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A study of time orientation, temporal integration and reading comprehension: Back to the future

Tacey L. Ruffner
University of the Pacific

A Study of

Time Orientation, Temporal Integration and

Reading Comprehension:

Back to the Future

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Tacey Ruffner

Dissertation Committee

Dr. Fred Muskal - Chair
Dr. Dennis Brennan
Dr. James Heffernan
Dr. David Baral
Dr. Christine Gray

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A Study of Time Orientation, Temporal Integration and Reading Comprehension: Back to the Future

Abstract of the Dissertation

Problem: Lower-track high school students' combination of poor reading comprehension, *present time orientation* and *shortened temporal integration* is an area that has been identified in a range of divergent literature, but little studied in terms of educational practice. Previous research into *time orientation* and *temporal integration* has failed to investigate a connection with reading comprehension.

Purpose: The purpose was to determine if there is a relationship between *time orientation*, *temporal integration*, reading achievement/high school track level and reading comprehension.

Procedures: Two measures, a *Time Orientation Questionnaire* and a *Cloze Test of Reading Comprehension*, previously identified and pilot tested, were employed. One class in each of four track levels [College Preparatory, General, Remedial and ESL] at two high schools was tested. The data were analyzed using descriptive and inferential statistics.

Findings: The utility of the two measures was validated by this study. The data indicate that track placement affected 63% of the verb tense items reflecting *time orientation* on the *Cloze Test*, and 55% of the verb tense items reflecting *temporal integration*. The *Cloze Test of Reading Comprehension* differentiated among the four track levels of reading ability, and showed that there are temporal factors which are involved. These temporal factors have not been understood as elements which mediate between levels of reading comprehension. In addition, track placement affected 35% of the responses on the *Time Orientation Questionnaire*, which addressed *future and present time orientations.*

Recommendations: The educational problem is how to accomplish temporal intervention by teaching about a broad range of temporality. 1. The teaching should focus on establishing a sense of the future, by starting from the present and incorporating the definite (past tense) and then the indefinite past (present perfect tense) in both teacher-student interactions and reading comprehension materials. 2. The primary vehicle is language and temporally-designed reading comprehension materials throughout the high school curriculum, indicating that a temporally-sophisticated curriculum can be designed to meet the needs of at-risk students.

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CHAPTER 1
INTRODUCTION

America is a pluralistic society, and California's percentage of ethnic minority children is more than 50%. After projections are made from the 1990 census figures, this number most probably will be revised upward. The current school population includes more than 48% minority children (Haycock & Navarro, 1988, pp. 7-9), and the change in ethnic composition of students has resulted in a clear mandate to educators. Since 1967, the number of minority students in California schools has increased from one million to almost three million (Curtis, 1992). Half of the world's immigration is to California (Haycock & Navarro, 1988, p. 6). Due to immigration and migration, the typical school population has become multilingual and multicultural, and increasingly working-class and poor. As the school population becomes more varied in terms of home-based educational styles and languages, it becomes ever more necessary to focus on issues which relate to student success in diverse populations.

As a pluralistic society, we manifest different social class, cultural, and linguistic traditions with contrasting *time orientations*. The two groups which are most impacted by operating within the non-mainstream, *present time orientation* are English as a Second Language and low-achieving students. The reality of many of their linguistic and socio-cultural contexts means that these students who are growing up in disadvantaged settings tend to be trapped in the present, and hopeless about the future (Annie E. Casey Foundation, 1993; cf. Moore, 1993). As the Annie E. Casey Foundation report

(1993, p. 43) shows, California has witnessed the following percentage *increases* from 1985 to 1990:

- •Students not graduating from high school 5%
- •Teens not in school and not in the labor force 21

California's overall graduation rate, as of 1990, is 63.1% (Ibid., p. 140).

The disadvantaged settings constitute "a culture at a disadvantage" (Williams, 1970, p. 3). These students tend not to connect present actions with future results, operating on a day-to-day, if not minute-by-minute, basis. Subsistence existence, the world of the street with its ever-present focus on survival, leads to temporal compression. For this student population, reinforced by socialization (Kohn, 1977), time is perceived as unconnected moments. Events happen without connections to the past or implications for the future; there is a profound lack of *future time orientation.* This is significant because this student population appears to have trouble with reading achievement. No connection between reading achievement and temporality has been established, but there has been much speculation stretching back several decades.

There appears to be an inverse relationship between social class and reading development. Kellmer-Pringle (1966), and Davie et al. (1972) have documented the correlation between poor readers, who generally get placed in lower tracks and then experience further reading failure (cf. Baratz, 1970; Bernstein & Henderson, 1967). In Great Britain, Kellmer-Pringle et al. (1966) grouped 11,000 seven-year-olds into three categories: good, medium and poor readers. The following percentages of poor readers were found:

social class	I (highest)	7.1 %
	II	7.1
	III	18.9
	IV	26.9
	V (lowest)	26.9

Davie et al. (1972) found that in Britain the chances of an unskilled manual worker's child being a poor reader at seven years are six times greater than those of a professional worker's child and that an unskilled worker's child has fifteen times more chances of being a non-reader at seven years. Vernon (1971) suggests that teachers expect higher reading achievement from middle-class children, and have lower, self-fulfilling expectations for working-class children.

While there is ample literature identifying the issue of *time orientation* dissonance as a general problem between schools and large groups of students, *time orientation* is largely unexplored as a research topic at the level of the individual student. There have been no studies to explore the correlation of *time orientation* with reading comprehension. Examining this factor as a possible factor in low reading achievement is a next step in focusing this line of research within an educational framework. If a linkage can be established between *time orientation* and reading comprehension, then the next step would be to address this problem within an educational framework, through both educating teachers and facilitating curriculum and materials revision and development. The degree of association between *time orientations* and levels of reading

comprehension could show which dimensions of temporality are associated with reading problems and strengths.

The dynamic involved in the at-risk student's difficulty with reading comprehension can be shown by describing the typical interaction in a remedial reading class, using the metaphor of baseball catching practice:

The teacher functions as the pitcher, the teacher's ball constitutes the curriculum/reading materials, and the at-risk student is the catcher. The catcher's mitt is primed to receive an invisible ball, not the visible one that is being thrown by the teacher. There are two concurrent baseball catching practices, *two parallel realities*. The pitching reality is visible to the middle-class eye, with rules that are understood and utilized by the pitcher. The catching reality is visible to the at-risk student's eye, with very different expectations. What the middle-class pitcher/teacher throws, the catcher/at-risk student does not receive. The ball can be thrown straight to the mitt, seemingly on the verge of landing in the middle of the mitt, and yet fall to the ground. Instead of the middle-class, visible ball from the pitcher, the at-risk student's mitt lands a ball that is invisible to the pitcher, operating in a very different reality, one that is unacknowledged by the pitcher/teacher and the curriculum/reading materials. The middle-class student understands; the working-class student misses the point. The attempted transmission from the teacher, a bundle of information and concepts based on the middle-class experience, is not apprehended by the at-risk student. Considering that most schooling is provided through reading materials, this analogy means that the transmissions to at-risk students are not completed, whether

in school or at home. According to Black (1967), 75% of a student's time in the classroom and 90% of the time spent on homework is focused on reading.

One of the themes that runs through the literature on low achievers is the degree of dissonance between the school and its clientele. Success in school is frequently attributed to the dynamic factor of *future time orientation* (Agarwal et al., 1983; Akinnaso, 1981; Bachman, et. al, 1971; Cohen et al., 1968; Cohen, 1968; Davids & Sidman, 1962; Gonzalez & Zimbardo, 1984; Kahn, 1965; LeShan, 1952; Oakes, 1982; and Ogbu, 1978). This situation biases the educational system in favor of those who share the temporal attitudes of the dominant group.

Curriculum design and reading materials seem to assume a middle-class, future-oriented experience of time, linking the past to the present, with the focus on the future. However, assumptions about how people function in time are not shared by the curriculum and non-mainstream, at-risk students. Curriculum scope and sequence have not taken into account that different socio-economic populations operate within radically different *time orientations*, and their resultant realities. At-risk students tend to develop a *time orientation*, including both their perceptions of themselves and the world at large, which is in direct opposition to the temporal assumptions that curriculum design and reading materials appear to make about how these children make sense of the educational dynamics surrounding them. There is no unilinear path of language and time socialization and development; the middle-class ways of language and time are not universal. The middle-class way of being

in the world is dramatically different from the way of being in the world for at-risk students, so that "goodness-of-fit" is lacking for this at-risk population in the schools.

The lower-track secondary students, who are recent immigrants, native-born bilinguals, and/or non-standard English speakers, share a common problem: they overfocus on the present tense. According to Vernon (1957), these students experience "cognitive confusion" while reading, in that their language usage has not typically included language as a means to transcend the present context. Almost exclusively, this *present time orientation* manifests itself linguistically through the overuse of the present tense, with an emphasis on present time only. According to Leech (1971), "the present moment, which enters into all tense specifications, may be regarded as the primary point of reference, the starting point for all reckoning of time relationships" (Leech, 1971, p. 147; emphasis not in original).

This group of lower-track students typically fails to use the present perfect tense. The present perfect tense exemplifies:

> the metaphysics underlying our Indo-European linguistic conventions (which) imposes on the universe the conception of a uniformly and perpetually flowing time divided clearly into a past, present, and future as contiguous segments of a single extension, a continuum shared by all events, all subject to the same laws (Cottle & Klineberg, 1974, p. 171).

This verb tense is a critical example of language's ability to enfold many concepts under one set of symbols, (as in, "She <u>has been</u> a student at UOP for many years"). *The present perfect tense functions as a way of describing an activity that started in the*

indefinite past, continues to the present, and may impact the future. The present perfect tense is a linguistic and external manifestation of the psychological reality of a future-oriented sense of time. This verb tense has had a very small place in the operating grammar which describes the daily reality of at-risk students' lives.

Statement of the Problem

Educators have sought answers beyond the classroom for the past three decades, and they have considered the cultural values, the home environment, and the language backgrounds of children as important influences on what happens, or does not happen, in the classroom. The problem of lower-track students, a combination of poor reading comprehension, *present time orientation* and *shortened temporal integration*, is an area that has been much identified in a range of divergent literature, but little studied in terms of educational practice. Previous research into *time orientation* and *temporal integration* has failed to investigate a connection with reading comprehension.

This study will focus on evaluating the possibility of a relationship between achievement and temporality. First, do students with extended temporality achieve better? Second, do students with shortened temporality achieve less well? This study will attempt to investigate the degree of relationship among reading comprehension, track level, and two underlying components of reading comprehension: *time orientation* and *temporal integration.* The

results will be utilized to remediate the teaching of reading to low-income and ESL students to improve achievement.

First, this study will determine the *time orientation* and *temporal integration*, i.e., two components of reading comprehension, of the sample in two instruments. Second, it will relate these data to their reading comprehension standardized test scores. This will be accomplished by administering three instruments. The first is the *Cloze Test of Reading Comprehension*, an instrument developed by the researcher. The second is the *Time Orientation Questionnaire* developed by Gonzalez and Zimbardo, as modified by the researcher. The third set of data will come from the district's regular *California Test of Basic Skills* administration.

If a relationship between *time orientation*, *temporal integration*, reading achievement/track level and reading comprehension can be established, then there will be a possible new way to frame reading instruction to be more effective with low-achieving groups. A reasonable next step would be to design curriculum which develops and fosters *future time orientation* and *extended temporal integration* through the use of Oller's schematic concept of *pragmatic expectancy grammar* in reading materials as a core concept. The focus and purpose of this curriculum would be to enable at-risk students to acquire a more *future-oriented time orientation*, in addition to a more *extended temporal integration*.

The purpose of the study is to determine if there is a relationship between *time orientation*, *temporal integration*, reading achievement/track level and reading comprehension. Oller's

theoretical schema of *pragmatic expectancy grammar* will be used to examine the dimensions of the relationships among these elements.

Specific Research Questions, Variables, and Statistical Treatments

This study will examine the following research questions:

1. What is the relationship of track placement to 8th-grade *CTBS reading comprehension* scores for College Preparatory vs.General vs. Remedial vs. ESL tracks? (Anova, one-factor)

2. What is the effect of track placement on reading comprehension (number of correct answers) on the *Cloze Test*? (Anova, one-factor)

3. What is the effect of track level on verb tense choices reflecting *time orientation* in reading comprehension on the *Cloze Test* for College Preparatory vs. General vs. Remedial vs. ESL tracks? (2-factor Anova {repeated}; Chi square{contingency tables})

4. What is the effect of track level on verb tense choices reflecting *temporal integration* in reading comprehension on the *Cloze Test* for College Preparatory vs. General vs.

Remedial vs. ESL tracks? (2-factor Anova {repeated}; Chi square {contingency tables})

5. What is the relationship of track placement to *Present Time Orientation* answers on the *Time Orientation Questionnaire*? (Anova {repeated}; Chi-square (contingency tables); Multiple regression)

6. What is the relationship of track placement to *Future Time Orientation* answers on the *Time Orientation Questionnaire*? (Anova {repeated}; Chi-square (contingency tables); Multiple regression)

7. What is the relationship between *time orientation* (selected *Cloze Test* answers) and *future time orientation* (selected responses to the *Time Orientation Questionnaire*)? (Chi-square {contingency tables}; Anova {factorial; repeated}, and Multiple regression.

8. What is the relationship between *time orientation* (selected *Cloze Test* answers) and *present time orientation* (selected responses to the *Time Orientation Questionnaire*)? (Chi-square {contingency tables}; Anova {factorial; repeated}, and Multiple regression.

9. What is the relationship between *temporal integration* (selected *Cloze Test* answers) and *Future Time Orientation* (selected responses to the *Time Orientation*

Questionnaire)? (Chi-square {contingency tables}; Anova {factorial; repeated}, and Multiple regression)

10. What is the relationship between *temporal integration* (selected *Cloze Test* answers) and *Present Time Orientation* (selected responses to the *Time Orientation Questionnaire*)? (Chi-square {contingency tables}; Anova {factorial; repeated}, and Multiple regression)

Assumptions

The assumptions are shared by a range of prior studies on the effects of *time orientation*, *temporal integration*, language usage, and social class.

1. This study will assume that the process of social class socialization takes place simultaneously with the processes of second language acquisition. Most studies focus on one set of processes only. This study employs the social class socialization theoretical position. This issue emerges in some of the results of the study.

2. Social class mediates one's *time orientation*, *temporal integration* and language use, helping an individual make sense of the world.

3. There is a crude relationship between reading level, social class and track placement, in that the students placed in the College Preparatory track tend to be more middle-class, and the other three tracks (General, Remedial and ESl) are typically more working-class.

4. Peer pressure from one's social class works against assimilation of the dominant middle-class culture's values, including *future time orientation*, *extended temporal integration*, and use of Standard English.

Other related assumptions follow. First, a change in student *time orientation* from present to future would increase school success and thereby reduce the secondary school dropout rate. Second, the *time orientation* and *temporal integration* of a student can be changed through the inclusion of *time orientation* and *temporal integration* principles in appropriately designed secondary curriculum materials. The English/ language arts curriculum can be made more sensitive to the temporality and language development needs of lower track students, especially when their relationship to standardized reading test scales is established. The curriculum can be modified to develop *future orientation* and *extended temporal integration* in high school students, thereby bringing minority and working-class students into congruence with the school's *future time orientation*. This should improve reading comprehension, achievement, and retention.

