righteousness and justice is desired by the Lord more than sacrifice.” The prophet Isaiah reiterated the commands concerning justice in verse 1:17, “Learn to do good; Seek justice, Reprove the ruthless, Defend the orphan, Plead for the widow.” The prophet Micah sums up the teaching in verse 6:8: “He has told you, O man, what is good; And what does the Lord require of you, But to do justice, to love kindness, And to walk humbly with your God.”

Further understanding of the requirement for seeking justice comes from the condemnation of many groups who practice injustice and partiality. At various times God pronounced judgments on those who acted unjustly and oppressively to those who were unable to defend themselves. Those whom he addressed were not only the people of Israel, but neighboring nations. Thus, the commands for justice and impartiality can be

applied as a general moral standard for all people. An example of such a rebuke is in Zechariah 7:8-10: “Then the word of the Lord came to Zechariah saying, ‘Thus has the Lord of hosts said, ‘Dispense true justice and practice kindness and compassion each to his brother; and do not oppress the widow or the orphan, the stranger or the poor; and do not devise evil in your hearts against one another.’” This principle was repeated to various groups including Judah, Assyria, priests and Pharisees in Isaiah 5:7, 59:4,8,9,11,14,15, 10:1-2; Habakkuk 1:4; Matthew 12:18-20, 23:23; Luke 11:42; Malachi 2:9; Ezekiel 22:29, 45:9; Hosea 12:6; Amos 5:7,12,15, 6:12; and Malachi 3:5.

This concept is also expressed to the New Testament church in James 2:1-9 where favoritism, especially with regard to socio-economic status is forbidden. The principles set forth are summed up in I John 3:16-18 which places justice as one of the indicators for love: “We know love by this, that He laid down His life for us; and we ought to lay down our lives for the brethren. But whoever has the world’s goods and sees his brother in need and closes his heart against him, how does the love of God abide in him? Little children, let us not love with word or with tongue, but in deed and truth.” The biblical mandates therefore, establish a reason and compelling direction for pursuing social justice, especially for those that are weak or oppressed. For these reasons, the researcher is compelled to seek ways to assist those who struggle in the academic system by seeking ways to limit the disadvantages in order for students to achieve at a higher rate. Though the reasons for seeking social justice are different, the researcher and the proponents of the development of cognitive/academic language as a way to equalize access to educational advancement end up with the same application.

The writers and proponents of the *No Child Left Behind Act of 2001* have also recognized historic inequity in the American public school system. They have sought legal methods to eliminate these imbalances, and have endeavored to do so by requiring all students to meet a high academic standard. This legislation focuses on students who may be unsuccessful in the educational system because their particular educational needs have not been appropriately addressed. However, the system itself precipitates another inequality. The public schools are expected to provide for each child “a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging State academic achievement standards and state academic assessments.” (*No Child Left Behind Act of 2001*, 2002) Though this sounds like a reasonable and equitable proposition, in reality it fails to consider the diversity of persons whose abilities may lie outside academic arenas, and the inability of a written examination to provide a true assessment of a person’s capabilities. This mechanistic approach to education expects improved pedagogy and increased technology to compensate for all other social and personal factors to produce 100% high achievers. This demotes students to little more than complex computers, and at the same time elevates educators to the place of computer programmers that can bring about results simply by altering input. It also assumes that every person’s values and abilities are primarily grounded in cognitive knowledge. Advocates of students with disabilities and vocational education have both voiced concern that this legislation assumes that all children require the same *kind* of education, and that the decades of hard-fought legal battles that have expanded school possibilities for those who learn differently will be sacrificed at the altar of “equality.” Human beings are complex and diverse, and the effort to provide equality

in educational outcome impinges upon individual choices to pursue diverse vocational or professional goals. Students are affected by physical, social, emotional and spiritual elements that cannot be ignored. Education then, is not simply executing a series of curricula that guarantee a particular outcome. Teachers must engage and relate with students, investigate their educational needs and be competent in a plethora of proven methodologies directed to a particular group of individuals. Though improvement in cognitive/academic language shows promise in improving academic ability for low achieving students, the method cannot be successful without a nurturing environment and skillful teachers. Neither should it be considered in and of itself, a solution for the learning needs of all students. Because all persons are not equal in ability and have been more or less affected by the results of sin, they do not all begin with the same potential. To force all persons, regardless of ability, to learn the same things to the same degree, and to assess all students with written examinations to determine educational progress, is in itself discriminatory because the process negates the goal of providing a “fair, equal and significant opportunity to obtain a high-quality education.” To quote former Supreme Court Justice Felix Frankfurter (1950), “There is no greater inequality than the equal treatment of unequals” The intent of the legislation however, is to rectify historic discrepancies in the achievement of sub-groups, and the development of cognitive/academic language shows promise as a sound method for improving the academic ability of some low-achieving students.

This research presents a potentially profitable method for improving the test results of low-performing students. To prove a causal relationship between a program to develop cognitive/academic language and improved proficiency test scores, further

research would be required. This project would need to be repeated with a variety of populations, in a variety of settings. A statistical comparison of actual proficiency test scores over a period of years would add credibility to the concept.

Further ideas for research on this topic might include experiments utilizing treatment groups of homogeneous students based on the disaggregated scoring groups as specified by the *No Child Left Behind Act of 2001* (ethnic groups, economically disadvantaged students, English as a Second Language Students, students with disabilities), to determine if improved cognitive/academic language is more or less effective within certain sub-groups. Other research might be done to modify the CALLA program in ways that more appropriately meets the needs of certain groups. Further research might study alternate pedagogical methods for developing cognitive/academic language, or discover methods that have been used historically that have allowed some groups of Second Language English speakers (Asian-Americans for example) to achieve high levels of cognitive/academic ability and perform at a very high level on standardized examinations.

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APPENDIX A  
INFORMED CONSENT FORM

This communiqué comes as a request for your son or daughter to participate in a research study that I am conducting for my Master's Degree at Cedarville University.

My name is Margaret Grigorenko (Mrs. G), and I am the Intervention Specialist at Cedarville Middle School. Currently, I am developing a program to help students learn the reading and strategy skills that may help them to improve Ohio proficiency scores. After extensive research, I have developed a program that will be instituted with all sixth-grade students both in regular education classrooms and in special intensive sessions during the Intervention period for the 2004-2005 school year. Students will be taking mock proficiency tests during each nine-week period, and tracking their progress. Different groups will be receiving different treatments at points to determine what is most effective.