Definition of Terms

The following terms will be operationalized in the literature review and during the presentation of the study. They are listed in alphabetical order.

Blank:
Blanks are used to denote the deletion of words. They are underlined and ten spaces in length.

Cloze Item:
A cloze item refers to the blank used to denote the deletion of a word.

Cloze Response:
A cloze response is a subject's attempt to replace a blank within a cloze test.

Cloze Score:
Cloze score indicates the raw score obtained by a subject and used as an index of his reading comprehension.

Cloze Test of Reading Comprehension:
A *cloze test* of reading comprehension is constructed by deleting words from a reading selection and requiring the examinee to make choices among options to fill in the blanks meaningfully, in context.

Linguistic Minority Student:

A linguistic minority student is defined as one in whose home a language or language variety other than Standard English is spoken.

Literacy Events or Activities:

Literacy events or activities are "occasions in which written language is integral to the nature of the participants' interactions and their interpretive processes and strategies" (Heath, 1982b, p. 50).

Locus of Control:

The locus of control construct refers to people's beliefs that they can and do influence the causes of events in their lives (*internals*), versus people's beliefs that they cannot and do not influence the causes of events in their lives (*externals*) (Rotter 1966, 1973).

Past Tense:

"The most important function of tense is to indicate past and present time. ... Past time *excludes* the present moment" (Palmer, 1965, p. 69; emphasis not in original). The past tense "views an action [*or state*] as a [*completed*] unit, [*in that*] the time frame is closed" (Pattison, 1969, p. 153-4). The time of primary interest for the usage of the past tense is the past (Pattison, 1969). According to Leech (1971), "the simple past makes reference to a definite, given moment or period of time prior to the present moment" (Leech, 1971, p. 148).

Pragmatics:

Pragmatics mediates connections between language in use and human experience (Oller, 1979, p. 33). "It is concerned with the relationships between linguistic contexts and extralinguistic contexts. ... Pragmatics is about how people communicate information about facts and feelings to other people ..." (Ibid., p. 19).

Pragmatic Expectancy Grammar:

Pragmatic expectancy grammar is a concept with which to discuss an entire track, through the combination of *time orientation* and *temporal integration*. *Future time orientation* is linked with *extended temporal integration*, and *present time orientation* is linked with *shortened temporal integration*.

Present Perfect Tense:

The present perfect is not a past tense (Pattison, 1969). According to Palmer (1965), "present time is any period of time ... that includes the present moment" (Palmer, 1965, p. 69). The key to understanding the present perfect tense is that the action or state which is referred to in the verb is completed, *but is still relevant in the present*, including the concept of process (Ibid.). "It is the continuing relevance that is the difficulty" (Pattison, 1969, p. 153). According to Pattison (1969), "the present relevance of the experience ... is uppermost, ... not when it happened" (Pattison, 1969, p. 154). In other words, the time of primary interest for the present perfect tense is the present (cf. Hill, 1958; Sweet, 1892).

Leech (1971) offers a definition of the present perfect:

> The Present Perfect ... is often described as ... 'past involving the present'. ... With 'state' verbs [know, think, believe, understand, imagine, perceive, wonder, guess, suppose, feel, mean, realize], present involvement means that the state extends over a period lasting up to the present moment. ... The period mentioned extends up to the present moment, but since 'state verbs' are of undefined time span, the state itself may extend into the future" (Leech, 1971, p.30-34).

This researcher believes that the notion of 'past involving the present' and extending to the future also applies to action verbs, and is not limited to state verbs.

Reading Comprehension:

Reading comprehension is the collection of multidimensional strategies of a reader interacting with text, of internal information interacting with external information. " ... A text only provides directions for ... readers as to how they should retrieve or construct the intended meaning from their own, previously acquired knowledge" (Adams & Collins, 1979, p. 3). The internal information is all of the information that a reader has in his/her head based on prior experience, in terms of *time orientation*, *temporal integration*, grammatical knowledge, and inferential ability. The external information is the text. "What language provides is a skeleton, a blueprint for the creation of meaning. Such skeletal representations must then be enriched and embellished *so that they conform with the understander's preexisting world views* ..." (Spiro, 1980, p. 245;

emphasis not in original). Reading comprehension is the successful integration of internal and external information.

Schema-Based Reading Theory:

According to schema reading theory, meaning exists only in the interaction of a reader and a text, through their respective phonological, syntactic, semantic and pragmatic language levels. Schema reading theory is integrative, incorporating elements of the learners' lives, and personal involvement via reader background knowledge, in the interactive process of identifying and integrating new, target information with relevant, stored information. According to schema theory, all of people's knowledge and information about their experience from living in the world is stored in slots in organizing frameworks of the long-term memory. "Each slot accepts information of a given type" (van Dijk & Kintsch, 1983, p. 307). All knowledge is schematic, including *time orientation*, *temporal integration*, social and cultural information, ideas, the structure of daily experiences, language itself, and norms for using language. What is perceived as relevant to the background knowledge of a reader interacts with how he or she proceeds in processing a text, while monitoring comprehension. The schematic conceptualization of temporal and linguistic experience and expressions presumed by an author may or may not be possessed by a reader.

Social Class:

Banfield's (1974) definition of social class will be used: "an individual's position in a deference hierarchy according to a prior

scheme such as sharing a similar patterning of education, occupation, income or status with others in a given social class" (Banfield, 1974, p. 126). This concept is defined operationally in this study as track placement.

Syntax:

Syntax constitutes the admissible combinations of words in phrases or sentences (also called *grammar*). Meaning embedded in the text is conveyed by syntactic structures through grammatical processing by an individual language user. "A grammar is a theoretical-and hence general, abstract, and idealized-reconstruction of the language rules known by language users." (van Dijk & Kintsch, 1983, p. 73). According to De Beaugrande (1980), "... syntax is always relevant to text processes: it determines the *temporal order* of occurrences" (De Beaugrande, 1980, p. 88; emphasis not in original).

Temporal Integration:

Temporal integration is the linkage of images of the future with conceptions of the past and the present (Cottle & Klineberg, 1974). An individual who overfocuses on the present tends to have *shortened temporal integration*. Freire (1973) suggests that "integration with one's context ... results from the capacity to adapt oneself to reality *plus* the critical capacity to make choices and to transform that reality" (Freire, 1973, p. 4). Wallace and Rabin (1960) discuss temporal behavior as involving "the total personality, memory for past events, and hopes, aspirations, and anticipations of future events" (Wallace & Rabin, 1960, p. 232). According to Orme (1969),

"a person's behaviour is inexplicable unless the unity between past, present and future is considered, implicitly or explicitly" (Orme, 1969, p. 5). According to Mowrer (1950), the core of integrated behavior is the capacity to bring the future into the psychological present (Mowrer, 1950, p. 454). Under his definition, only a person who is future-oriented has *extended temporal integration.*

Temporality:

Temporality includes both the dominance of past, present or future in one's thinking and behavior, as well as the extension of the present into the past and the future.

Temporal Socialization:

Each social class in American society socializes its members to its particular norms and values. *Time orientation* is a socialization factor, in that middle- and upper-class children are socialized to integrate the present with the past, with the focus on the future, especially in terms of personal effectiveness and achievement.

In fact, manifesting a *future time orientation* is the accepted dominant culture norm. In contrast, the working-class child is socialized to develop a *present time orientation.* There are a number of reasons for this, including the continuing environmental pressure of dealing with life on an immediate basis.

Tense:

"By tense we understand the correspondence between the form of the verb and our concept of time" (Quirk & Greenbaum, 1973, p. 40).

Time:

"Time is a universal, non-linguistic concept with three divisions: past, present, and future" (Quirk & Greenbaum, 1973, p. 40).

Time Orientation:

Time orientation can be conceptualized as an individual's directedness to the ordering of and relative dominance of past, present and future realms in one's cognitions (Lauer, 1981). An individual acquires *time orientation* through socialization (Lauer, 1981; Cottle, 1969). *Time orientation* is a cognitive and motivational abstraction that is developed as a function of social class (Kastenbaum, 1964; Lauer, 1981).

The way in which an individual views the past, present and future has powerful personal, social, and educational implications. *Time orientation* is a psychological construct for the inner framework of an individual's dominance of, or investment in, past, present, or future in his cognitive and behavioral interactions with the world. It is both a learned and a developmental concept.

Time Orientation Questionnaire:

The Time Orientation Questionnaire was based on one by Gonzalez and Zimbardo (1985). There were 20 questions that require the respondents to indicate on a four-point scale, rather than the five-point scale used by Gonzalez and Zimbardo.

Track Placement:

Student placement in one of the following curriculum tracks in a secondary school: English As A Second Language (ESL), Remedial, General, and College Preparatory. The tracks are ranked hierarchically in practice, ranging from College Preparatory (highest, 1) to ESL (lowest, 4).

Limitations

This study is limited to a natural sample of high school students drawn from a variety of reading levels in Northern California. The study will be limited by the focus on randomly selected classes of 9th-grade students in ESL, Remedial English, General English, and College Preparatory English classes who were attending two high schools in the Modesto area.

Significance of the Study

The *time orientation* and *temporal integration* of students are related to many factors in the literature, and the importance of this study is two-fold. First, if it can be shown that *time orientation* and *temporal integration* are related to reading achievement, we may have identified a variable which needs addressing in ESL, Remedial, and General English track-level classrooms. Secondly, if this proves to be the case, further research on teaching temporality through reading materials will be instrumental improving reading instruction for these low-achieving groups. This study focuses on factors which

could be applied easily as linked vehicles for restructuring educational practice.

Oller's *pragmatic expectancy grammar (PEG)* construct seems to be the most promising approach to examining both *time orientation* and *temporal integration* differences in reading comprehension among students of different social classes and track levels. If *PEG*, using its component factors of *time orientation* and *temporal integration*, is related to reading comprehension of secondary students in different socioeconomic groups and tracks, then it would be educationally useful to know to what degree it does. This relationship, if clearly and strongly established, would indicate a need for the inclusion of *PEG* issues in reading materials and curriculum. The results of this study may lead to the development of reading materials and curriculum which address the specific temporal needs of a large part of the school population, leading to more successful educational careers. Curriculum can be modified to develop a *future time orientation* and *extended temporal integration*, and diminish lower track students' propensity to drop out.

The dynamic dimensions of *time orientation* and *temporal integration* should be included as part of the full range of benefits of our educational system. Non-mainstream, at-risk students occupy the majority of school desks, and must be well-prepared to hold the majority of jobs in the future. That preparation can be facilitated by teachers and curriculum, sensitized to the temporal needs of the students. We can begin to make progress, which means equal educational opportunity and access for everyone. The majority culture, through the powers invested in the school, can play a

significant role in opening the door to full educational and cultural participation. If a sense of *future time orientation* and *extended temporal integration* are essential acquired skills for participation and success in American education, then they should become part of the curriculum. A sense of time is learned, and it can be extended and retaught.

The information gained from this research is intended to be of value to teachers, materials developers, and curriculum designers who are concerned about the success levels of at-risk students who manifest low levels of reading comprehension, a *present time orientation* and a *shortened temporal integration.* By making explicit and teaching the mainstream value of *future time orientation* and an *extended temporal integration* through the reading curriculum, students and teachers can reap the benefits of a stronger congruence between the *time orientation* in the home and the one at school. The results are intended to be source of insight and information that practitioners and researchers can use to develop and frame reading comprehension and curriculum questions related to at-risk students and their failure to proceed. Reading instruction can be re-framed to include the underlying reading comprehension constructs of *time orientation* and *temporal integration* to be more effective with low-achieving groups.

Organization of the Study

Literature related to schema theory, *pragmatic expectancy grammar*, educational theory, *time orientation*, and *temporal*

integration is reviewed in Chapter 2. In Chapter 3, the population and sample used in the study are identified, the data collection procedure is described, and the statistical analyses for testing each research question are indicated. In Chapter 4, the results of the data analyses are presented in discussion and table form, and summaries of the findings and conclusions are drawn. In Chapter 5, implications are examined and recommendations suggested. In addition, the implications for basing a reading program on these findings are discussed.

CHAPTER 2
EDUCATIONAL THEORY: SCHEMATA, READING COMPREHENSION, AND TIME ORIENTATION

The basic theoretical orientation of this study is grounded in Piaget's schema theory. Schema theory argues that people have integrated world views which orient them toward living, and specifically reading. Oller's *PEG* is a particular kind of schema. Oller argues that the schema of some students has a particular orientation towards time. This schema is created by external environmental pressures, such as poverty or the struggle to learn a new language. Oller's construct provides a way to examine and manipulate this factor, testing its significance on reading achievement.

This chapter will examine the theoretical underpinnings, some assumptions, and the research on reading and achievement in diverse groups. The focus will be on *time orientation*, *temporal integration*, social class, reading comprehension and at-risk students' propensity to drop out. Piaget's schema theory forms the major conceptual base of Oller's construct of *pragmatic expectancy grammar (PEG)*. Oller's work is used to conceptualize temporality issues in reading comprehension, and the two temporality issues which impact reading comprehension are *time orientation* and *temporal integration*.

Piaget

Piaget's (1958) ideas about learning were based on assimilating a child's old experiences with new ones. Unfortunately, "experiences" are too often interpreted as and limited to those which take place in the middle-class home and school settings, ignoring the those which continue to take place in the at-risk, survival-based home environment.

In contrast to the temporal compression of low socio-economic status students, middle-class students acquire a linear, extended, and future-oriented attitude towards time, the one which is validated by mainstream society. Instead of overfocusing on the present, middle-class students strongly prefer to connect past actions with present results, and present actions with future results. The linear, *future time orientation* serves middle-class students well when interacting with the teacher and curriculum/ reading materials in a typical school environment. All three players in the education interaction game - the students, the teacher, and the curriculum/materials - utilize the same underlying temporal infrastructure: *future time orientation and extended temporal integration.* The educational dynamic radically changes when the majority of the students are at-risk and assumptions about *time orientation* are not shared by the teacher/curriculum and non-mainstream students.

Piaget's Schema Theory

The approach used to address the *time orientation and temporal integration* problem in this study lies within the area of schema theory (Inhelder & Piaget, 1958). According to schema theory, all aspects of knowledge of the world are in script form and dynamically interactive. These aspects of knowledge include *time orientation*, *temporal integration*, other psychological constructs, social and cultural information, ideas, and the pragmatic structure of daily experiences, language itself as symbolically-based, and norms for using language. The total set of schemata that a person possesses functions as that individual's theory about the nature of reality, as he knows it, and forms a network of expectancies with which to interpret the world and express himself.

> According to van Dijk and Kintsch (1983):
>
> a schema ... is a knowledge structure that ties together information in memory. It is a label with slots that stand in some prearranged relation to each other. Each slot accepts information of a given type. 'Information' may mean concepts, propositions, or even other schemata" (van Dijk & Kintsch, 1983, p. 307).

The value of schema theory lies in its openness to social, cultural, psychological and temporal information as knowledge that is stored in long-term memory, so "perceptual organization is powerfully determined by expectations built upon past commerce with [a given] environment" (Bruner, 1973, p. 82). This knowledge acts dynamically through the development of self-concept (Ferdman, 1990), so that

students draw on their knowledge of their social identity in ways that extend beyond their knowledge of the language elements in required reading.

The academic reality of the student at school is mainly comprised of responding to reading materials. However, the student may or may not have developed appropriate schemata for successfully interacting with reading materials or their instruction. As Olson (1980) asserts, the oral and written modes in school settings are usually based on the language and communicative norms of the dominant or powerful groups. In the U.S., Standard English (based on white, middle-class sociolinguistic norms) is the language of control in the schools, "a social class dialect" (Stubbs, 1980).

According to Heath (1982a, b), middle-class parents model, promote, and teach their children their social class dialect, with a school-minded orientation towards life and reading through thousands of literacy events during the pre-school years. The literacy-based, interactive goals of the parents for the middle-class child includes three critical concepts: first, constantly asking what-questions and answering with "what-explanations, ... a linear order of instruction ... and sequential hierarchies" (Heath, 1982b, p. 54); second, extending "familiar items and events from books to new situational contexts" (Ibid., p. 52); and third, "suspend[ing] reality, to tell stories which are not true, to ascribe fiction-like features to everyday objects" (Ibid.). In other words, the participatory interactions between the middle-class parent and child include sequential what-questions and explanations, according to the linearity and causality of the stories. In addition, connections with the child's

world, past, present and anticipated, are knit into the sequential exploration of the stories themselves. Reality is alternately alluded to and suspended, so that both the child and the parent move easily into the past from the present base, and also apply expectations to the future. These literacy-based skills are interdependent with the development of middle-class, *future time orientation.*

In contrast, the working-class child in a home with books is socialized in two main ways: first, "to remember the book's content for the sequential followup questioning," as opposed to ongoing cooperative and participatory questions (Ibid., p. 61); and second, to *not* "move [his] understanding of books into other situational contexts or to apply it in [his] general knowledge of the world ..." (Ibid.). In other words, the working-class parent directs sequential what-questions to the child, and expects explanations, according to the linearity of the story *only.* Connections with the child's world, past, present and anticipated, are *not* knit into the sequential exploration of the story itself. The reality of the book is separate from the reality of the child, so that *both* the child and the parent are tied to the past or timeless present of the narrative. These particular literacy-based skills are interdependent with the development of working-class temporality.

In further contrast, the working-class child in a home without books is socialized in two main ways: first, "preschool children are not asked for what-explanations of their environment" (Ibid., p. 66); and second, "parents do not believe that they have a tutoring role in this learning" (Ibid., p. 67). In other words, connections with the child's world, including the past, present and anticipated future, are

not explored. Both the child and the parent are tied to the present physical reality.

This literacy-oriented socialization issue biases the educational system in favor of those middle-class students who share the cultural, communicative, and temporal conventions of the dominant group. Each time that middle-class or working-class students enact a literacy event, they encounter new evidence either re-affirming or disconfirming their self-identity as it involves meaningful print.

The metaphor which can be used to describe classroom interaction is baseball practice. Time after time, the visible ball is pitched but not received. At the same instant that the pitcher/teacher expects the visible ball to land in the at-risk student's mitt, instead an invisible ball appears. The invisible ball is familiar to and expected by the student, but it is not from the same reality as the teacher. The result is typically frustration, confusion, anger, and eventual apathy for the student, if not the teacher.

This invisible ball, or temporality mismatch, seems to be generic to minority and poor students. These students share a subsistence level of reality, economic and/or emotional, which is oriented toward day-to-day survival. The issue of *present time orientation* has been addressed educationally only in the form of negative school evaluation through failure and dropping out. *Time orientation* and *temporal integration* never have been addressed as instructional issues generally, let alone in reading comprehension.

Schema theory argues that successful reading comprehension depends on the reader's ability to access appropriate schemata, or patterns of understanding, from his or her background and apply

them to a given text. Ideally, appropriate reader schemata are applied to appropriate text schemata, leading to a high level of comprehension. Conversely, the mismatch of schemata to text can lead to a very low level of comprehension. For example, when a reader's

> expectations are violated by the environment, the perceiver's behavior can be described as resistance to the recognition of the unexpected ... The resistance manifests itself in ... the dominance of one principle of organization which *prevents* the appearance of incongruity (Bruner, 1973, p. 82; emphasis not in original).

Readers use their knowledge of the world, conceptual and social knowledge, psychological constructs, and syntactic/semantic knowledge in constructing and reconstructing meaning while learning from print. In other words, readers map their personal socio-temporal realities onto the author's chosen linguistic forms in the process of comprehension. The underlying temporal infrastructure of the reader mediates the understanding of particular syntactic/semantic features of written English. As Morgan and Sellner (1980) assert: "the distinction between syntactic and semantic rules in the standard theory of grammar hinges on the fact that the categories of syntax are categories of *form*, the semantic structure's representations of *meaning*" (Morgan & Sellner, 1980, p. 188). *The verbs animate the embedded argument of any given sentence.* In support, De Beaugrande (1980) argues that "tense is responsible for both the time organization of a textual world and for the relationship of the communicative situation to that world" (De Beaugrande, 1980, p. 89).

Verbs constitute the meaningful core of syntactic structures, in that "tense is the one obligatory choice that has to be made in the verb phrase" (Pattison, 1969, p. 151). According to Niemi (1976), "grammatical forms of language, through which people construe their perceptions of their experiences, manifest temporality through the use of verb tenses" (Niemi, 1976, p. 322). It is the hope of this writer that focusing on the key past and present perfect verb tenses will encourage the reader to confront critical temporality issues that might otherwise escape notice or seem innocuous when considering the issue of reading comprehension for various socio-economic groups. This body of research takes the position that the closer the match between the reader's temporal schemata and the writer's temporal schemata represented in a given text, the higher the level of reading comprehension through syntactic and semantic processing by the reader.

Oller

Within schema theory, the work of John J. Oller is the most promising. He focuses on an individual's world view, including *time orientation* and *temporal integration*, through his schematic psychollinguistic construct, *pragmatic expectancy grammar (PEG)*. In addition, he integrates *PEG* into schema-based reading theory, which is oriented towards the interaction of a reader of a given age, and a given text. This individual is subject to the past and present influences of various other schemata, including social and cultural information, the structure of daily experiences, the formation of his self-concept, and language usage. Oller's research (1971a, 1971b,

1972a, 1972b, 1973, 1974, 1975a, 1975b, 1978a, 1978b, 1979, 1983) develops the concept of *pragmatic expectancy grammar* to integrate reading comprehension with *time orientation* and *temporal integration*, which are expressed through verb tenses.

Grammar is not an abstract system to Oller; it is schemata, sets of rules by which children, adolescents and adults internalize the social world and express themselves. A person's *time orientation* and *temporal integration* iare expressed in speech, reading and writing, through the understanding and use of verb tenses which form a schema locating an individual in a time orientation (Oller, 1979). *Pragmatic expectancy grammars* enable the language user in his particular socio-cultural environment "to infer the plausible limits of intended meanings ... in a stream of speech or a written passage" (Oller, 1975a, p. 345; cf. Bruner, 1973). The internalized *pragmatic expectancy grammars* of language users make the construction of meaning possible by anticipating the limits of a range of meanings, especially those which are related to *time orientation* and *temporal integration* through verb tenses and temporal adverbials. For example, Harner asserts that two, three and four-year-old children have an "understanding of past and future as distinct categories of experience, clearly removed from the present" (Harner, 1976, p. 66; cf. Goleman, 1993) as soon as they can use both verb tenses and accompanying temporal adverbs together and appropriately. For example, in response to a offer of frozen yogurt, a middle-class three-year-old child might say, "Have I tried cherry vanilla yet?"

These temporally-based internalized *pragmatic expectancy grammars* facilitate the construction of meaning, at least when there

is sufficient matching of the grammars for the writer and the reader. The more grammatically and temporally predictable a text, the more easily it can be processed by a reader. According to van Dijk and Kintsch (1983), " ... a tighter integration between the text and the reader's own knowledge structure ... result[s] in better learning" (van Dijk & Kintsch, 1983, p. 51-2). For example, a reader who operates in the present would be able to easily process a story which is situated in the present, with a *temporal integration* span of yesterday to tomorrow, or at most, last week to next week. "It is as though our learned expectations enable us to lie in wait for elements in a highly constrained linguistic context and make much shorter work of them than would be possible if they took us by surprise" (Oller, 1979, p. 25; cf. Bruner, 1973). Of course, when there is a critical lack of match, meaning is severely affected, taking present-oriented readers by surprise. For the students who operate within a *present time orientation*, reading middle-class, mainstream materials has only a limited connection with the present, and none with the future.

As Freire (1973) asserts, "as [individuals] ... free themselves from 'today,' their relations with the world become impregnated with consequence" (Freire, 1973, p. 4). According to Oller (1979), verbs are temporally based and the places where tense resides. They are key linguistic elements which serve as central pivots for meaning (Fillmore, 1968). *Verb tenses and accompanying temporal adverbs co-occur with and are systematically related to life as experienced by language users* (Oller, 1979; Quirk & Greenbaum, 1973). These repetitive patterns of language usage provide data which can lead to general principles of underlying *time orientations*. For example,

Labov (1967) studied past tense usage by speakers of BVE (Black Vernacular English). He asked BVE speakers who were in junior high school to read aloud sentences which included the past tense, in context. The sentences included the following examples: "*I looked for trouble when I read the news*; and *When I passed by, I read the posters*". The key indicator to their understanding of the past tense morpheme *-ed* was in their pronunciation of the homograph *read.* Labov found that the junior high school students in his study were able to understand and use the past tense marker only 35-55% of the time. Although Labov focused strictly on the students' visual recognition of the past tense and did not address their underlying *present time orientation,* their responses suggest that *the students' temporal and linguistic failure to understand and use the past tense form of the verb in context affected their reading comprehension from 45% to 65% of the time.*

The issues raised in Labov's study have also been an interest of those who analyze text structure. The temporal, conceptual and social schemata, integrated as background knowledge through the *pragmatic expectancy grammar* construct, affect reading comprehension in the interaction of a reader and a text. Schmidt (1979) asserts that propositions which are determined to be true in a person's reality are called "FACTS" (sic.). van Dijk and Kintsch (1983) suggest that "... a fact is directly tied to the parameters of some specific possible world ... Facts are fragments of possible worlds ..." (van Dijk & Kintsch, 1983, p. 117). Each possible world operates through a *pragmatic expectancy grammar.* In addition, Fabian (1983) argues that " ... in a most basic sense, ... temporal

distance might be a sort of minimal condition for accepting any kind of observation as a fact" (Fabian, 1983, p. 88). These FACTS become part of a group's reality, a BELIEF SYSTEM (sic.) (Bruce, 1975).

Cohen (1969) refers to the concept of a hierarchy of facts constituting a BELIEF SYSTEM when she asserts: "The hard-core poor are [a] ... subculture, the members of which do not share common societal values and do not wish for social mobility" (Cohen, 1969, p. 19; cf. Rotter, 1966). According to De Beaugrande (1980), BELIEF SYSTEMS are "the most fundamental assumptions about the organization of knowledge and experience. *Some facts and beliefs are so firmly established that they act as defaults pervading any textual world that might be created* ..." (De Beaugrande, 1980, p. 111 (emphasis not in original); cf. Bruner, 1973). In other words, the more powerful partner in the reader-text dynamic is the reader, the co-author of meaning.

The key to each fact is the *verb* in the predicate. According to van Dijk and Kintsch (1983), "the cognitive focus of the facts we understand, hence, must be the predicate. ...The predicate is interpreted as the new central information about the property, event or action [which defines] the fact" (van Dijk & Kintsch, 1983, p. 129). van Dijk and Kintsch (1983) continue to assert that:

> ... A sequence of sentences can be said to be coherent if the sentences denote facts in some possible world that are related. These fact relationships will often be conditional: One fact will be a possible, probable, or necessary consequence *for* another fact, or a possible, probable, or necessary consequence *of* another fact. *Relationships between facts will usually involve relationships between their ... predicates* ... (Ibid., p. 150; emphasis not in original)

Brown also touched on the construct of *pragmatic expectancy grammar*: "An English verb must always occur in some tense and it would seem that a sense of time is constantly necessary" (Brown, 1958, p. 254; cf. Leech, 1971, p. 39). This sense of time may be shortened or extended, depending on the socialization and life experiences of the language user.

The construct of *PEG* also includes other conceptual and social schemata that together make up background knowledge. Oller (1979) has described the construct, functioning for the language user as: "a psychologically real system that sequentially orders linguistic elements in time and in relation to extralinguistic elements in meaningful ways" (Oller, 1979, p. 34). The meaning constructed, of course, tends to be based on the growing-up experiences of a given individual in a particular culture or social class (Whorf, 1956; Halliday, 1978). Regardless of the social class, "children's task is to figure out what adults mean when they use different tenses and to learn how to map distinctions onto their own experience" (Friedman, 1990, p. 93).

The growing-up experiences can include literacy-related child-rearing practices which tend to be inter-generational (Heath 1982a, b, 1983; Kersten, 1986; Scollon & Scollon, 1981). For example, Heath (1983) found that *middle-class parents show children that print is both controllable and functional; working-class parents tend not to demonstrate this, leading to a lack of involvement with and control over print*. Social-class pressures to be a functional member of the group socialize an individual to see the world in a certain way and expect that others, encountered either in the home or school environments, see the world in exactly the same way (Cohen, 1969;

Kohn, 1977; Heath, 1983). For example, the middle-class child learns to act as a questioner-answer in relation to books at school (Heath, 1982a), focusing on print as controllable and functional.

Using Oller's construct of *PEG*, the operational base of the present-oriented *pragmatic expectancy grammar* would mean that the individual would make sense of events, at home or in school, only in terms of how those events relate to the present. Goals are conceived in terms of the limited, short-term future, such as a day, a week, or a month. The focus on the present excludes the setting of long-term future goals and working toward their achievement, including persisting through any difficulties or setbacks. After all, "there is no future without at the same time a desire for something else and awareness of the possibility of realizing it" (Fraisse, 1964, p. 174; cf. Freire, 1970, 1973; Lewin, 1942; Rotter, 1966). A sense of process towards a better distant future is missing for a person operating within the *present-oriented PEG* . This present-oriented individual tends not to see a relationship between what one did in the past, what one does today and what one can achieve in the distant future.

Individuals who deal with the world from either the *future* or the *present PEG* bases would tend to agree that getting good grades will get one into college. The individual operating from the *present PEG* base would skip homework in the evening because of a good movie on television, while the individual operating from the *future PEG* would tend to work on homework, because it is linked to a future, desired goal. The *present PEG* individual would tend not to see the relationship between doing homework today and getting into college, while the future *PEG* individual will be convinced of it and proceed

accordingly. The key difference is that one responds only to present options [What will I do tonight?], while the other would see some sort of process and relationship of present actions to future options [What can I do tonight that will help me to get into UOP in 4 years?] Growing up poor orients one to the present, while growing up middle-class makes future options an integral part of daily life decisions.

The *time orientation*, *temporal integration*, psychological, conceptual and social schemata, all integrated as background knowledge through the *PEG* construct, affect reading comprehension in the most basic interaction of a reader and a text. *The very basis of literacy is the skill of transcending the present context.* The language socialization of non-standard English speakers emphasizes staying within the present physical context, so that information in a reading task tends to be translated into the present, regardless of the stated or intended time frame of the writer. The reader's *PEG* must access real time, as he or she experiences it, as an anchor and operate with expectancy in terms of the nature of human experience, which is powerfully affected by social class. A reader who operates in a *present PEG* responds to mainstream curriculum and reading materials in the present, transforming input which is past- or future-oriented into the present (cf. Bruner, 1973). The concepts of past and future are only that in relation to the present (Harner, 1976; Fraser, 1978). If the present is overwhelmingly important to an individual, then the past and future naturally fade in relevance.