I've selected your child for this research project for a number of reasons. One is that I have a natural connection with Cedarville Middle School as a teacher here. Mrs. Potter, principal, has helped to focus the direction of my project to meet an authentic current need, and has generously granted permission for me to make this request of parents for their voluntary permission. The complete thesis proposal is on file with Mrs. Potter in the High School Office.

All sixth grade students will be involved in the instruction to improve proficiency test scores, and instruction will happen during regular classes as well as intervention classes. Instruction will be by regular classroom teachers, as well as me, the Intervention Specialist. I am requesting permission to use the test result data that is collected to evaluate the effectiveness of the program. I will be collecting the testing results and coding it so that no child will be personally identifiable in any materials that will be publicly printed or distributed. The choice to have the data used is completely voluntary, and you or your child may withdraw your permission to use the data at any time. There are no known hazards associated with this research.

If you have specific questions about the thesis project, you may contact me at Cedarville High School (766-1871) Mailbox #412 or at [cchs\\_pgrigor@k12server.mveca.org](mailto:cchs_pgrigor@k12server.mveca.org).

Please accept my most sincere appreciation for your participation with this thesis research. I believe that the project will benefit both your child and future students at Cedarville Middle School as they participate in the proficiency test process.

Thank you, and your son or daughter, for your participation.

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Name of child

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Signature of parent

Date

APPENDIX B  
CALLA REMEDIATION LESSONS

16-Lesson (One quarter) Plans for Instruction in  
Cognitive/Academic Language Development

Objectives

1. Students will use inference to give definitions for new vocabulary words within a reading passage.
2. Students will use a summarization and question evaluation strategy to answer comprehension questions about fiction and non-fiction reading assignments.
3. Students will utilize prior knowledge and prediction to increase comprehension and retention of reading material.
4. Students will use images or pictures to describe or explain what they have read.

Day 1 – Introduction – Mountain climbing story – Metacognitive self-evaluation – *The CALLA Handbook* (Chamot, 1994), 134-6.

Introduction:

During Intervention periods on two days per week this semester, we will be doing some special instruction to help everyone improve on Proficiency Tests. How do you feel about proficiency tests right now?

What we will be doing is some fun and interesting activities that will teach you how to do better on all the proficiency tests. These things will be taught here in Intervention, but you can use them in all your classes. In fact, we'll be doing them here first, then your other teachers will be using them in their classrooms, so you will be the experts and will learn these things before your classmates! These ideas are ones that will help you get better scores and not be so stressed on proficiency tests, but actually they are ideas that can help you do better in class too, and get better grades.

The activities that we do here will not be graded, but you will get a ticket for each class and each paper that you do here as long as you participate and complete the activities. Are there any questions?

In order to do a lot of the activities, we will be dividing into groups. You all received a colored paper with your name on it when you came into class today, and the color of the paper indicates which group you will be in. Would you get into the groups with all the other people that have the same color paper as you do.

To give you an idea of what we will be doing in this class, I want to tell a story:

“I love the mountains. Even though we live here in Cedarville where it is quite flat, my family loves to go to the mountains and climb them. Has anyone ever been to a place where there are mountains? Actually, my family has lived in a place where there are a lot of the highest mountains in the world. We lived in the country of Nepal. Here are some pictures of the amazing mountains there. They are called the Himalayas. In fact, my family got to go to the highest mountain in the world. Does anyone know what that is? Here is a picture of my family at Mt. Everest. How do we look? What do you think it would be like to climb up that high? Do you think it would be hard? (List some of the ideas.)

Actually, doing well on proficiency tests and in school is sort of like climbing a mountain! There were four steps that we took that let us get to our goal of reaching Mt. Everest, and there are four steps that we will learn to do that will help you reach the goal of passing proficiency tests. We had to do some things with our bodies, but we also had to use our minds much more to accomplish our goal.

First we had to plan. Planning means that we had to think ahead about what we would need to accomplish our goal. With your group take 3 minutes to make a list of the things you think we would need to reach Mt. Everest. (Give time) Let me tell you how our family planned for our trip, and you can check off the things your group listed. First, we had to decide where we wanted to go. There were lots of mountains, and there were lots of places that we could go on the mountains, but we decided that we wanted to go to Mt. Everest Base Camp. That is the highest point on earth that you can go without being a mountain climber. After we set our goal, we had think about what we knew about mountains. We knew that mountains were steep and that there were certain trails where we could get through, so we got a MAP that would show us where we had to go. From the map we could see the kind of land and how high we would need to go. That helped up predict what will happen on our trip so that we know what to take.

We asked the question, “What might happen?” Because mountains are high, it would be cold, so we packed WARM CLOTHES. Because we would be traveling by walking, we packed strong hiking BOOTS. Because it would take a long time (more than 2 weeks), we packed WARM SLEEPING BAGS to sleep in and light, but NUTRITIOUS FOOD like power bars. We would be in the mountains, so we packed some special equipment like ROPES. We would be where there was no electricity, so we packed FLASHLIGHTS. We would need to buy some food along the way, so we packed some MONEY. We knew that we would need to stay clean, so we packed TOOTHBRUSHES, TOOTHPASTE, SOAP and SHAMPOO. What might have happened if we had not thought about what was ahead?

We also had to think about the special LANGUAGE that we would need to be able to make this trip. Mt. Everest is in the country of Nepal and most people there do not speak English. We know that the language we speak at home is a great way to talk to each other, but that it would not help us enough in Nepal. We had to learn to speak the words and language that were needed to accomplish our goal.

Then we were ready to start climbing. We still needed to keep thinking. As we went along, we checked our map to make sure we were on the right track. Some of the family members were stronger than others, so they helped carry more of the weight. When we stopped we would check how we were doing. We asked ourselves, “Are we getting enough water? Are there any sores on our feet? Are we staying warm enough?” We continue to think about the times we had trekked in the mountains before. Thinking about what we had learned made us able to keep going.

We also had to keep a picture in our minds of where we were going. We would think about the next campsite that we had to reach, but the picture of reaching Mt. Everest was always in our minds. We kept a picture of the map in our minds too, so we could ask, “Are we almost there? How many more days?”

When we got scared, tired or discouraged, we would have to talk to ourselves and each other. We would say, “You can do it. Remember that you felt this way on other mountains, but you could keep going.” “Think how you will feel when you have reached the top!” “Remember that we are all here to help each other, and you don’t have to do this by yourself.”

Sometimes we ran into problems, then we had to think of ways to solve them. When we got up high it was very hard to breathe because there was not very much air, and we had to climb a very steep hill. We thought of ways we could solve our problem: We could look at the map and find an easier way to go. We could go very slowly and take many rests. We could stop along the way and eat candy bars to give us more energy. We could leave some of our gear at the bottom to make our packs lighter. Because we were good thinkers, what do you think we did?