PEG essentially argues that degrees of difference in *time orientation* and *temporal integration* between the reader and the text limit reading comprehension. The reading comprehension gap

between the at-risk student and the assigned reading materials tends to expand as the track levels drop from College Preparatory to General to Remedial to ESL. The General, Remedial and ESL tracks are those in which most at-risk students are placed.

Reading is interactive in that the reader's comprehension is driven by a dynamic collection of schemata, background knowledge which includes psychological constructs, conceptual and social knowledge, based within a temporal framework. All levels of background knowledge interact simultaneously as the reader constructs a social and personal meaning, but not necessarily the author's intended meaning, for a given text. According to van Dijk and Kintsch (1983), "*... a reader of a text will try to reconstruct not only the intended meaning of the text - but also a meaning that is most relevant to his or her own interests and goals*" (van Dijk & Kintsch, 1983, p. 44; emphasis not in original). Readers generate critical *time orientation* and *temporal integration* hypotheses as they construct the meaning of a text. According to Bruner (1973), "a specific hypothesis is not simply an isolated expectancy about the environment, but rather relates to more integrated systems of belief or expectancy about environmental events in general" (Bruner, 1973, p. 93). In addition, "when correct recognition does not occur, what results may be best described as perceptual disruption. Correct recognition itself results when inappropriate expectancies are discarded after failure of confirmation" (Ibid., p. 83). Predictions will be confirmed or rejected, according to the interaction of the reader's background knowledge with the text information.

Reading interaction in which reader's temporal schemata does not match the writer's temporal schemata tends to result in an overreliance on the reader's schemata, thereby defeating the author's intentions. Linguistic cues in the form of specific verb tenses and temporal adverbials are included consciously or unconsciously by the author to establish or confirm a *future time orientation*. Since "a text is a semantic structure that is formed out of a continuous process of choice among innumerable sets of semantic options" (Halliday, 1975, p. 124), it may easily be misread by the reader on the basis of a *present time orientation*. According to Freedle (1979), "there is a "system of relevances ... [which] determines those features of the world that will be attended to - for example, which features will be constituted as typical, which as problematical, which as irrelevant, and which as invisible" (Freedle, 1979, p. 183). In other words, reading comprehension tends to be based on the reader's *time orientation*, *temporal integration*, and belief system of relevances, rather than the writer's.

A reader's perception of reality based on *present time orientation* overrides the writer's perception of reality based on the future, because the reader's internal sense of time orientation and its connection with external events is extremely powerful. If a language user has internalized a *present time orientation*, then she or he will tend to manifest that orientation primarily through the use and recognition of the present tense, instead of the past and present perfect tenses with temporal adverbs which indicate psycholinguistic connections to the past and to the future. Although Oller has not

used the term "*time orientation*," he is clearly referring to that concept, a critical part of a reader's schemata.

The typical middle-class writer's *future time orientation* and broad span of *temporal integration* are not universal, contrary to the underlying assumptions of most current mainstream curriculum design, materials, and instructional practices (Nix & Schwarz, 1979, p. 183-196). The gap between the curriculum writers' and/or teachers' middle-class life experiences and those of at-risk students becomes a barrier to an effective, interactive reading dynamic. When print communication is negatively affected, both teaching and learning suffer.

Mainstream reading comprehension situations are an expression of a language performance system of relevances that is shared *only* by majority culture members. Americans in the middle-class culture unconsciously operate on the assumption that each person is individually part of an on-going process which links the past, present and future, and is directed towards the future (Kluckhohn & Strodtbeck, 1961). The language usage of middle-class Americans, both orally and in written form, manifests this underlying temporal schema in the form of the frequent use of the past and present perfect tenses, and those temporal adverbials which co-occur with them. Naturally, this notion of time as a forward process linked with the past also underlies the curriculum.

A reader who operates in a *present pragmatic expectancy grammar* responds to curriculum and reading materials in the present, transforming text input which is past-or future-oriented into the present. For example, a reading comprehension question such as:

"When was Reagan president of the U.S.?" would tend to elicit the response, "Reagan *is* president from 1980 to 1988" (instead of "He *was* president from 1980 to 1988"). In addition, a question such as: "When will the next presidential election be?" would tend to elicit: "It is in 1996", instead of "It will be in 1996." Lastly, a question such as: "How long have you lived in Stockton?" would tend to elicit: "I live here 6 months", instead of "I have [I've] lived here for 6 months." Reading comprehension not only involves accepting information, but accepting that information framed within the boundaries of the future-oriented, middle-class relationship to time (Bateson, 1972).

According to van Dijk & Kintsch (1983), "how do we express some given fragment of reality in language, that is, how do we go from worlds to words? ...It is not worlds but words which are interpreted" (van Dijk & Kintsch, 1983, p. 119). In a common situation, a teacher indicates that an answer such as "I live here 6 months" is wrong, based on the mainstream *future time orientation, extended temporal integration,* and conventions of Standard English. At the same time, he is also giving a message to the student that his relationship to time, if not his self-concept, is inappropriate or dysfunctional, based on the middle-class way of being in the world (Ogbu, 1978).

In summary, *time orientation* and *temporal integration* are both socially constructed and integrated into the individual's belief system of relevances. Social class pressures socialize an individual in an appropriate *pragmatic expectancy grammar* within which to view and respond to the world. A person operating within the *present pragmatic expectancy grammar* tends not to see a clear, continuing

relationship between what he does daily in school as a teenager and what he can achieve in the distant future as an adult. Present pleasures typically are not foregone in order to obtain future rewards. A reader who operates in a *present pragmatic expectancy grammar* responds to curriculum and reading materials in the present, resulting in a very low level of reading comprehension development.

Educational Theory: Schemas, Reading, and Time Orientation

Schools have had little success dealing with the working-class student, partly because curriculum developers have had no way of conceptualizing temporal differences in their materials for different student populations. Schema theory, originating in Piaget's theories of child development, has enabled educators to begin to address temporality as an important variable in student success with particular curriculum materials.

A schema is a network of psycholinguistic connections which enable an individual to interact successfully with various worlds; for example, the world at school and the world at home. While Piaget focused on developmental levels of comprehension with the physical world, schema theory has broadened to include levels of human interaction with temporal, physical, social, and linguistic worlds, including reading.

Schema reading theory focuses on meaning as present *only* in the interaction of a reader and a text. Schema reading theory integrates elements of the learners' past and present via reader

background knowledge in the interactive process of reading. According to schema theory, all knowledge is schematic, including *time orientation*, *temporal integration*, psychological constructs, social and cultural information, ideas, the structure of daily experiences, language itself, and norms for using language. What is perceived as relevant to the background knowledge of a reader interacts with processing a text. Rumelhart (1980) has focused his schema reading theory inquiries on the effects of prior experience and learning on comprehension:

> ... Schemata are truly the building blocks of cognition. They are the fundamental elements upon which all information processing depends. ...Perhaps the central function of schemata is in the construction of an interpretation of an event, object or situation - that is, in the process of comprehension. ... The total set of schemata we have available for interpreting our world in a sense constitutes our private theory of the nature of reality. ... Schemata are like theories in another important respect. *Theories, once they are moderately successful, become a source of predictions about unobserved events* (Rumelhart, 1980, p. 33-4; emphasis not in original).

Reading operates as a psycho-social process through the use of schemata in the following ways. First, readers use their knowledge of their worlds and conceptual and social knowledge in the form of schemata in constructing and reconstructing meaning in learning from print. Reading is multileveled in that readers use various levels of language (phonological, syntactic, semantic, pragmatic) simultaneously to access meaning. Second, reading is interactive in that the reader's comprehension is driven by background knowledge, which includes *time orientation* and *temporal integration*. All the

levels of background knowledge interact simultaneously as a reader constructs a meaning for the text. Third, reading involves the generation of hypotheses as readers make predictions about the meaning of a text. These predictions will be confirmed or rejected, according to the interaction of the text information with the reader's schemata, as reading proceeds. Fourth, typical reading comprehension situations are an expression of a language performance system of relevances shared by the majority culture. Since comprehension of a text is related to the goodness of the match between the schemata that the author has presumed of the reader and that actually possessed by the reader, significant comprehension gaps can occur.

Smith (1975) focuses on the notion of reading comprehension as "relating new experience to the already known" (Smith, 1975, p.10). He argues that our minds operate with various theories of the world, or the known. We constantly test our hypotheses, based on these theories, with new material that we read in order to understand (cf. Bruner, 1973). Smith believes that readers tap certain internal theories to interact with the external experience of the written language. When there is a match between internal theory and external experience, we understand. When there is no match, we do not understand and should, but do not always, revise our theories. *This learning process applies to all areas of life.*

According to Smith (1975, 1978), prediction, anticipation, and hypothesis-testing, so vital to efficient reading, are made possible by frequent accessing of the reader's storehouse of prior knowledge. Smith asserts that comprehension depends on prediction, or asking

questions during the process of reading. Prediction is based on what the reader already knows and expects. Therefore, the set of questions asked during reading are *not* random, but represent a small set of all possible questions. According to Smith (1978), the small set of questions that are produced by a reader's theory of the world is the product of "the prior elimination of unlikely alternatives" (Smith, 1978, p. 66-67). Each reader possesses "layers of prediction" (Smith, 1978, p. 170). Goodman argued that reading is a psycholinguistic guessing game, tapping prior experience and learning to produce comprehension (1967). According to both Smith and Goodman, reading comprehension is the activity of successfully mapping psycho-social, non-linguistic reality, or "knowledge that makes us feel secure" (Obah, 1983, p. 130) onto linguistic forms, either producing a cohesive flow of understanding, or constructing a disjunctive interpretation.

This schemata necessarily includes *time orientation* and *temporal integration* (Kastenbaum, 1964), which can either aid or cause defaults in comprehension, depending on the degree of match or mismatch between the reader and the text. According to Carrell (1984):

> From the perspective of schema theory, reading comprehension is a function of the reader's possessing and activating the appropriate ... schemata in interaction with a text (or more specifically with the linguistic cues the author of the text has put there). Comprehension failures may be due partly to the reader's lacking the appropriate schemata required by the text. Second language [or Standard Englishd as a second dialect] comprehension failure may be due to mismatches between the schemata presumed by the text and those possessed by the reader. (Carrell, 1984, p. 105)

Linguistic cues in the form of specific verb tenses and temporal adverbials, put there by the author to confirm an unquestioned, but not shared, *future time orientation*, may easily be misread by the reader on the basis of a *present time orientation*.

In summary, the linguistic cues of the author, predicated on the assumption of a shared *future time orientation*, may be negated by the reader's *present time orientation*. The interaction of a reader and a text, as the result of a mismatch of *time orientations*, leads to low levels of reading comprehension. Student reality based on the *present time orientation* overrides the textual reality based on the future, because the reader's internal sense of time and its connection with external events is extremely powerful. This construct is called *pragmatic expectancy grammar*.

Time Orientation & Self-Concept: Work in Sociology, Psychology, and Education

The basic problem investigated in this study explores *time orientation*, a factor which has been identified as common to a number of social groups with a high dropout rate. This problem will be examined in terms of its occurrence in society, as a theoretical construct in explaining educational problems, and as a major component of schema theory. Schema theory will be examined generally, as well as in the work of John Oller. The issue of how to best measure *time orientation* in theoretically and practically sound ways will also be addressed.

Time orientation is an individual's directedness to the ordering and prioritizing of the past, present, and future, both acquired and developed by the individual in a given social class context. It has been examined by a number of scholars in several fields, and this section will look at a number of these examinations. What they all have in common is that the integration of past, present and future operates in a *future time orientation*. Conversely, the lack of integration of past, present and future functions in a *present time orientation*. Both *time orientations* are indications of an individual's cognitive, emotional, and societal maturity, as defined by the majority culture.

Bernstein

Basil Bernstein has examined the relationship between language, temporality and social class in a series of papers and studies stretching back over three decades at the University of London. His quest in conceptualizing how to offer a working-class child a better opportunity to succeed in school began just after World War II. His work in running boys' clubs and participating in family casework attracted his interest in the social, linguistic, and educational effects of social class. In particular, he developed a strong interest in the discontinuity of language usage between those who decide on curriculum and many of those who experience it. His major focus has been on the comprehension gaps between curriculum that is based on middle-class language interaction, usage

and values, and working-class students who tend not to respond to that curriculum.

Bernstein believes that as an individual acquires language, he actively constructs a self-image within his social context. "... The social structure is not just a kind of incidental appendage to linguistic interaction, ... but is an integral element in the deeper processes that such interaction involves" (Halliday, 1975, p. 128). An individual's social context is powerfully influenced by his socio-economic class, and "the form of the social relation regulates the options which speakers take up at both syntactic and lexical levels" (Bernstein, 1972, p. 31). Bernstein's work has asserted since 1958 that language, socialization and knowledge are integrated into an intimate, interdependent relationship (cf. Durkheim, 1924; Halliday, 1975; Hoijer, 1962; Sapir, 1933, 1949, 1959;). Sapir (1959) argued that "language is a guide to 'social reality' ... We see and hear and otherwise experience very largely as we do because the language habits of our community predispose certain choices of interpretation" (Sapir, 1959, p. 201-210; cf. Halliday, 1975, p. 140). These language habits, or codes, are connected with competence, not performance (Chomsky, 1965, pp. 3-15). Bernstein (1960a) has suggested that:

> Different social structures will emphasize or stress different aspects of language potential, and this in turn will create for the individual particular dimensions of relevance. As the child learns his speech, so he will learn his social structure, and the latter will become the sub-stratum of his innermost experience through the effects of linguistic processing (Bernstein, 1960a, p. 322-3).

According to Bernstein, the social structure is represented by the home environment, which includes "... language (and) child rearing

patterns ... HOME is where one's basic world view is formed" (Muskal, 1983, p. 12; cf. Halliday, 1975). For example,

> The child's task is to construct the system of meanings that represents his own model of social reality. This process takes place inside his own head; it is a cognitive process. But it takes place in contexts of social interaction, and there is no way it can take place except in these contexts (Halliday, 1975, p. 139).

The home environment focuses on the interaction between the caregiver, who is usually the mother, and the child. This interaction is called "maternal language style" (Olim, 1970, p. 212), and has wide implications for a child's linguistic and social development.

These home-based oral patterns of interaction, which are directly related to literacy and school preparation, vary according to social class (Cohen, 1969; Bernstein & Henderson, 1967; Heath, 1981, 1982a, b, 1983; Michaels, 1981; Robinson, 1973; Vygotsky, 1962; and Wells, 1981a, 1981b). For example, Scollon and Scollon (1981, 1982) have suggested that from the beginning of a child's life, *middle-class parents use particular oral patterns of interaction which prepare a child in that environment for an empowered role with relation to the consequences of effective reading comprehension and school achievement.* Olim (1970) argues that in middle-class families, "the family control system more often includes an orientation ... towards consequences, viewing behavior as antecedent to more or less predictable outcomes" (Olim, 1970, p. 212). Typically, middle-class families tend to be oriented "toward consequences, toward rational considerations involving antecedent conditions and consequent effects" (Ibid., p. 221; cf. Hess, 1968). Plumer (1970)

argues that there is a strong correlation between the middle-class family control system presenting a variety of options related to behavior, and the development of more linguistic options. Conversely, he asserts that there is an equally strong correlation between the working-class family control system of presenting few, if any options, and the development of fewer linguistic options, as compared with middle-class language habits. In support, van Dijk and Kintsch (1983) argue that "language users construct a representation not only of the text but also of the social context and ... these two representations interact" (van Dijk & Kintsch, 1983, p. 7). Halliday (1975) asserts that "a child constructs his meaning potential ... by building up context-specific micro-paradigms, small sets of options that are his resource for each of the types of situation that serve, for him, as environments of symbolic action" (Halliday, 1975, p. 125).

These literacy- and school-oriented patterns of questioning and answering, which include both past-referenced and predictive framings of experience, tend to occur in middle-class homes. When answering children's questions, middle-class caregivers tend to give answers which provide *opportunities to teach linear order through the concept of cause and effect, or the connections between the past with the present, (what happened to produce a present effect) , and the present with the future (what will happen, based upon a present cause). In other words, the concept of cause and effect has two dimensions: past (expressed through the past tense) and future (expressed through the present perfect)* (cf. Melges, 1982).

Both the past and the future are based on the present. Craig (1992) argues that "the establishment of cause-and-effect relationships is another important cognitive process that children must develop in order to meet both academic and behavioral expectations of the school environment" (Craig, 1992, p. 68). Repetitive elements of socio-linguistic behaviors in the middle-class environment build larger patterns, influencing the development of language usage that includes the past tense, which tends to refer to one cause and one effect, and the present perfect tense, which tends to refer to multiple causes and multiple effects. After all, "it is adults who link the past and the present by calling to mind prior shared experiences" (Deutsch, 1963, p. 171; cf. Goleman, 1993), and they also link the present to possible future experiences. In addition, these language usage patterns include positive attitudes towards connecting the present with both the past and the future. These temporal attitudes are reflected in middle-class children's success with literacy-related activities, both at home and at school. In other words, *middle-class adults who have been successful in school tend to teach causality and predictive skills to their children, instructing them from infancy in performing a capable role in regard to reading comprehension and school success.*

In contrast, Robinson (1973) found that working-class care-givers tend to answer their children's questions with "'it's always like that,'" focusing primarily on the present rather than giving more precise and expansive answers which are both past-referenced and predictive in terms of cause(s) and effect(s). According to Deutsch (1963), "...there is a tendency for these [working-class] children to be

proportionately more present-oriented and less aware of *past-present sequences* than the middle-class child. ...It could also relate to a greater difficulty in seeing themselves in the past or in a different context" in the future (Deutsch, 1963, p. 172); emphasis not in original). In addition, there tends to be less adult-child interaction, due to economic pressures (Ibid.). As Craig (1992) suggests, "developing long-and short-term goals has little meaning to children who live in family systems focused on the 'now,' with little emphasis on past or future" (Craig, 1992, p. 68). Bernstein (1972) asserts, in terms of interpersonal dynamics, that "the social structure becomes the developing child's psychological reality by the shaping of his acts of speech" (Bernstein, 1972, p. 32-3). For the middle-class child, the home social structure teaches the temporal reality of a *future time orientation* and *extended temporal integration*, through language as applied to interaction and literacy-related activities. However, for the working-class child, the home social structure teaches the temporal reality of a *present time orientation* and *shortened temporal integration*, through language as applied to interaction. There tend to be few, if any, literacy-related activities (Heath, 1983).

As Mills (1978) asserted: "... A child does not merely learn a language; he also learns to use his language to conform with the reality that the group has constructed for itself" (Mills, 1978, p. 10). Mills' definition of experience is an excellent illustration of middle-class, *future time orientation*: "To say that you 'have experience' means, for one thing, that your past plays into and affects your present, and that it defines your capacity for future experience" (Ibid.,

p. 196). This definition of experience is also the definition of the present perfect tense in an experiential framework.

Bernstein (1962a, 1962b) draws a distinction between two communicative codes which are divided by social class. The working class uses a restricted code among a small group with shared assumptions and expectations, a code whose embedded meanings are implicit and dependent on immediate physical and temporal context. This means that self-concept is developed in terms of a personal relationship to the group. The working class tends to emphasize the nonverbal context of the communication, i.e., the persons being addressed, over the verbal message which communicates information.

The middle class uses an elaborated code, which can communicate information in a verbally explicit way from an individual to people outside the group with its assumed shared experiences. The person or persons being addressed are *not* significant to the communication. Bernstein's use of linguistic code does not refer to the surface level of language, but to the deeper levels that designate the choice and use of possible syntactic and semantic surface-level constructions. According to Spiro (1980), "surface structures are transformations of deep structures. These deep structures receive interpretation in a semantic component" (Spiro, 1980, p. 247). Bernstein's deep-structure, socially-induced linguistic choices have implications for self-concept, *time orientation*, *temporal integration* and *pragmatic expectancy grammar.*

Bernstein (1958, 1960a, 1960b, 1961a, 1961b, 1961c, 1962a, 1962b, 1964a, 1964b, 1967, 1968, 1970, 1971, 1972, 1973, 1975,

1981) has attempted to explain unsuccessful educational outcomes on the basis of the interaction between the working-class origin of the learner and the middle-class context of the school. He argues that school failure is rooted in language code differences between social classes (1971). One of his experiments focused on showing a series of four inter-related pictures to working-class and middle-class children, and eliciting descriptions from them. The working-class children responded in the present tense: "... He kicks the ball through the window, then the woman chases them." In contrast, the middle-class children introduced,or framed, the same picture as follows: "...This is a picture; in the picture a boy is depicted as kicking a ball through a window ..." (Bernstein, 1971). Because the language of the school is perceived as being identical to language used by the middle class, there can be conflict between the middle-class language use norms of the school and the working-class language use norms of working-class children.

Bernstein (1972) suggests that "language is seen as an integrating or divisive phenomenon; as the major process through which a culture is transmitted: the bearer of social genes" (Bernstein, 1972, p. 25). In its divisive dynamic, Cook-Gumperz (1982) supports Bernstein, discussing discrimination as having a linguistic dimension, as language use creates a social identity for the user. This social identity may be confirmed or disconfirmed by the teacher, leading to positive or negative experiences for the student. In addition, Cook-Gumperz (1986) asserts that both culture and context-specific norms limit choices of communicative options and the possible interpretations of what is being said. According to both Bernstein and

Cook-Gumperz, *no linguistic form can be separated from the social context in which it is used.* The social context determines the meaning which the individual continues to derive from future interactions.

Repetitive elements of language behaviors build larger patterns, and these socially-based patternings of the linguistic environments are differentially distributed. A restricted code of language use tends to be the input for children growing up in a working-class environment. According to Bernstein (1972):

> The speech here is refracted through a common cultural identity which reduces the need to verbalize intent so that it becomes explicit, with the consequence that the structure of the speech is simplified, and the lexicon will be drawn from a narrow range. The meanings are likely to be concrete, descriptive or *narrative* rather than analytical or abstract. The intent of the speaker is likely to be taken for granted. (Bernstein, 1972, p. 37; italics not in original)

In contrast, an elaborated code of language use tends to be the input for children growing up in a middle-class environment. "From a developmental perspective, an elaborated code user comes to perceive language as a set of theoretical possibilities available for the transmission of unique experience" (Ibid., p. 43). If a child is to succeed in school, it becomes critical for him to understand and use an elaborated code:

> Where a child is sensitive to an elaborated code, the school experience for such a child is one of symbolic and social development; for the child limited to a restricted code, the school experience is one of symbolic and social change ...

from a present-oriented environment to a future-oriented one (Ibid,. p. 49).

In summary, the accepted *time orientation* norm for a successful, middle-class individual is the manifestation of a future direction for present actions, especially those actions which involve schooling based on middle-class, elaborated-code values. This *future time orientation*, in combination with a clear concept of the past as part of the cause-and-effect chain, links the past with the present and the future. *Future time orientation* tends to be associated with growing up in a middle-class environment, communicating through the elaborated code. This is *not* the milieu of most underachieving linguistic minorities who tend to grow up in working-class environments, communicating in the restrictive code and dropping out of high school, usually from the non-college preparatory tracks levels. Bernstein has explored the language usage connections for those middle-class students who succeed in school, and those language usage disconnections for those from working-class environments who do not succeed.

Cottle & Klineberg, and Gonzalez & Zimbardo: Psychological Approaches to Time Orientation

Cottle and Klineberg (1974) have focused their work on an individual's self-concept, which is based on information about the present, his personal past and expectations of his place in his world in the future. According to Cottle and Klineberg (1974), "as a person gradually assimilates his changing recollections into a sense of

identity and of self-continuity, anticipations of the future become an inextricable part of the meaning he confers on present experiences" (Cottle & Klineberg, 1974, p. 9). In addition, "as a person bridges the past and the future via the emergence of a sense of identity, these two temporal 'worlds' interpenetrate and shape each other" through present experiences (Ibid., p. 12). The bridge constitutes the constantly shifting state of the present, and a person's ongoing efforts to comprehend and integrate his present experiences shape his notions about both his past and his future. "Without an articulate sense of the future, the force of obligations, liabilities, expectations and goal-setting is diminished" (Gonzalez & Zimbardo, 1985, p. 21; cf. Kastenbaum, 1964). In support, Melges and Fourgerousse (1966) state even more strongly that "if an individual has no plans or cannot deal with the present in terms of the past, then behavioral disorganization will result" (Melges & Fourgerousse, 1966, p. 138).

The past and the future are inextricably linked, both experientially and linguistically. An individual's ability to anticipate his future is based upon his memories of positive experiences in the past (Harner, 1976), and "future and past make sense only in reference to a present" (Fraser, 1978, p. 342). Cottle (1969) supports these temporal concepts, in that:

> if past-present connections are made through the sense of personal efficacy, control of activity, or, more simply, autonomy, then present-future connections become the inferred extension of this autonomy. Inference gives life and meaning to the future. Prior achievement, therefore, breeds possibility and reinformces credible planning (Cottle, 1969, p. 549).

In other words, having integrated positive past experiences into the present, an individual can project himself into a positive future, believing that he has the ability to influence the causes of events in and direction of his present and future life through internal locus of control (cf. Moghaddam, et. al, 1993; Rotter, 1966, 1973; Trimble & Richardson, 1982).

Gonzalez and Zimbardo (1985) assert:

> The time orientation that individuals develop early in life depends chiefly on their socioeconomic class and their personal experiences with its values, influences and institutions. A child with parents in unskilled and semi-skilled occupations is usually socialized in a way that promotes a present-oriented fatalism and hedonism. A child of parents who are managers, teachers or other professionals learns future-oriented values and strategies designed to promote achievement. (Gonzalez & Zimbardo, 1985, p. 26)

Both parental behaviors, in terms of parenting for the present or parenting for the future, and attitudes towards education are subtly embedded in temporality. Achievement in school is directly related to an individual's operating on the basis of time as a linear sequence of events in life, stretching from the past and directed towards the future. According to Craig (1992), "*the ability to bring linear order to the chaos of daily experience is central to the cognitive processes tapped by academic pursuits*" (Craig, 1992, p. 67; emphasis not in original).

Without this sense of linear order incorporated within daily experience (Logan & O'Hearn, 1982), it is impossible to "extract causality and consistency from possibly coincidental, random events in our lives" (Gonzalez & Zimbardo, 1985, p. 21). Kelly (1963)

asserts: "Behavior is given its consistency by attempts to anticipate events" in an uncertain future (Kelly, 1963, p. 211). According to O'Rand and Ellis (1974), "one advantage the middle class has over the lower class is its greater capacity to use coherent means-ends chains for apprehending and organizing future behavior" (O'Rand & Ellis, 1974, p. 58; cf. Bernstein, 1960b, 1968). The experience of living for a sustained period of time in an orderly, cohesive world constitutes cultural capital for middle-class students. This socially-constructed universe constitutes an arrangement of events in a temporally logical, linear, and causally-connected sequence.

Continuity and orderly change in the past is likely to produce the concept of positive possibilities for the future. Craig (1992) asserts that the development of "*sequential semantic* memory is most easily made in environments marked by consistent, predictable routines ..." (Craig, 1992, p. 67; emphasis not in original). Typically, this is the experience of a child brought up in a middle-class environment. Without cohesiveness, continuity and predictability, "children may continue to encode new information episodically or not at all" (Ibid., p.67; cf. Goleman, 1993). If a student in school is connected to what is personally significant in his past and present, then his or her ability to construct a positive and coherent self-identify is strengthened. However, if life at home and in the community is lacking in predicability, then the sequential world of the school is likely to seem deviant from the norm for at-risk students. "Without a time perspective in which the past blends into the present, how could we establish a sense of personality - a sense of self that is stable through time ..." (Gonzalez & Zimbardo, 1985, p. 21; cf. Rotter, 1966).

Students who have learned to respond to a given level of unpredictability may not respond to the school environment, which is based on predictable sequence.

Naturally, lack of continuity and unpredictability of change in the past is likely to produce the concept of negative possibilities for the future, so that the child discounts both the future and his power to impact it through education. This tends to be the daily experience of a child who grows up in a poor or working-class environment; he "cannot shift focus away from the concrete reality and sensory temptations of the present to consider abstract future goals. [This] temporal bias gives precedence to events that can be directly experienced here and now" (Ibid., p. 22). In addition, when an individual's energies are completely absorbed by the concerns of the present, "the future will largely disappear from consciousness, and anticipatory images will lose their power to motivate present behavior" (Cottle & Klineberg, 1974, p. 20). According to Niemi (1976):

> Because [the poor] foresee no future that differs much from the present, they tend to pragmatism and "present" orientation, a live-for-today philosophy that stresses immediate rewards. On the other hand, members of the dominant middle-class society lean toward future orientation and exhibit more willingness to wait for rewards. In practical terms, also, as a response to discrimination on the part of the dominant middle-class society, many groups reject its institutional structures (such as schools and universities) in favour of 'small, personal kinship, locality of friendship groups' (Niemi, 1976, p. 2)

Hope for the future diminishes as a child or adolescent, evaluating his past and his present realities, finds little reason to contemplate a better life.

When an individual perceives future prospects negatively, then the basic motivating factor to think, act, and interact in terms of the future disappears. As Craig (1992) asserts, "*the failure to perceive the self as an object that is constant across time and space ...[and be] able to control its impact on the world [is a]... type of social dysfunction* ..." (Craig, 1992, p. 68; emphasis not in original). The attitude of an individual who views the future negatively indicates that he perceives his role as that of "a passive entity to whom events 'just happen'" (Kastenbaum, 1964, p. 100). In other words, such an individual fate believes that fate controls both the events in his life and the direction that his life takes. A person with external locus of control (Rotter, 1973) believes that *he cannot influence the causes of events in his life, both present and future.*

Such an individual's social interaction via language usage tends to mirror his emotional and cognitive orientation to the future; i.e., there is little reference to his personal past or the future, either explicitly in terms of expressed plans, or implicitly in terms of the future through the past or present perfect verb tenses describing on-going life experiences or as responses to text. According to Gonzalez and Zimbardo (1985), whether present- or future-oriented, "our temporal perspective influences a wide range of psychological processes, from motivation, emotion and spontaneity to risk-taking, creativity and problem-solving" (Gonzalez & Zimbardo, 1985, p. 21).