After we got up the hill, we had to think again, and ask ourselves if we had solved our problem in the best way. Should we do it that way on the next hill? Was there a better way to solve the problem?

We continued to think and climb and think and climb. Finally we reached our goal and were very happy! We knew that part of our success is because our bodies were strong and healthy. But we knew that most of it was because of the way we thought.”

SO, how does this relate with passing proficiency tests? First you have to PLAN: Set Goals, Activate Background Knowledge, Predict MONITOR: Monitor sense, Selectively attend to specific elements, Learn the Language, Use imagery, Apply rules, Relate information to background knowledge, Self-talk to build confidence, Cooperate with

classmates; PROBLEM SOLVE: Ask questions, Draw inferences, Substitute/Paraphrase, Use Resources EVALUATE: Check goals, Verify, Summarize, Self-evaluate, Assess strategy use. These are all things that we will be learning to do this year. This gives you the big picture of what we will be doing.

Before you leave today, I would like you to answer some questions that will help me know how well you are doing on some of these things so I can decide what we need to work on.

I want you to answer the questions about what you do right now. There are no right or wrong answers, but it will help you think about what you do and think right now.

Complete Metacognitive Self-Assessment – Read the directions and questions out loud, and have students complete the assignment.

Day 2 – Cooperative Group – Introduce the concept of “academic language” and “register”–Practice group “translation” activities. Use Cinderella story from *A Framework for Understanding Poverty* (Payne, 2003), 47-48.

As students come in the room, give out colored cards and have them divide into their groups.

“The last time we met, we talked about learning ways to think and read that will help each one of us do better in school and on tests. Today we want to start practicing with some of the strategies that we talked about in our mountain climbing story. One of the things that I believe is one of the most important keys to doing well on proficiency tests, is learning the language of the tests. Remember when I talked about traveling to Nepal and climbing to Mt. Everest, that I said that we had to learn the language of the people so that we could get help and understand how to get to the mountain? If I had walked up to someone in Nepal and had spoken to them in English, do you think I could have accomplished my goal? No, I had to learn a “second language” to do that.

It is actually the same thing when we talk about proficiency tests. Believe it or not, experts have studied tests and textbooks and discovered that they use a different language than most people use when they talk. Actually, they use a different kind of language than even those people who have gone to college use. The experts have called this academic language. In order for you to be able to take tests well, you will have to learn a “second language.” It is still English, but it is different from the language that you or I use when we talk. Actually it is the same language, so the experts say that we use different “registers” of language. There is a kind of language you use in casual situations, like at home or with your friends on the play ground. There is a different register of language that you use when you are talking to a teacher, policeman or important person. There is a separate register of language that we use when we are working with written academic material like textbooks and tests. Is one kind of language better than another? Not exactly. Each one is important to communicate in a certain situation. But every person should be able to speak and read in different registers because we need different kinds of language for different situations.

I am going to read you a story that you all have heard before – Cinderella...but, I will read it to you in two kinds of language. One is in a casual register...like the language that you might use at home or with friends. The second is a formal or academic register. This is the kind of language that you need for proficiency tests. As I read, think to yourself about which register the story you are hearing is written in. [Read “Cinderella – Formal-Register Version and Casual-Register Version” from Ruby Payne’s book, pp. 47-48] Ok, which version was in the formal register? Which one was in a casual register? Can you see the difference?

Today we are going to work in groups to do a little translating of common phrases. Some will be from academic language to casual language, and some will be the other way around. I will put up a phrase or sentence and tell you what register it is. Each group will work together and have one minute to “translate” their phrase. When the time is up,

I will pick a color, and the person with that color card will read out their group's phrase. Ms. Wrightsel and I will give a point for one or two groups who best translate the phrase."

For the rest of the class flash up the following phrases for translation:

"Hello, how are you today?"

"He da man."

"Please take your seats and remain silent."

"Whaz up?"

"Where'd ya get that at?"

"I request your presence at my house tonight."

"Let's do lunch."

"I gotta jet."

Day 3 –Prior knowledge practice – “A Real Pain in the Neck” from *Time for Kids: Comprehension and Critical Thinking Level 6* (Clark, 2002) 36-37

Today, we are going to practice using what we already know to help understand a reading passage. This is called using background knowledge. It has been shown that if you think about what you already know about a topic before you read, you will understand and remember it better. Let’s practice using our background knowledge. We are going to be talking about backpacks. How many of you use a backpack to carry things back and forth to school? Tell me what you know about backpacks. (Use the board to make a graphic organizer.)

Now let’s look at the article together. Take a look at the title...what do you think this article might be talking about? (Relate it to any of the prior knowledge that relates.) Now let’s read the article together. (Relate the article back to any of the prior knowledge that relates). Now let’s look at some questions about the article and work through them together. Complete “A Real Pain in the Neck” worksheet together. Have students highlight the question and discuss question words. Compose an answer together and write it on the board. Continue to refer back to prior knowledge in answering the questions.

Can you see how thinking about our topic helped us understand the reading better? How did it help us? This is one strategy that we will use every time we read. With a little practice you will begin doing this automatically, and it will help you be a better reader.

Day 4- Cooperative Group – Prior Knowledge Practice – Introduce Cooperative Group Roles and Use of Graphic Organizer– from Reading Proficiency Test 03-6, pp. 10-12 – “Preparing to Read” *The Learning Strategies Handbook* (Chamot, 1999), 196-198.

You can remember that students who think about what they already know are better prepared for and more successful in reading. Sometimes, you may not know a lot about a topic, but a friend, parent or teacher may. Today we will be working in groups to think about and organize information before we read to help answer science proficiency questions more successfully.

At your group tables you have a graphic organizer consisting of a center circle and smaller circles around the center circle. There is smaller circle for each person in your group. You also have a small piece of paper for each student. Pass those around so that each person has a piece of paper. We also need to give people different jobs so that we can work quickly and well. One person has a red dot on their paper. They will take the job of Coordinator. They will be in charge of getting the group to complete the task I give you. The person who has the yellow dot will be the Recorder. They will write things down on the graphic organizer for the group. The person with the green dot is the Time keeper. They will use the stop watch to time activities. The person with the blue dot is the Cheerleader. Their job is to encourage the team members by making positive comments about their contributions. Are there any questions about your job for today?