Temporal Integration

The notion of a personal temporal continuum between the past and the future is contingent on personal *temporal integration* of the past, present and future, so that the continuum is both "linearly and causally connected" (Cottle & Klineberg, 1974, p. 86). "The future is primarily created out of the implications of past experience, of the sense of continuity and of orderly predictable change that it may provide" (Ibid., p. 34). In contrast, the lack of *temporal integration* "symbolizes ... lack of a sense of personal efficacy and control" (Cottle, 1967b, p. 70; cf. Kastenbaum, 1964). Those children who grow up in poor or working-class environments tend to develop both a *present time orientation* and *shortened temporal integration*.

The shorter their ties with the past, the shorter their view on the future. A visual *temporal integration* test, the Circles Test, by Cottle (1967b), showed 60% of the 18-to-22-year-old male and female lower-middle class subjects to be atomistic, having a complete lack of integration of the past, present and future. Levels of adjustment for adolescent boys have been studied by Douvan and Adelson (1966). They found that a major factor which separated well-adjusted adolescent boys from those who were experiencing difficulties was the capacity to integrate the past, present and future into a single cognitive framework with which to view the world (cf. Cottle, 1967c).

Jacques (1956) suggested that there is a direct relationship between the length of time that a person can project into the future and the length of time that the same individual can reach into the past "to organize previous experience" (Jacques, 1956, p. 91) . At-risk

students "experience life as a series of things happening to them rather than a process over which they can exert increasing control" (Craig, 1992, p. 70; cf. Bakan, 1966; Kastenbaum, 1964; White, 1959). According to Rotter (1973), a person's *external locus of control* constitutes a fatalistic attitude in that he "believe[s] events in [his] life to be controlled by fate" (Moghaddam et. al, 1993, p. 90). n other words, at-risk students tend to see life as the cause, with themselves as the object which is negatively affected in the past, present and future.

This sense of powerlessness is pervasive during their adolescent development. Cottle and Klineberg (1974) believe that:

> Adolescence brings important transformations in three central aspects of experience. The acquisition of formal operations provides a growing person with a new mastery of possibility and brings the verbal elements that express his images of the future under the constraint of logical thought. New role expectations press him to link his conceptions of the future more securely with the implications of his present experience. The formation of a "sense of ego-identity" entails an awareness for the first time of one's entire life span and the effort to bridge the past and the future through a coherent sense of self-continuity. The joint outcome of these developments is likely to be a dramatic extension of the span of temporal integration (Cottle & Klineberg, 1974, p. 92).

Temporal integration, according to Mowrer (1950), constitutes the core of behavior that is integrated in the capacity to apply the future to the present, bringing the future into the psychological present (Mowrer, 1950, p. 454). In education, the relationship of self-concept to *time orientation* and *temporal integration* is significant in some students' willingness to address the future in terms of school motivation to succeed in the classroom, day to day and year to year.

Maintaining a psychological climate of positive thinking about the future while involved in present activities is a strong research interest of Gonzalez and Zimbardo, who have produced the most recent work in the area of *time orientation*. Gonzalez and Zimbardo developed and published a *time orientation questionnaire* , placing it in the March, 1984 issue of Psychology Today. The *Stanford Time Perspective Inventory*, a 31-item questionnaire, required the respondents to indicate on a 5-point scale, from "very characteristic" to "very uncharacteristic", how well each of the 31 statements described them. A factor analysis of several thousand surveys revealed seven time perspective factors, six of which apply to the population in this study:

Future Time Orientation Factors

Factor 1: Future, work motivation perseverance. This factor embraces those with a positive work motivation and the "Protestant Work Ethic" of completing a task regardless of intrusions, difficulties or temptations (Ibid., p. 24).

Factor 2: Future, goal-seeking and planning. The items on this factor centered less on work and more on the satisfaction that is derived from "planning and achieving goals " (Ibid., p. 25).

Factor 3: Future, pragmatic action for later gain. These individuals tend to act responsibly in the present to "achieve desirable future consequences" (Ibid., p. 26).

Factor 4: Future, specific daily planning. This factor described individuals who are obsessed with the specifics of getting ahead. They manifest a "compulsive attitude toward daily planning, make lists of things to do, set subgoals and pay attention to details" (Ibid.).

Each of these four factors represents some aspect of *internal locus of control* (Rotter 1966, 1973).

Present Time Orientation Factors

Factor 5: Present, fatalistic, worry-free, avoid planning. Individuals with this orientation can be characterized as living one day at a time; they avoid planning into the near future and believe that their fate is controlled by destiny rather than their efforts (Ibid., p. 24).

Factor 6: Present, hedonistic. Individuals who fell into this factor tended to be "pleasure-seeking, partying, risk-taking, and impulsive." (Ibid.).

These two factors represent some aspect of *external locus of control* (Rotter, 1966, 1973).

Self-Concept, Time Orientation and Motivation

One consistent finding throughout the literature related to *time orientation* and social class is the idea that manifesting a *future time orientation* is the accepted norm for a well-adjusted individual. For the most part, in order to be successful, one must adhere to some extent to the temporal values of those aspects of society which can provide the opportunity for success. In order to successfully interact with the aspects of American society that enable one to get ahead, one must be able to relate to and operate in the same temporal direction of the middle-and upper-middle classes which tend to be future-oriented. In fact, without a *future time orientation*, success in a modern industrial society is almost impossible (Gonzalez & Zimbardo, 1985; Bernstein, 1960b, 1967; Cohen et al., 1968, 1969; Liebow, 1967; Teahan, 1958).

Education is a socialization factor that may also enable one to conceive of one's future as optimistic and internally controlled. A strong emphasis on education is typically associated with internal locus of control, higher achievement and higher educational status, which lead to a higher income and more interesting and satisfying occupational positions. In contrast, according to Haycock and Navarro (1988), attrition follows low levels of school success. "Among California's large and growing population of ethnic and poor youngsters, the statistics are especially startling. Almost one-half of Latino and Black students leave school before graduating" (Haycock & Navarro, 1988, p. 1; cf. Bernstein 1960b, 1968). Haycock and Navarro also report that by Grade 12, minority students perform

about three years behind White students. "In fact, most Black and Latino seniors have skill levels about the same as White students entering grade 9" (Ibid., p. 3). McGrail (1984) reported that 56% of all Hispanic and 47% of all black seventeen-year-olds are functionally illiterate.

According to Moll (1990), " ... the schooling of disadvantaged students is intimately linked to their social-class standing. This schooling can be characterized as atomistic, highly structured, repetitive, and emphasizing the learning of low-level skills" (Moll, 1990, p. 67). In support, Heath (1982b) argues that "high school freshmen who are judged poor in ... reading skills spend most of their time on what-explanations and practice in advanced versions of bedtime story questions and answers" (Heath, 1981, p. 54). In other words, the temporal atomism found by Cottle (1967b) tends to be replicated in the General, Remedial and ESL curriculums, in which subject matter is generally divided into small tasks with few, if any, thematic connections which can link the past with the future (Oakes & Lipton, 1992).

The curriculum in predominantly minority high schools is oriented towards the general track, the track which produces the largest number of dropouts, or the downwardly mobile (Haycock & Navarro, 1988, p. 24). Minicucci (1985) stated that "California places ... 45% of our high school students in the general track ...plac[ing] the child at a tremendous risk of dropping out" (Minicucci, Dropping Out, Losing Out: The High Cost for California, 1985, p. 46-7). According to another study, both the general and the remedial tracks have been targeted as key placements for future dropouts (Combs & Cooley,

1968). In support, Williams (1983) asserts that "tracking leads inevitably to ethnic and socio-economic separation and it reinforces the stereotypes of inherent intellectual inferiority" (Williams, 1983, p. 197). We have a large and growing population of underachieving linguistic minorities who tend to drop out of the three lower tracks of high school, due to a lack of connection with the future-oriented school environment.

From the research available, one of the basic differences which appears to predominate the educational sphere is that of *time orientation*. For example, Oakes (1982) surveyed student attitudes in 139 secondary classrooms at different track levels. She found that track levels were reflective of racial and social divisions in society, so that students from the upper socioeconomic classes tend to be found in the highest track levels and minority group students tend to be found in the lowest tracks. Oakes discovered that students' self-concepts, aspirations and future plans varied with track level. Students in the lowest tracks expressed more negative attitudes about themselves and their futures, specifically their anticipated roles in adult society. "Students in low tracks had lower aspirations, felt more negative about themselves academically and expressed more feelings of general unworthiness than did students in higher classes" (Oakes, 1982, p. 209; cf. Rosenbaum, 1976). In addition, O'Rand and Ellis (1974) found in comparing Job Corps trainees with university freshmen that the working-class trainees had a much shorter view of the future. In addition, the Job Corps dropouts had an even shorter perception of the future than the ones who remained.

In summary, the accepted *time orientation* norm for a successful, middle-class individual is the manifestation of a future direction for an individual's present actions, especially those which involve schooling based on middle-class values. This *future time orientation* tends to be associated with growing up in a middle-class environment, which is not the milieu of most underachieving linguistic minorities who tend to drop out of high school, usually from the non-college preparatory track levels.

Time Orientation and Human Development

Another impact on *time orientation* is the transition of adolescence. Some, but not all, of the children making the transition to adolescence undergo a process of change in terms of temporal experience through integrating future time and imagining the future with a stronger degree of realism (Klineberg, 1967). The adolescent's self-concept and identity are formed within a sense of time which spans from the past to the future. Identity means an integrative process of "both past-in-present ('What I am through what my parents are') and the leap from present to future ('What I deeply hope to be, what I deeply dread being') (Douvan & Adelson, 1966, p. 19). Since "the future is primarily created out of the implications of past experience, of the sense of continuity and of orderly predictable change that it may provide" (Cottle & Klineberg, 1974, p. 34), adolescents who have experienced an unpredictable past may discount the future. Given a choice of anticipating a future without hope of positive change or consciously deleting the future from

active and conscious consideration, many adolescents choose the latter. In so doing, the span of integrated time may appear to disintegrate. Planning for the future in this society includes succeeding in and graduating from high school. Success in high school means achieving a certain level of reading comprehension development. Lack of a positive belief in a personal future translates into school failure, both in lack of school success and dropping out.

As children approach adolescence at age 11 or 12, the Piagetian shift from concrete operations to formal operations begins to take place, "in that formal thought ... no longer deals with objects directly but with verbal elements" (Inhelder & Piaget, 1958, p. 252). The shift tends to reach equilibrium at age 14 or 15 (Ibid.). The development of formal operations means, temporally, that some children are beginning to be able to deal realistically with notions of the future via symbolic expression in language usage. The development of formal operations means that an adolescent's active intelligence is not confined to the real and the present. According to Flavell (1963): "The child deals largely with the present, with the here and now; the adolescent extends his conceptual range to the hypothetical, the future, and the spacially remote" (Flavell, 1963, p. 223). Wallace and Rabin (1960) suggest that the shift to an abstract notion of time is not achieved until ages 13 or 14, the typical age of a 9th-grade student. In addition, Bernstein (1960a) asserts that "a crucial stage in development is the period between the acquisition of *concrete* operations and their transformation into *formal* operations" (Bernstein, 1960a, p. 321). In support, Cottle and Klineberg (1974) argue that "the full acquisition of an abstract notion of time in the life

of an individual appears to depend on the attainment of formal operations" (Cottle & Klineberg, 1974, p. 86).

For the middle-class adolescent, integrating future possibilities with past events and present experiences comes to fruition with the development of a clearly articulated concept of time as a hypothetical, linear, abstract continuum which causally connects past and present experiences. This middle-class conceptualization of time is not the only one, although it is the one validated by mainstream, middle-class society.

Vernon (1969) states that many studies have shown that children from North American Indian Tribes show reasonably normal achievement in their educational careers until adolescence, when they realize that future opportunities, linked with education, for them are limited. According to Melges (1982), a "predominant present-orientation is a form of chronic hopelessness about the future, and prompts the person to disregard future consequences" (Melges, 1982, p. 70). Very often, it is during the ninth grade that these students lose interest in school as a vehicle towards advancement in the future. In addition, Mead (1956) suggested that there is a tremendous gap between aspirations for a lifestyle in the middle-class model, and the social and economic realities for minorities:

> So bright girls have no "ambition" and children of discriminated-against minorities turn "dull" at adolescence, not because of intrinsic incapacity, but because the desire to learn is blocked by the knowledge that part of the pattern to which they aspire will be denied them (Mead, 1956, p. 371).

Ogbu (1980) found that minority students chose not to work hard in school because they, along with their black and Hispanic communities, did not believe that an education would benefit them economically in the future (cf. Moghaddam, et. al, 1993; Moll, 1987; Niemi, 1976; Oakes & Lipton, 1992).

Economic realities influence the *time orientations* of people in different social positions in the various socio-economic levels of American society. According to Cottle and Klineberg (1974):

> Perspectives on the future are profoundly shaped by the social and cultural context in which a person is embedded. The experiences that underlie one's conceptions of the present and its projections into the future derive from that context. It is therefore to these cultural and social realities that one must look first for explanations of individual differences in outlooks on the future (Cottle & Klineberg, 1974, p. 196).

Economic experiences carry enormous impact for the individual. The Conference Report on Minority Attrition (1987) reported that "higher proportions of minority group members in California live at or below the poverty level than do white Californians; for example, 25% of the Black population lives in poverty, 33% of the Hispanic population, but only 8% of the White population" (Conference Report on Minority Attrition and Retention in Higher Education: Strategies for Change, 1987, 1980 figures, p. 3-4).

Poverty is overrepresented among minorities (Haycock & Navarro, 1988). According to Elliot Liebow (1967):

> The future orientation of the middle-class person presumes, among other things, a surplus of resources to be invested in the future and a belief that the future will be sufficiently stable .... But the streetcorner man lives in a sea of want. He does not, as a rule, have a surplus of resources, either economic or psychological. Gratification

> of hunger and the desire for simple creature comforts cannot be long deferred. Neither can support for one's flagging self-esteem. Living on the edge of both economic and psychological subsistence, the streetcorner man is *obliged to expend all his resources on maintaining himself from moment to moment.* (Liebow, 1967, p. 65; emphasis not in original)

In support, Cohen et. al (1968) argue that:

> To the hard-core poor, *time is a series of discrete moments, each understood in itself, rather than a continuum.*. Such concepts as those of social mobility, infinity, the value of money, ... improving one's performance, and so forth, which assume a continuous distribution of critical variables are equally strange to the usage. ...*Conflicting assumptions of the discrete [verb tenses] in hard-core use and the continuous [verb tenses] in standard use represent one area of mutual incompatability* (Cohen, 1968, p. 24-5; emphasis not in original)

Minority groups, such as Native Americans, Blacks and Mexican-American workers tend to be perceived as "lazy", because they do not positively value the dominant class values such as ambition and daily striving for success which characterize the middle class (Horton, 1972). The *time orientation* of the working class, which typically consists of minorities, is oriented in the present (Ibid.; cf. Lauer, 1981). According to Lauer (1981):

> *People cannot answer the question of who they are apart from the fact that they share a social past and a social future with others.* ... If someone has a high self-esteem, it is in part because that person identifies with those people who glorify their past achievements and anticipate their future triumphs (Lauer, 1981, p. 65; emphasis not in original).