Let me give you an example of what I want each person to do. For example if I said we were going to read about cardinals, here is what I might think and write on my paper. “What do I know about cardinals? Cardinals are BIRDS. They are RED and PRETTY. They have a CREST on their heads. The MALES are BRIGHT colored, but the FEMALES are not. Cardinals are the STATE BIRD of Ohio. They eat the SUNFLOWER SEEDS in my birdfeeder at home.” Did you notice that I only wrote important words? Sometimes you might want to write a two or three word phrase, but keep it short. Ok, my time is up, so now I will share this with my group. The cheerleader shared first and had the ideas that cardinals are RED BIRDS. The timekeeper shared second said that they were the STATE BIRD of Ohio and were the STATE BIRD of Virginia too, because they had lived there. When it is my turn, I will not share the same thing, but think about what I wrote that is important that no one else has shared. I will say that they have CRESTS on their heads and eat SUNFLOWER SEEDS.” By the time everyone shares, we have some good ideas about Cardinals. Our topic today is fog. Start by writing down everything you know about fog on your small piece of paper. You will have two minutes to think and write. Now have the cheerleader share for one minute what they wrote and have the recorder write down the two most important things that they share in their circle. Remember that it is time for ONLY the cheerleader to talk, and for everyone else to listen. Now have the timekeeper share. You have one minute to listen and for the recorder to write down two important thoughts. Now it is time for the recorder to share. Now it is time for the Coordinator to share.

We will now read a story about fog together. While I am reading, follow along and see if some of the ideas you thought about are in the passage. (After reading). As a group put a

check mark beside each word or idea that was in the reading passage. Then work together to answer the questions about the reading passage. Think about the question word in each question to make sure you are answering the what the question asks. Did you find it easy to answer the questions?

Remember that thinking about what you already know will help you understand what you read and remember what you read much better. If you participate in sports or music you know that it is important to prepare before a game, match or performance. Preparing for reading in language is just as important.”

# COOPERATIVE LEARNING ROLES

## **PURPLE – COORDINATOR**

This person is the one who organizes the work, and makes sure that everyone does their work and gets a chance to participate.

## **YELLOW – RECORDER**

This person takes notes, writes down answers or makes the group report to the class

## **BLUE – RESOURCE MANAGER**

This person picks up and delivers materials, keeps track of timed activities and makes sure everything is cleaned up.

## **GREEN – CHEERLEADER**

This person encourages group members by making positive statements about what they say or do. They help to make sure that everyone works together.

“The Fog” - Reading Proficiency Questions

1. Why did it take the man so long to shingle the barn?
  - A. The barn was so big.
  - B. The man was lazy.
  - C. The man had poor eyesight.
  - D. The man put shingles on the fog.
  
2. Name the two unlikely events that happened on the foggy day in the story.
  
  
  
  
  
  
  
  
  
  
3. If you were to accept this selection as true, what idea could you get from it?
  - A. Fog can be so thick that it can bear the weight of solids
  - B. Some people are foolish enough to work in bad weather.
  - C. Shingling a large barn is no easy job.
  - D. It is extremely difficult to travel through a thick fog.
  
4. In real life, which action would be most like shingling a patch of fog?
  - A. walking barefoot on a tight wire
  - B. accidentally causing a forest fire
  - C. photographing the wind
  - D. climbing stairs
  
5. Did the author intend the ending of the selection to be believable?
  
  
  
  
  
  
  
  
  
  
6. The selection’s main theme concerns fog. Which statement below best describes that theme?
  - A. Fog is composed of chemicals from air pollution.
  - B. Fog only occurs near bodies of running water.
  - C. Fog always lifts when the weather changes.
  - D. Fog may confuse people, causing problems.
  
7. The best person to recommend this selection to would be someone who
  - A. appreciates fantasy.
  - B. has been in sunny weather.
  - C. has spent time on a farm.
  - D. likes stories with suspense.
  
8. Would you recommend “The Fog” to a person who is making a collection of humorous stories?

Day 5 – Prior knowledge review – Introduce imagery/pictures - listening/reading exercise from *Reading Strategies for Nonfiction* (Gowdy, 2003), 20-22.

By now we all know that activating background knowledge will help in understanding what we read. Today, I want to introduce you to another strategy called Imagery. Imagery means that as you read or listen, you make a picture in your head or on paper that will help you remember the information or plot. Today we will be reading a selection about planets. You may remember that we have nine planets in our Solar System and their names are listed on the overhead. What do you know about any of these planets (record prior knowledge). Now as I read the selection, I want you to close your eyes and make a picture of what the planets look like in your head. (After reading) Now I want you to re-read the selection. Take the drawing paper and fold it in half twice to make four squares. In each square draw the picture of one of the planets. You may look back at the reading. Don't label which planet it is, because you will have a friend try to guess which planet you drew after we are finished. Work quickly, because you have 5 minutes to draw 4 planets. (After drawing) Trade your work with a partner. Label the planets according to which one you think it is. See how many you get right.

How many of you felt that it helped you to understand the passage because you were making pictures in your head? Imagery or pictures can help many people “see” the words and remember the meanings better.

Day 6 – Cooperative Group – listening/reading exercise – from Reading Test - pp. 23-25 - Answering Comp Questions *The Learning Strategies Handbook* (Chamot, 1999), 193-196.

Today we will use our prior knowledge and imagery to learn strategies for answering questions about a reading passage. We know that if we activate prior knowledge about a topic it will help us to understand and remember what is in a passage better. If we make pictures or images in our minds, it will also help. In addition, we can sometimes act on those images. By moving our bodies in some ways, it will help us remember. The passage we will read today is about bees. Get in your groups. Start with the Coordinator and tell what you know about bees. I will give each person 30 seconds to tell what they know. Now listen and read along as I read the passage. Make pictures in your head of what this passage says about bees. Next get into your groups. Act out the process of making honey. You may look back at the reading to do this. You will have 3 minutes.

Now let's try to answer some questions about this reading passage. We will be highlighting the question words so we know what we should be answering. After we look at the options, we will also ask the question, "Does this make sense?" Sometimes an answer is correct, but it does not make sense in answering the question.

Look at the first question (29): "What information does the 'complicated dance' give? What strategy should you use to be able to answer that question? Read the sentence that uses that phrase. "There they do a complicated dance that tells the field bees the direction and distance of the flowers" Tell me in your own words why the scouts do their dance. Now look at the answers. Which one is connected to the words direction and distance? Read the question again. Does our answer make sense?

Look at the next question (31): "Which of these would most likely provide nectar for a bee?" How will we answer that question? What is the most important word in the question that we must look for? Find the place in the reading where it talks about nectar. "In North America, honeybees get nectar from flowers such as clover, dandelions, fruit-tree blossoms, and berry bushes." Make a picture in your mind of places where bees get nectar. Now look at the answers. Do any of the answers match the pictures in your mind of the places where a bee gets nectar? Read the question again. Does your answer make sense?

Now look at the third question (35): After the bees collect the nectar, where do they store it as they take it back to the hive? What is the question word? Where in the reading passage does it talk about this? It doesn't use the exact same words, but when you were acting out the passage, where did it talk about taking the honey back to the hive? How did they do it? Where was the nectar held? Now look at the answers. Which one would you choose? Does it make sense?

Get in your groups and use our strategies to answer the last two questions. When you are finished raise your hand and I will check your answers. Make sure that you look

carefully at the question words, and ask the question “Does this make sense?” to check your answers.

We have used our strategies to correctly answer questions right off the proficiency test. We activated prior knowledge, and used imagery to remember and understand what the words said. We looked at question words to understand the question, then found what the passage said about the main words of the question. We looked at the answers and decided which one was saying the same thing as the passage. Finally, we asked “Does this make sense?” to check our answers. By using these strategies we were able to get correct answers on proficiency test questions!! You can do this!!!

Honeybees – Questions from Ohio Reading Proficiency Tests 03-6, pp. 24-25

29. What information does the “complicated dance” give?
- A. the amount of nectar available
  - B. the location of a good food source
  - C. the type of job each bee gets for the day
  - D. the way back to the beehive from the field.
31. Which of these would most likely provide nectar for a bee?
- A. maple tree leaves
  - B. apple blossoms
  - C. a hollow tree
  - D. blades of grass
35. After the bees collect the nectar, where do they store it as they take it back to the hive?
- A. in their tongues
  - B. inside a special tube
  - C. underneath their wings
  - D. in their honey stomachs

[question corrected]

30. [adapted] In what two ways are very young worker bees different from scout bees?
- A. in their color and number of legs
  - B. in their location and type of work
  - C. in their type of food and drink
  - D. in their ability to fly and buzz
33. Which of these sentences best summarizes the selection?
- A. Honey is a nutritious treat.
  - B. It is simple to construct a beehive.
  - C. Many bees work together to make honey.
  - D. Bees have a special way of communicating.

Day 7 – Review of prior knowledge/imagery/vocabulary development – 03-6 Reading Proficiency Test, p. 2; *Time for Kids: Comprehension and Critical Thinking Level 5* (Clark, 2002), 96.

Sometimes when you read, there are words that are new or different. Have you ever felt like you were using a different language? If you have, you were right, because in English we actually use different, more unusual words when we write than when we speak. Most of the words that we use, and the ways that we say things when we talk come from people that lived in what is now England, and are called Anglo-Saxon words. Most of words and usage that we use when you read and write are from Roman or Greek origins. So when you read a textbook or take a proficiency test, which kind of language will you be using? Therefore, it is important to be able to learn a new or second language to be a good student in school. Many kids think that if they are good talkers that they will be good readers, but really you have to learn a different kind of language to be a good reader. Just like I had to learn another language to live in a different country, I want you to be able to learn a different language to be good students.

How can you learn the language of textbooks and tests? One of the best way is to read, or to listen to people reading. Even if you don't like to read, the library has lots of books on tapes or CD's that you can listen to. Do you think that watching TV – even shows that teach educational type things like the History Channel – will help you learn this kind of language? Why not? That's right. They all talk and use the spoken kind of English, not the writing kind of English. Is one better than the other? NO. We need to be able to use both kinds of language to function. In fact you may use different kinds of language with different kinds of people. I bet there are certain words that you use when you talk to your friends (that aren't bad words) that you wouldn't use with your grandma or grandpa because they don't know what those words mean – like computer words. So you already use language in different ways for different things.

Today we are going to start developing a strategy you can use when you are reading and run into words that you don't know. I have written some of the things you might do on the overhead. Look at those things. Which are the ones you do now? Which ones might be the best ones to help you understand what you are reading?

You know about language and learning, and you can use what you know to learn and remember new words. I am sure that you are currently using one or more strategies to do this. Now you are going to read the passage I will give you and underline words that you do not know. Afterwards, you will work in your groups to find the meanings of the words you underlined by using the text and what you already know. This passage is about Mao Zedong, the former leader of China. Does anyone know anything about him? Read this paragraph on your own. Underline any words that you do not know. Ok, without those words, it will be difficult to understand what you read. But let's see if we can use what we already know and the text to figure out the meanings of the words without looking them up in the dictionary.

We will do the first section together. “Born into a peasant family, Mao Zedong saw the terrible living conditions of many Chinese peasants.” Hmm, I do not know what this word means (underline peasant and peasants). Let’s see, it says that they lived in terrible living conditions, so I know that it is not people who are rich and powerful. I also know that this is in China, and I know that many people in China are workers while there are a few rich and powerful leaders, so I think that this means poor, working people. Does that make sense as I read on. Yes, so I can know that peasant means a poor worker. I can also get a picture in my mind of what it would be like to be a kid who grows up in a family like this. What do you think he felt like? Let’s keep reading, “As a result, Mao became one of the founders of the Chinese Communist Party.” I don’t know what this word (founders) means. I know that Mao was mad about being poor, so I think this may mean that he started the new political party. So a founder is someone who starts something. “Years of civil war followed.” I don’t really know what a civil war is, and this sentence doesn’t help me, but I will read one more sentence to see if I can get any clues. “From 1934-1935, Mao and a group of followers marched over 6,000 miles while escaping government troops.” Oh, I think that the war was between Mao’s group and the government troops. It was not a war between countries, so it must be a war inside a country. “‘The Long March,’ as it was called, was admired by supporters and became part of Chinese legend.” I don’t know what this word means (supporters). I know it must be some kind of people because only people can admire someone. But will the next sentence help me figure it out? “Many peasants looked upon Mao as their leader.” Well if people looked to Mao as their leader, they must be people who agree with what he believes. A supporter must be someone that is a fan of Mao.

Now let’s try the second reading passage. I want you to take a minute to read the passage. Think about what you know already about this topic and make some pictures in your mind. Underline all the words you don’t know. Then get into your groups and use the clues in the text and what you already know to answer the questions. (A Communist Party! – *Time for Kids: Comprehension and Critical Thinking Level 5* – p. 96)

You can see that even if you don’t know all the words in what you read, you can use clues from the text and what you know to understand new vocabulary words.

## A COMMUNIST PARTY – VOCABULARY

From other words and sentences in the passage, choose the meaning of the following words.