Research has connected *time orientation* and social class (Bernstein, 1960a, 1968; Cottle, 1967a, 1969; Hearnshaw, 1956; Klineberg, 1967; Lamm et al., 1976; Oakes, 1982; O'Rand & Ellis, 1974; Pollack et al., 1969; Williams, 1970); social class with lack of reading achievement (Davie et al., 1972; Heath, 1983; Kellmer-Pringle et al., 1966; LeShan, 1952); and social class with school failure (Kohn, 1977; Haycock, & Navarro, 1988; California High School Curriculum Study: Paths Through High School, 1984; Making High Schools Work for Linguistic Minorities, 1985; The Undereducation of Minorities and the Impact on the California Economy, 1985; Conference Report on Minority Attrition and Retention in Higher Education: Strategies for Change, 1987; Bachman, et. al, 1971; Oakes, 1982; Oakes & Lipton, 1992; Rosenbaum, 1976; Steinberg et al., 1982; Teahan, 1958).

The linked issue of *time orientation* and reading comprehension has been little addressed in research. Studies have focused on time spent reading, student aspirations, dropouts from particular tracks, English language proficiency, and social class as it relates to reading failure. Clearly, the language usage of many groups of students is significantly at variance with mainstream curriculum. For example, LeShan (1952) studied the time span of children's stories. He discovered that working-class children produced stories of a shorter time-span than middle-class children. His suggestion was that this shorter time span was related to the *present time orientation* of the working-class. Oakes' (1982) research in secondary classrooms found that students' aspirations and future plans varied with track level. Students in the lower tracks showed more negative attitudes

about their futures and had lower aspirations than students in the higher tracks.

Bachman's (1971) study found that of those youngsters who scored low on tests of reading, approximately 40% dropped out of high school. In addition, one-half of those with D averages in school dropped out. DeAvila and Duncan (1980) found that English language proficiency is the single best predictor of reading skills in English. In other words, those students who acquire and use Standard English as a social class dialect in the school system tend to succeed. Those who acquire and use Standard English as a second dialect tend to drop out. Potential dropouts tend to be placed in either general or remedial educational tracks, which comprise up to 55% of the secondary population (California High School Curriculum Study: Paths Through High School, 1984; Combs & Cooley, 1968; Oakes, 1982).

Studies which focus on the minority student tend to be associated with a cultural deficit perspective which has been discredited in the literature (Banks & Lynch, 1986, p. 14; Delgado-Gaitan, 1987, p. 131-2; Diaz, Moll & Mehan 1986, p. 190-191; Keddie, 1973; Sue & Padilla, 1986, p. 46), but is still part of school practice, albeit implicitly. The cultural deficit explanation "place(s) educational accountability in the hands of the children who are dependent on the school system which promotes the favored" (Williams, 1983, p. 198) mainstream, middle-class ways of temporality and language usage. According to Bernstein (1970), "... the school has to compensate for the something which is missing in the family, and the children become little deficit systems" (Bernstein,

1970, p. 54). When minority students in the school setting act on their belief that there is no relationship between personal school effort today and adult success in the future, they are perceived as lacking in appropriate ambition by school personnel. Bernstein (1970) argues:

> ... if the contexts of learning, ... the reading books, are not contexts which are triggers for the child's imaginings - are not triggers on his curiosity and explorations in his family and community, then *the child is not at home in the educational world* (Ibid., p. 57; emphasis not in original).

This cultural deficit perspective denies the school its options as an agent of change, a gate-opener.

The attributes of the dropout (California High School Curriculum Study: Paths Through High School, 1984; Making High Schools Work for Linguistic Minorities, 1985; The Undereducation of Minorities and the Impact on the California Economy, 1985; Conference Report on Minority Attrition and Retention in Higher Education: Strategies for Change, 1987; Steinberg et al., 1982; Means & Knapp, 1991) have been well-documented. The dropout student population, including ESL, bilingual, black and working-class students, fails to proceed, in part because these students are not sensitive to the temporal assumptions of the school. Conversely, the school is not sensitized to their temporal framework. These students in the lower tracks, the remedial readers who tend to drop out, "live on a subsistence level [and] develop a keen sense of the present and a limited sense of the future" (Gonzalez & Zimbardo, 1984, p. 21).

The at-risk students' *temporal integration* range is limited to the very recent past and the very near future, based on their operative grammar of everyday life. For lower-track students, time is *not* a

continuum, with each individual a part of an on-going process which links the past, present and future, and is directed towards the future. Their *temporal integration* does not range from the distant past to the distant future, only from yesterday's survival to tomorrow's (Cottle & Klineberg, 1974; Klineberg, 1967).

Temporal integration is both a textual function and a dimension of social environments and personal behavior. In a text, *temporal integration* is context-driven. For example, the time span of the *Cloze Test of Reading Comprehension* used in this study covers seven years, up to and including the present, with implications for the future. The interaction between the text and the reader produces a *temporal integration* picture of how this construct is operationalized by the temporal span in which the individual reader operates. If the temporal span of the reader is limited to only today, then the textual information of events over the past seven years tends *not* to register as relevant with the individual.

These studies suggest that the product of at-risk minority students' interaction with majority reading materials produces low reading comprehension. Majority reading materials are based on the dominant, mainstream, middle-class life experience and expectations, *future time orientation*, *extended temporal integration*, and language usage norms. In fact, these studies suggest that the lack of congruence between the implicit middle-class values present in school reading materials and the implicit values present in the at-risk, out-of-school sociocultural milieu may be a deciding factor in student failure.

The main points of these studies can be summarized briefly. The activity of reading exists within a social schema which supports it as a means to positive results in the future, for those students who operate within a *future time orientation* and *extended temporal integration*. For the students who function within a *present time orientation* and *shortened temporal integration* schema, reading has only a limited connection with their present, and none with their future. The potential dropout who operates within a *present time orientation*, lacking *temporal integration* of the past and the future through the present, does not see a relationship between adolescent school effort today and adult success in the future. The family of the at-risk student stresses short-term goals, and is not supportive of a future achievement orientation through education as a means of advancement (Craig, 1992; Steinberg, Blinde & Chan, 1982). The student has poor attendance and grades, and is reading below grade level by third grade. There is no perception of oneself as an individual with a personal future and long-term goals which can be accomplished through education via language skills, especially reading skills. This *present time orientation* and shortened *temporal integration* are factors which bear heavily both on lack of achievement in reading and the decision to drop out .

In summary, the sociological and psychological literature has developed a sense of how the working-class or low-SES minority student addresses his worlds, the school and the home. Bernstein argues that the child's language is referenced on the logic of social relations, as they exist, both at school and at home. The mismatch of *time orientation* values, the present at home and the future at school,

results in discontinuity for the working-class student. *Present time orientation* tends to affect linguistic minority group students in the non-college preparatory tracks, leading to a high dropout rate. Cottle, Klineberg, Gonzalez and Zimbardo together address the same issue of how the working-class child operates in his present-oriented world, discounting both the future and his power to impact it, to be in charge of his own destiny.

In the classroom, these issues mean that there is considerable conflict between the working-class *time orientation* of a large part of the school population, and the middle-class *time orientation* of the school. Manifesting ambition and striving for success in the classroom are predicated on the underlying concept of the future as positive and controllable for the individual. These are alien notions to working-class students, whose differences in motivation and ability may be more accurately understood in the context of radically different *time orientations*. The activity of reading exists within a social schema which supports it as a means to positive results in the future, for those students who operate within a *future time orientation/ extended temporal integration* schema. For the students who operate within a *present time orientation/ shortened temporal integration* schema, reading has only a limited connection with the present, and none with the future.

Summary

Time orientation and *temporal integration* are developmental and learned concepts which have powerful educational implications,

especially for adolescents. These concepts have been linked with social class, which has strong correlations with reading achievement. The current level of knowledge is very crude, because we stereotype whole social classes. Normally, we would not reasonably expect an entire high school track to be uniform on any temporal dimension. However, we have no information on how these temporal characteristics are arrayed across tracks.

Researchers in psychology and education have found evidence which indicates that *future time orientation* and *extended temporal integration* tend to be found in middle-class adolescent populations, co-occurring with high reading achievement. Many middle-class adolescents tend to shift from a *present time orientation* and *shortened temporal integration* to a *future time orientation* and *extended temporal integration* at about age 13-14, or in the 9th grade. They tend to manifest the dominant culture temporal norm, integrating the past, present and future in a future direction.

In contrast, minority working-class and poor adolescents tend to maintain a *present time orientation* and *shortened temporal integration*, in conjunction with low reading achievement, severely affecting their dropout rates. We have seen that almost one-half of Latino and Black students leave school before graduating, and we have a large and growing population of underachieving linguistic minorities who tend to drop out of high school. When an adolescent perceives future possibilities negatively, then the most basic motivating factor to think, act, and interact daily in school in terms of future success disappears. A student with a *present time orientation* and *shortened temporal integration* which spans only from yesterday

to tomorrow lacks the willingness to address the future in terms of school motivation to succeed, especially through reading, which involves the suspension of the present and the expanding of *temporal integration* from the distant past to the distant future. In order to succeed in school, a student must be able to operate in the same temporal direction as the school, which is future-oriented, within a broad span of *temporal integration*.

Underachieving linguistic minorities lack temporal synchronicity with the school, severely affecting their reading achievement. This lack of shared temporal schemata means that the reality espoused by the school and that which is manifested by the students are in serious conflict. Underachieving linguistic minority students are asked, as part of the established curriculum, to read majority language/ middle-class materials in various subject areas and respond to them in middle-class ways. These materials are based on *future time orientation* and *extended temporal integration*, schemata which the students do not share.

Current schema theory focuses on comprehension as the product of the reader's own background knowledge interacting with the information on the page. During the interactive reading process, these low-achieving students tend to respond to the material through the *present time orientation* and *shortened temporal integration* of their *pragmatic expectancy grammar*, which overrides the intentions of the author and leads to a low level of reading comprehension. Reading comprehension gaps, based on differences of *time orientation* and *temporal integration* as expressed through very

different *pragmatic expectancy grammars*, occur during every literacy activity.

These reading comprehension gaps can be accessed through the use of a *cloze test. Cloze tests* tap the interaction of reader and text, and can focus on the *pragmatic expectancy grammars* of the reader and the author, operationalizing the *time orientation* and *temporal integration* of the reader through the use of verb tenses. If *pragmatic expectancy grammar*, using its component factors of *time orientation* and *temporal integration*, impacts reading comprehension of secondary students in different socioeconomic groups and tracks, then it would be educationally useful to know to what degree it does. This relationship, if clearly and strongly established, would indicate a need for the inclusion of *pragmatic expectancy grammar* issues in reading materials and curriculum, especially in those track levels which experience the highest levels of dropouts. The results of this study may lead to the development of reading materials and curriculum which address the specific temporal needs of a large part of the school population, leading to more successful educational careers and futures.

CHAPTER 3
METHODS AND INSTRUMENTATION

The rationale for using a *cloze test* to measure reading comprehension skills is based upon current psycholinguistic theories of the reading process. The integrative nature of the *cloze test* allows for the inclusion of extra-linguistic knowledge and social factors. First, readers use the various kinds of text information to make guesses about the meaning of the ongoing flow of text. Second, based on the interaction of text and level of integration with their background information, they use the same text information to confirm, revise, or reject these guesses.

During a *cloze test*, the student is being tested on both his or her ability to draw continuously from the context clues available and to draw information from his old knowledge to predict the nature of the language and information immediately ahead in the reading selection. This ability to predict what the author will lead to depends on the reader's ability to comprehend the language being processed, by operationalizing the internal information that he possesses. According to Brown (1988), "cloze items tap a complex combination of morpheme to discourse level rules in approximately the same proportions as they exist in the language from which they were sampled" (Brown, 1988, p. 19). *Cloze testing* uses the theoretical basis of an internalized *pragmatic expectancy grammar* (Oller, 1979) which interacts with a text to produce meaning.

Cloze Testing and Reading Comprehension

Current schema reading theory argues that comprehension is the product of the reader's own knowledge interacting with the information on the written page. If reading comprehension is defined psycholinguistically as the degree of correspondence between the grammatical and semantic language usage systems of the writer and the reader, then the *cloze test* operationalizes the degree of correspondence between the language systems of two individuals. *Cloze* taps this correspondence interaction, providing an excellent measure of reading comprehension which represents the degree of matching between the reader's *PEG* and that of the author.

The *cloze test* is designed to measure the holistic processing of information by a reader from the printed page, so that the data collection procedure will be comprehensive enough to assess the degree to which the temporality of the writer matches or mismatches that of the reader. A *cloze reading comprehension test* is convenient to use and consistent from scorer to scorer. A *cloze test* differentiates competence among examinees; is applicable to students with a range of reading skills; has potential for diagnosis; and avoids language production that is uncharacteristic of the reading process. The *cloze test* taps and operationalizes the *PEG*, including the *time orientation* and *temporal integration* of the reader. The hope is to reveal the key characteristics, the thinking behind temporality-based mistakes in verb tense choices which reflect *time orientation* and *temporal integration*.

Sample Selection

The sample included 261 ninth-grade students drawn from two high schools. The distinction between social class levels was made on the basis of high school tracks, not school location. Evidence drawn from 8th-grade *CTBS Reading Test* data, *Cloze Test* data, and *Time Orientation Questionnaire* data is presented. During March 1989, one class in each of the four track levels (ESL {including C and D level LEP students, Remedial {including E and F level FEP students [please see Appendix A}, General and College Preparatory {tracks 4, 3, 2, and 1}) at two high schools was tested. The track level population percentages were as follows: College Preparatory: 21%; General: 20%; Remedial: 32%; and ESL: 27%. Each student completed the two quantitative data-gathering tools: the *Cloze Test* and the *Time Orientation Questionnaire*.

This study used three instruments: the 8th-grade *CTBS Reading Comprehension* scales, the *Cloze Test of Reading Comprehension*, and the *Time Orientation Questionnaire*, a variation of the 1984 Stanford Time Perspective Inventory. The *CTBS Reading Comprehension* scale offers grade equivalents correlated with reading comprehension. This scale was correlated with the two *PEG* components, *time orientation* and *temporal integration*, on the *Cloze Test of Reading Comprehension*.

CTBS Reading Comprehension Test Scales

All of the *CTBS* scales were examined for inclusion in the study, but some proved too limited to be of value. There are three scales which deal with reading: *Reading Comprehension, Language*

Expression, and *Language Mechanics*. The *Language Expression* scale does not measure *pragmatic expectancy grammar (PEG)*. The *Language Mechanics* scale was not relevant, as it measured grammar, but not *pragmatic expectancy grammar*.

The *CTBS Reading Comprehension* scale measures *PEG* with its two components of *time orientation* and *temporal integration*. The forms used for testing the 8th-grade students in Modesto City Schools in the spring of 1988 were Forms U and V. In Form U, the Reading Comprehension Test presents 10 passages with comprehension questions following. Of the 10 passages, 7 use the present and/or present perfect tenses, and 3 use the past. Seven of the passages are written in the present time frame, and three are written in the past. In Form V, the Reading Comprehension Test presents 9 passages with comprehension questions following. Of the 9 passages, 6 use the present and/or present perfect tenses, and 3 use the past. Five of the passages are written in the present time frame, and four are written in the past.