1. The meaning of *victoriously* is
  - A. successfully
  - B. with defeat
  - C. happily
  - D. with weapons
  
2. The meaning of *prosperity* is
  - A. many people
  - B. power
  - C. excitement
  - D. richness
  
3. The meaning of *opposition* is
  - A. a grammar term
  - B. people who are against something
  - C. people who are friends
  - D. people who give speeches
  
4. The meaning of *highlighted* is
  - A. put lanterns on poles
  - B. showed off
  - C. put color in their hair
  - D. tried to hide

Day 8 – Cooperative Group – prior knowledge/imagery/vocabulary from context practice (inferencing)– *Reading Strategies for Nonfiction* (Gowdy, 2003), 12-15.

We will use what we know to, imagery, and using clues from the text to write a famous American song in our own words today. Often reading passages that were written long ago, or for formal occasions use unusual or rare words. We will be looking at the Star-Spangled Banner. Tell me what you know about the Star-Spangled Banner.

Read a passage with me that tells something about the Star-Spangled Banner. Was this first written as a song? Tell me what you pictured in your mind when I read the story.

Even though most of us sing this song often, many people do not understand what the words mean. We are going to work in groups and figure out what this song means, and put it into our simple spoken language. I want you to use clues and what you already know about your country’s song, plus what we just read to help figure this out.

Get into your groups. Look at line one. I want the Coordinator for today to read the first line, then work together to figure out any words that you don’t know. Then have the recorder write down what the meaning is. You have 2 minutes.

[Continue this line by line, writing the meanings on the board and having students write it in.]

You have all used great strategies to figure out a very difficult literary passage. Now you may have a better understanding of what you are singing at the football and basketball games. But do you think that our “translation” would be better? Let me try to sing it. What do you think? Are there times when “fancy” or academic language is better? Yes, but we still need to be able to understand the language. You are all getting better and better and reading and writing in your “second language” – academic language.

Day 9 – Introduce inferencing/predicting - Review of prior knowledge/imagery  
“Predicting with Storytelling” *The Learning Strategies Handbook* (Chamot, 1999), 224-226; *Critical Thinking and Classic Tales* (Hindes, 2003), 19-20.

So far, you are all doing well at learning to activate prior knowledge, using imagery and using clues in the writing to figure out new words. All these things will help you to develop your second language – cognitive/academic language. Today we will add one more strategy to help develop that second language. It is called “predicting.” When we predict, we use clues to guess what will happen next. You do this all the time. When you get dressed in the morning, you choose your clothes based on what you predict the weather will be like, and what activities you predict that you will be doing during the day. When you read, you can do this as well. Fairy tales or folk tales are good examples of stories that we can make predictions about.

If you are reading a story about a young girl and a prince, what do you think will happen? If you are reading a story about a knight in shining armor and a dragon, what do you think will happen? You are making predictions. What are you doing when you answer my questions? You predict based on what you know about the story or other stories like it. *Prediction* is an effective strategy that you can use before you read or during reading to help you look for information or remember information in the passage. If you expected the knight to kill the dragon, you would be looking for that and reading to see if that is what happened. When you predict you look for patterns in the story that help you make sense of it. Today we will be reading a folk tale called “Silly Jack.” Tell me what you know about folk tales. What do you think this one might be about?

As I read the story we will stop at various points. At each point we will check what we have predicted and then predict what will happen next. We will also notice what helps to make predictions. [Read first two paragraphs. Follow outlined procedure. Then read third paragraph and discuss, then final paragraph and discuss.]

Guessing what will come next based on the patterns you see in the story, then checking your predictions helps to understand what the story is about. Get into your groups and discuss then write the answers to the questions about the story. [When finished, discuss answers if time allows.]

Day 10 – Review/consolidate– listening/reading exercise – from fiction story Li'l Sis and Uncle Willie from Proficiency Test – Reading 03-6– “Finding the Meaning from the Text” *The Learning Strategies Handbook* (Chamot, 1999), 215-216

Today we will practice all the strategies we have learned so far. We will be reading a selection that is take from a proficiency test and will see if you can use what you have learned and use it to practice answering proficiency test questions.

Remember, first you think about what you already know. Before you start reading, predict what you think might happen. While you are reading, use clues from the other words and patterns you know to figure out what is going on. I especially want you to think about figuring out new words, because literary language will often contain words that you don't use everyday when you talk. When you come to new words in book or textbook, what do you usually do? The strategy that we already started working on to help figure out new words as you are reading without using a dictionary is called *inferencing*, or using the context. I like to do this because it makes learning new words and ideas sort of like solving a jigsaw puzzle. While I am reading, I use all the clues in the reading passage, like other sentences, other words in the sentence, pictures, captions, charts, etc. to help me understand the meaning of a word or sentence. I can usually guess at the meaning by seeing how it is used in the story. If I can't, or really want to be sure about the meaning, I can check it in the dictionary or ask someone else.

I am going to read the introduction to this story with you. Are there other things on the page with the introduction that might give us clues about this story? [pictures] Now, think about what you already know about the story. [read intro] What do you think this story might be about? Can you predict what will happen?

I want you to read the story to yourself. Underline any words or sentences that you don't understand. [After that is completed place the story on the overhead. Ask students for one of their words or sentences. Think outloud through the process I would use to infer meaning.] I want you to get into your groups and I will call one person to think out loud to figure out a different word or sentence that they don't know. The group members can help them figure out the meaning.

Now look at the questions from the proficiency test. Remember to read the question and underline the question word or words. Look back if necessary to the reading passage to find the answer or reread the section. Read all the answers and then talk with your team members to choose the right answer. Work quietly because we will have a small competition to see if your answers are right. Every team that gets 4 questions correct will get a piece of candy as a prize.

By using the thinking strategies, you can read in cognitive/academic language to understand and remember what you read. You can also use your second language to understand and answer questions.

Day 11 – Introduce summarizing - Review of prior knowledge/imagery/  
/inferencing/predicting – “Summarizing a Story” *The Learning Strategies Handbook*  
(Chamot, 1999), 236-237 – “Raising Royal Treasure” from *Time for Kids:  
Comprehension and Critical Thinking Level 6* (Clark, 2002), 20.

I am going to start today by reading you a story, then I want you to tell me what happened. Are you ready? [Read story.]

Ok, who can retell this story for me? Why do you think that it was so hard to remember exactly what happened? We didn't use our strategies at all. So let's start at the beginning. What is the story about? What do we know about this lady? What do you know about Egypt? What could we predict about what would happen?

There are many times when you read a story or article that is long and has a lot of information in it, and by the end you are not sure what happened in what order, like what happened today. How can we take the information in bites so that we can remember it. We can do that by using the idea of imagery that we practiced before and stopping after a section of reading to make a picture or write a few words that will help us *SUMMARIZE* what we have read. Let's go back and read the story again, and learning how to summarize. [Read first two paragraphs.] Ok, what are a couple of words or ideas that are important to remember so far. [Write them on board.] If you didn't want to use words, a picture would work well too. What is a simple picture we could draw to remember what we have read so far. Ok. Next two paragraphs. Let's summarize again. What are some words or pictures to help remember this? Now the next two paragraphs. Finally, the last two. Ok, now who can retell this story for me. Why was it easier this time than before? Do you see how strategies can help you with reading, even if there is a lot of reading to do.

I want you to break into pairs. I want one partner to retell the first half of the story using our summarizing on the board, then the other partner to retell the second half of the story.

You have just proven how well this strategy works, because as I watched you, everyone could remember and retell the story that you heard. Now you know how to summarize what you have read!

Day 12 – listening/reading exercise – Review previous strategies – Summarizing practice  
- *Reading Strategies for Nonfiction* (Gowdy, 2003), 42-43.

Today you will each have a chance to practice all the strategies we have worked with so far. Who can name one strategy? How do you use it? Who can name another one? Etc. (Re-place the names of the strategies on the mountain visual) We will be reading a selection about the Seven Natural Wonders of the World. On the paper in front of you jot down anything you know about this topic in the first square. Now I want you to read the selection. It is divided into seven sections, with each one describing one of the wonders of the world. After you read the section, summarize the paragraph with a couple words or a simple picture. There is a square for each wonder. Remember to label your summaries by putting the initials of the wonder in the box. For example for the Grand Canyon, you would write G.C. Does everyone understand what you are to do? As you read use inferencing and imagery to understand the words.

Now I would like to collect the reading passage. You may keep your summarizing notes. Now I will give you a worksheet that asks you to match the name of each wonder with a picture. Using your notes, complete the worksheet.

Finally, with just your summarizing notes, I will pick one wonder out of the hat, then a person's name. With your notes, tell me a little bit about the wonder.

Great, do you see how well you could understand the reading passage by using all the strategies. Already, I can see that you are becoming better and better at your second language!

Day 13 - Review of all strategies so far – *Critical Thinking and Classic Tales* (Hindes, 2003) 34-36; Reading a Fairy/Folktale *The Learning Strategies Handbook* (Chamot, 1999) 209-211.

Today you will have a chance to read a folk tale and practice all the reading strategies you have learned so far. Tell me what you already know about folk or fairy tales. Tell me what strategies you will use to understand and remember this fairy tale. Let's think ahead. Just by knowing that the reading is a fairy or folk tale, what can you predict will be in the story (good/bad characters, magic, happy ending). Now look at the title and the picture. Do you want to make more predictions? Now we will read the first paragraph together. Any changes to the predictions? Any more?

Now read the rest of the story. After every paragraph, jot down a few words or draw a simple picture to summarize what has happened.

Ok, let's put our thoughts together. We are going to divide our story into the beginning, middle and end. Who can summarize what happened at the beginning of the story? What happened in the middle of the story? What happened at the end? Now I want you each to fill in the lines at the bottom of the page, summarizing the whole story.

Then complete the jigsaw puzzle to make sure that you understand the words that were used in the story.

By using your strategies, you will have a good picture of what happened in the story, and be able to remember it.

Day 14 – Cooperative Group – Answering cognitively high-level questions after reading  
– Use fairy/folktale from Day 13

We are going to test how well our strategies help us remember. The summary that we prepared last week about the folk tale that we read is still on the board. In your groups, I will have you choose one section of the folktale. I will give you 5 minutes to prepare, then I want you to act out the portion of the story that you chose.

Can you see that our reading strategies help us to understand what we read, but it also helps us to remember. Nobody had to re-read the story to be able to act it out.

Now I want you to use what you know and remember to answer some questions about the folktale from before. I want you to get into your groups, and talk about each question. Underline the question words and make sure you understand the question before you answer it. Some of the questions are not directly answered in the story, so you will need to use clues in the story to answer the questions, but you know that the strategy of inferencing will help you do this. You will have 2 minutes to talk about each question, and one minute to write your answer. Then we will discuss and check the answers. All the correct answers of the group will be added together. If the group gets 90% or more of the answers right, they will have their choice of rewards.

Day 15 – Writing Extended Response Questions I- Review and practice of all strategies as student learn how to write and practice writing extended response questions.

Objective: Students will be able to list at least three positive things to do and three things to avoid related to writing extended response questions. Students will identify appropriate and inappropriate responses to an extended response question. Students will observe the four step process to write a good extended response question.

Pass out hand-outs on for writing an extended response question. Review reading strategies, discuss the process, then hand out example question with sample answers. Have students highlight question words, verbs and conjunctions. Have students follow as teacher reads answers. Have them identify which ones are good answers and which ones are not. Have them explain why an answer is not appropriate by putting the number from the extended response handout that is being violated. Have students select the best answer, and explain their choice for why it is the best. (Refer to reading passage: Citizenship #16.) Teacher will then do a think-aloud, taking students through the four step process for writing a good extended response question. Have students participate by answering teacher generated questions about how to compose an answer as the think-aloud proceeds.

## WRITING ANSWERS ON PROFICIENCY TESTS

1. Before answering any question, **THINK ABOUT THE TOPIC, READ THE ENTIRE SELECTION** and **READ THE DIRECTIONS**.
2. Always use sentences to answer questions. Do not say simply yes or no.
3. Determine what kind of question it is. Is it a short answer or extended response question?
4. A short answer question should be answered in two to three sentences. Be precise with your answer.
5. An extended response question must have at least three sentences to be graded. If you have the right answer, but do not write in sentences, or write too short an answer, it will not be scored and you will receive a "0".
6. Determine what the question is asking. **Underline or circle question words, verbs and conjunctions**.
7. If the question has numbered or lettered parts, put numbers or letters in your answer.
8. You are **NOT** being graded on grammar, spelling or handwriting, but make sure it is readable.
9. Work quickly, but be complete. Summarize as you read so you can remember the content without re-reading. You may make notes or marks on the test.

Directions: Read the paragraphs below to answer number 21.

The school office has a lot of things that have been collected over the past few years. The school has tried, but has not been able to find the owners of the property. This “lost and found” has grown so large that something must be done. The office wants to get rid of everything within the next two weeks. The student council does not want the items to be wasted. Some of the suggestions are:

- Give items away to anyone who asks for them
- Throw the items into the garbage
- Hold a rummage sale and give the money to the teachers for school supplies
- Give the items to a shelter for the homeless

21. Write the answer to the following in your **Answer Booklet**.

- a) Choose one of the suggestions that satisfies the goals of both the school office and the student council.
- b) Explain how the suggestion satisfies the goals of both the school office and the student council.

**Student A:** I think the stuff should be given away to anyone who asks for it because then it won't be wasted and it will be out of the way of the office.

**Student B:** a) Lost and found stuff really doesn't belong to anybody, so it doesn't matter what happens to it. b) Maybe there is some really good stuff in there. Maybe when they put it out, people will see it and realize it is theirs.

**Student C:** a) The school should give the items to the shelter for the homeless. b) In that way, the “lost and found” items will be taken care of quickly and easily for the office people, and they will not be wasted because people in the shelter who need things will be able to get them free.

**Student D:** a) I think the school should hold a rummage sale and give the money to the teachers. b) The teachers always need money, and there are always things that students could use. This way the school benefits.

**Student E:** a) The first one b) It will be good for the office and the student council.

## Day 16 - Writing Extended Response Questions II:

Objective: Students will practice writing extended response questions using the four steps. Students will peer evaluate the answers composed by other students, and will compare them to the grading rubric. Students will revise answers to create full-credit responses.

Today you will be given three extended response questions from the Science proficiency. To review, let's walk through the four steps that we learned yesterday: 1) Think about the topic, 2) Read the *entire* selection And 3) Read the directions. (Have students do this after discussing each step for question 1, then just remind them of the steps again before they complete the other questions.. "Now we will look at the first question together. What is the topic? Take 20 seconds to think about what you already know. Now, read the entire selection carefully. Now read the directions. I want each person to follow all the directions on the page we handed out yesterday, and write an extended response answer to this question. When you have a good answer, raise your hand and a teacher will look at it. Revise it according to the teacher's suggestions to make it an excellent answer." Then have them complete the other two questions independently. Have students exchange papers, display rubrics and have them check the questions based on the rubric and then give a score. Return the answers to the owners and allow time for them to revise. Have them checked by a teacher.

"Finally, in the last few minutes, I want you to retake the Self Assessment to see how your ideas may have changed over the past eight weeks."

APPENDIX C  
INFORMAL ASSESSMENTS

STUDENT EVALUATIONS

1. What was the purpose of these intervention classes?
2. Which lesson did you enjoy the most? Why?
3. Which lesson did you enjoy the least? Why?
4. What strategies did you learn?
5. Which strategies for reading and completing standardized tests do you think you will use in the future.
6. Did you feel more confident when you took the post-test than when you took the pre-test?
7. Do you feel that some of the reading strategies and abilities that you learned are helping you in class work or homework assignments? Which ones?
8. Are there any other helpful comments you would like to make?

## SELF ASSESSMENT

You are reading a passage from a textbook. You have to understand what you read and answer questions about it.

1. Before I read, I try to think of what I already know about the topic.  
Never Rarely Sometimes Usually Always
2. Before I read I look for clues that would give me the big idea.  
Never Rarely Sometimes Usually Always
3. As I read, I look up *every* new word in the dictionary.  
Never Rarely Sometimes Usually Always
4. I pay special attention to titles, bold letters, pictures or drawings.  
Never Rarely Sometimes Usually Always
5. As I read, I try to make good guesses at the meanings of new words.  
Never Rarely Sometimes Usually Always
6. As I read I make pictures or images in my head of what it looks, smells, sounds and feels like.  
Never Rarely Sometimes Usually Always
7. After I read, I write down the most important ideas or make pictures to summarize what I learned.  
Never Rarely Sometimes Usually Always
8. I notice or underline the question words in any question to help understand what answer I am looking for.  
Never Rarely Sometimes Usually Always
9. If I don't understand the words in a question, I stop working on it.  
Never Rarely Sometimes Usually Always
10. I work with a friend and we read and study together.  
Never Rarely Sometimes Usually Always

APPENDIX D  
SUMMARY LETTER

January 3, 2005

TO: FAMILIES OF ALL PARTICIPANTS IN  
MRS. G's RESEARCH PROJECT

Thanks again to all who allowed me to use the results of your child's tests to conduct research that is aimed at improving your child's proficiency test scores. Here is a brief summary of what the research was looking for and what I found:

The concept of Cognitive/Academic Language was developed by linguists, and identifies the distinction between everyday conversational language and language that is used in literature and on academic tests. More recently, legislation known as the "No Child Left Behind Act" has caused teachers to look for scientifically researched teaching methods that will serve to eliminate inequities, and thereby increase academic achievement of specific groups who have been historically or practically marginalized, including racial/ethnic minorities, ESL students, economically disadvantaged students and students with disabilities. Cognitive/academic language proficiency was identified as one factor that may be a culprit in preventing academic advancement among certain populations. An experiment was performed to show that improving a child's cognitive/academic language proficiency will improve their Ohio Proficiency Test Scores.

Your child can explain to you the significant difference between spoken and written language. Because our culture has moved away from written language and more to oral communication, some students have a more and more difficult time accessing the special academic language that is used in textbooks, classroom materials and especially state testing. My belief is that many students know the material that is being tested, but cannot perform well on the tests because they are not proficient with the language of the questions and options. What the experiment showed is that improving test-taking skills through the development of cognitive/academic language and learning strategies *is* effective for improving test scores for students without disabilities. The eight-week trial did not show a significant improvement for students with disabilities, but further implementation of this method will show whether it is effective for this group in the longer term.

What this also suggests are ways that parents can help students to develop the language that they need to do well on tests. Here are some simple suggestions of ways to develop this type of language and better prepare your students for the state tests that they will be taking every year from now on with the exception of their ninth grade year:

## **READ TO YOUR CHILD**

- Read books that are above the child's reading level – or are different kinds of literature than what they normally would pick (poetry for example).
- If you don't like to read yourself, or simply don't have time, listen to books on tape or CD at home or during extended car trips – Remember videos do not present the literary language unless they use actual written language as a script. The local library carries a large selection of both adult and children's literature on tape or CD.
- Have your child read formally and informally – Cereal box backs, newspapers, magazines, devotionals, cartoons or comic books all offer literary language! Read parts or act out favorite stories by using the actual words from the books. Even children's books use 50% more of the cognitive/academic language than does the conversation of a college graduate.
- Talk about things that you read. Discussing the material reinforces the meaning, vocabulary and style of the material.
- **READ**. Seeing adults model reading has been shown to be the most significant factor in children's reading achievement. Be a good example.

Thanks again for your help and cooperation. If you have further questions or comments please contact me (Mrs. Grigorenko [Mrs. G]) at Cedarville High School (766-1871) Mailbox #412 or at [cchs\\_pgrigor@k12server.mveca.org](mailto:cchs_pgrigor@k12server.mveca.org).