The Cloze Test of Reading Comprehension

The *Cloze Test of Reading Comprehension*, as developed by the researcher, used teenage pregnancy, a popular culture topic of current interest, in a narrative that is situated in the present (Freire, 1973; Stump, 1978). The narrative form was selected because narrative "skills include the knowledge of how to sequence the information to form a coherent" string of connected sentences (Feagans, 1982, p. 97; cf. Goleman, 1993). According to Labov and Fanshel (1977), "we define narrative as one means of representing

past experience by a sequence of ordered sentences that present the temporal sequences of these events by that order" (Labov & Fanshel, 1977, p. 105). *Temporal sequencing, therefore, is a central focus of the narrative form.*

The present anchor serves as a pivot (Fillmore, 1968) to access a point in time that was seven years in the past, up to the present, and includes implications for the indefinite future. Popular culture, operating in the present, is the students' primary source of socialization both at home and in the street (Muskal, 1983). Current and real topics anchor students in the present, the only frame of temporal reference shared by all tracks.

The truth value and current nature of the *Cloze Test of Reading Comprehension* material was emphasized by including the following *orientation* (Labov & Fanshel, 1977) as part of the student instructions: "The following three pages are from a **TRUE STORY THAT WAS IN A NEWSPAPER YESTERDAY**"). The *orientation* introduces the time frame of the narrative itself, which "characterizes the language in school. It is these uses of syntax and semantics that every child must acquire to do well in school. These discourse skills incorporate not only knowledge of the language but of the rules and format for sequencing the discourse" (Feagans, 1982, p. 101). Using a popular culture topic validated the student's everyday, community knowledge and language by offering an opportunity to integrate new information about a familiar topic. In this way, students were directed to use their background knowledge, *time orientation*, *temporal integration*, and reading comprehension strategies in order to determine meanings that cohere across sentence and paragraph

boundaries (please see the student instructions and *Cloze Test* in Appendix B). This test required students to perform an everyday, real-life reading task, coordinating their reading comprehension strategies. The students checked for overall understanding of the text, including inter- and intrasentence meanings, by interacting with the *Cloze Test of Reading Comprehension*, "A Book That Grew From Love and Poverty". The *cloze test* determined the *PEGs* of students in four 9th-grade tracks [College Preparatory (1), General (2), Remedial (3), and ESL (4)]. It assessed students' *PEGs* through their choices of verb tenses in their task of text reconstruction. The College Preparatory track answers served as the criterion reference for the General, Remedial and ESL tracks.

The *Cloze Test of Reading Comprehension* was designed to have a grade level equivalent of 8.4, using the Fry formula (Fry, 1967, 1968), which was developed for ESL purposes, "to help a group of African teachers on a UNESCO training project who were teaching English as a second language" (Fry, 1967, p. 243). The grade level constitutes the intersection of sentence length and word length, measured in syllables on the Fry reading graph (Fry, 1967, 1968). The grade level for the student reading selection was based on *time orientation* research which indicates that the temporal shift from concrete operations into the formal operations stage takes place at about age 13-14, which is typically the age of most 9th-grade students (Inhelder & Piaget, 1958; Leech, 1971; Wallace & Rabin, 1960).

The development of the formal operations stage of cognitive development means, temporally, that a child is beginning to be able

to deal realistically with notions of the future via symbolic expression in language usage, specifically in the indicated overall time frame of the reading selection, as well as through verb tenses and temporal adverbs embedded in the story.

Time Orientation Assessment

The *Cloze Test* items which offered choices of the past, present or future tenses measured *time orientation*. For the purposes of this test, choosing a high percentage of correct past tense answers signified that the student possessed not only a clear concept of the past, but also a *future time orientation*. Those students who chose either the present and/or the future tenses were found to have neither a clear concept of the past nor a *future time orientation*. Those latter students were categorized as having a *present time orientation*.

Temporal Integration Assessment

The *Cloze Test* items which offered choices of the past, present perfect, or future measured *temporal integration*. For the purposes of this test, choosing a high percentage of correct present perfect answers signified that the student possessed not only a clear concept of the past, but also *extended temporal integration*. The present perfect tense was the focus for *temporal integration*, as it links the past, present and future (describing an event or state which began sometime in the past, is true presently, and may impact the future). Those students who chose either the past and/or the future tenses were found to have neither a clear concept of the past nor an

extended temporal integration. Those latter students were categorized as having *shortened temporal integration.*

Cloze Test Theory and Research

An appropriately scored *cloze test* can determine temporal differences between middle-class and working-class speakers of English. Such a test highlighted how students function in reading comprehension through *time orientation* and *temporal integration* in their *PEGs*, offering a way to operationalize and measure these two concepts through text reconstruction.

According to Anderson (1975), "cloze procedure measures success at (text) reconstruction" (Anderson, 1975, p. 18). In addition, " ... a subject's cloze score represents the degree of correspondence between his habits of communication and those of the sender of the message" (Ibid., p. 11). Klein-Braley (1983) suggests that:

> cloze tests are considered to be linked both to the Gestalt psychology notion of the ability to complete an incomplete pattern (closure), and also to the notion of redundancy provided by information theory. The incomplete pattern is constructed by deleting words from a running text, and the redundancy provided by natural language, its overdetermination of content, makes it possible to restore the missing words in order to reconstruct textual coherence. (Klein-Braley, 1983, p. 218).

The level of correct text reconstruction is a critical indicator of track-based reading comprehension. In support, Streiff (1978) argues that "cloze tests clearly require the relating of language to extra-linguistic context, as Oller has suggested. ... It should be emphasized that cloze test results reflect the experience which one expresses and understands through language" (Streiff, 1978, p. 71). *Language*

usage reflects the temporal quality of life, as it is experienced by the individual.

Oller's research discusses the value of integrative, meaning-oriented tests of reading proficiency, such as the *cloze*, to measure the *pragmatic expectancy grammars* of first and second language users (1972b). "The most important argument in its favor is that it requires the student to perform a task which is not unlike what native speakers do in sending and receiving messages" (Oller, 1972b, p. 187). Oller's (1973) discussion of *cloze tests* focuses on "a grammar of expectancy [as] the chief mechanism underlying the skills of thinking, understanding, speaking, reading and writing" (Oller, 1973, p. 113). When a student responds to items on a cloze test, he or she analyzes "to synthesize a greater whole. At the same time, the synthesis or projection may become part of the next analysis required to produce a subsequent synthesis" (Ibid., p. 114).

The *cloze* is a type of reading test which

> invoke[s] and challenge[s] the efficiency of the learner's expectancy grammar, first by causing the learner to process temporal sequences in the language that conform to normal contextual constraints, and second by requiring the learner to understand the systematic correspondences of linguistic contexts and extralinguistic contexts

(Oller, 1979, p. 34). In addition, "in taking a cloze test, the examinee must utilize information that is inferred about the facts, events, ideas, relationships, states of affairs, social settings and the like that are pragmatically mapped by the linguistic sequences in the passage" (Ibid., p. 43). The reader makes hypotheses about textual meaning

based on what information is perceived and utilized by the student's internalized *pragmatic expectancy grammar.*

In 1971, Oller conducted *cloze* research on English prepositions to yield useful diagnostic information concerning trouble spots for non-native speakers. He found that this *cloze test* provided diagnostic information for both college-level native and non-native speakers of English from a wide variety of language backgrounds. Oller based his work on the efforts of Darnell (1970), who used a method based on a sophisticated comparison of the non-native's choices of an item with a response frequency table for native speakers' choices. Darnell used a multiple-choice *cloze test* and a scoring method which relied on comparison of the non-native's choice on each item against a response frequency analysis for native speakers. His technique yielded high correlation (.83) with the *Test of English as a Foreign Language* (Educational Testing Service, Princeton, New Jersey).

In Oller and Inal's 1971 study, every other preposition was deleted from a passage of prose taken from a reader in English as a second language. Perhaps the most important finding was the benefit of the *cloze* procedure as a diagnostic instrument for uncovering certain types of grammatically-based problems. This prepositional *cloze test* achieved an overall correlation of .75 with the grammar section of the UCLA-ESLPE test. College-level native speakers consistently achieved close to 100%, and the average score for non-native speakers was approximately 65% (Oller, 1973).

Oller's (1972b) research indicates that the every nth (5th - 7th word) blank *cloze test* adequately differentiates levels of proficiency

among non-native speakers of a language. The groups tested included both college-level native and non-native speakers of differing levels of English proficiency. He found that the differentiation of ESL speakers from native English speakers is clearest when any contextually acceptable word is counted as correct, rather than measuring such differences with a specific correct word procedure. According to both Oller and Darnell, native speaker judgment of word acceptability actually works slightly better than the exact-word scoring method.

Studies have resulted in validity coefficients ranging from .61 to .95 between *cloze tests* and standardized reading examinations for native speakers of English (Ruddell, 1964; Bormuth, 1967). With nonnative speakers of English, less research has been done. However, that research suggests that *cloze* correlates with validity coefficients of .63 to .89 with measures of EFL proficiency (Brown, 1980; Darnell, 1970; Oller, 1972a, 1972b; Jonz, 1976; Irvine et al., 1974; Stubbs & Tucker, 1974). Oller (1979) found that the *cloze test* has a validity coefficient of .60 to .70 when correlated with multiple choice reading tests as a criterion measure (Oller, 1979, p. 357).

The rational, non-random multiple-choice *cloze test* is a type of reading test which is constructed by deleting examiner-selected words from a prose passage (Alderson, 1979b; Bachman, 1982; Hinofotis, et. al, 1980; Scholz & Scholz, 1981; Bensoussan & Ramraz, 1984). A rational deletion procedure provides the test developer a way to control the specific components of language proficiency measured by the test. Bachman (1982, p. 62) asserts that the rational deletion *cloze* procedure which targets only content-word

deletions is more valid than mechanical, every *nth* word deletion. He feels that content words, such as verbs, more strongly reflect cohesive processes which move across sentence boundaries in a logical argument. Bachman (1982) asserts that "a modified cloze passage, using rational deletions, is capable of measuring both syntactic and discourse level relationships in a text" (Bachman, 1982, p. 61). In this way, the test construction can target pivotal syntactic/semantic categories for diagnosis.

Brown (1980) and Hinofotis and Snow (1980) developed multiple-choice *cloze tests* based on learner-generated distractors selected on the basis of most frequent errors per deletion from an open-ended, non-multiple choice *cloze test.* In both studies, an intermediate college-level ESL text was used with college-preparatory ESL students. Both studies found high correlations between an open-ended *cloze* and its multiple-choice version, even though a multiple-choice *cloze* task may be receptive, while an open-ended *cloze* task requires written production of the correct answer or its semantically acceptable equivalent.

Cloze Test Description

The story contained 896 words, and was three pages long, with 25 blanks (Rand, 1978). Each blank had three possible multiple-choice, learner-generated answers which focused on verb tense usage in the context of the narrative (Guthrie, 1973). Guthrie (1973) used three responses for each blank: a correct answer, a syntactic alternative (a word that was syntactically but not semantically appropriate), and a lexical alternative (a word that was neither

syntactically nor semantically appropriate). In order to focus on student preferences for particular verb tenses, this researcher chose to use the following three responses for each blank: a correct answer, and two syntactic alternatives. In other words, each choice was a member of the same grammatical category, but had different semantic meanings (Rankin, 1983; Deutsch, 1963; Craig, 1992). In support, van Dijk and Kintsch (1983) argue that "readers ... use information from semantic memory to organize the text they read" (Van Dijk & Kintsch, 1983, p. 46).

The multiple-choice answers of various tenses were placed directly under each blank space, and the student's task was to choose the best response, based upon his level of comprehension of the text. According to Rankin (1983), "the multiple choice option construction procedure decreases the probability that anyone will miss an item because of failure to understand the word meanings of the correct word or the options" (Rankin, 1983, p. 10).

The range of possible clues in the test accessed three levels of language processing: linguistic, pragmatic, and textual (Oller, 1979; Bensoussan & Ramraz, 1982). The verb tense choices interacted with all three levels, and "carried the flow of the argument" (Bensoussan & Ramraz, 1982, p. 18). Sixteen of the verb tense items measured *time orientation*, and nine focused on *temporal integration.* Each of the blanks offered choices of three verb tenses, focusing on a particular semantic issue.

This type of *cloze* treatment constitutes a discrete point test (Alderson, 1979a). The chosen tense indicated student understanding of its meaning on the sentence, paragraph, and whole-

text levels. The verb tense choices were used to deduce certain underlying, repetitive track-level verb usage patterns reflecting levels of *time orientation* and *temporal integration*.

Summary

The *cloze test* was rational and non-random, in order to focus on the verb tenses, to determine the student's ability to handle those discrete language elements which carry the weight of each sentence's argument. Choosing sequentially correct verb tenses meant that a given student was following the logical flow, the thought sequence and coherence of the narrative argument. The multiple-choice option construction procedure decreased the probability that anyone missed an item, while allowing key verb tense concepts to be authentically embedded within the text, and within the context of application: reading for meaning. The reader accepted a hypothesis that he or she understood, which sometimes overrode the intentions of the writer. For example, a reader might accept the present or future tense verb choice rather than the past tense, even though the cohesion of the past time frame of the text clearly indicated that the reader's choice was not an appropriate one. For many students, the meaning that the author intended was not the meaning that the reader understood, illustrating the powerful effects of *time orientation* and *temporal integration* on the reading process.

Time Orientation Questionnaire

The most recent work in the area of *time orientation* is by Gonzalez and Zimbardo. These two researchers developed and

published a *time orientation questionnaire* and published it in the March, 1984 issue of Psychology Today. The Stanford Time Perspective Inventory is 31-item questionnaire which required the respondents to indicate on a 5-point scale, from "very characteristic" to "very uncharacteristic", how well each of the 31 statements described them. A factor analysis of several thousand surveys revealed seven time perspective factors, or categories, six of which are relevant to this study. Of the six categories, four are future-oriented and two are present-oriented:

Time Orientation Factors

Internal Locus of Control

Factor 1: Future, work motivation perseverance. This factor embraces those with a positive work motivation and the "Protestant Work Ethic" of completing a task regardless of intrusions (Gonzalez & Zimbardo, 1985, p. 24).

Factor 2: Future, goal-seeking and planning. The items on this factor centered less on work and more on the satisfaction that is derived from "planning and achieving goals" (Ibid., p. 25).

Factor 3: Future, pragmatic action for later gain. These individuals tend to act responsibly in the present to "achieve desirable future consequences" (Ibid., p. 26).

Factor 4: Future, specific daily planning. This factor described individuals who are obsessed with the specifics of getting ahead. They manifest a "compulsive attitude toward daily planning, make lists of things to do, set subgoals and pay attention to details (Ibid.).

External Locus of Control

Factor 5: Present, fatalistic, worry-free, avoid planning. Individuals with this orientation can be characterized as living one day at a time; they avoid planning into the near future and believe that their fate is controlled by destiny rather than their efforts (Ibid., p. 24).

Factor 6: Present, hedonistic. Individuals who fell into this factor tended to be "pleasure-seeking, partying, risk-taking, and impulsive" (Ibid.).

There were 20 questions on the revised questionnaire that required the students to indicate on a four-point scale, how well each of the

statements describe them. The categorization of *Future* vs. *Present Time Orientation Questionnaire* items was determined by the responses from the chi-square results, which focused on response frequency. The four-point scale was organized as follows: **NO!!**; no; yes; and **YES!!** All of the responses were aligned, within a yes/no division. In the following discussion, the wording of any *Time Orientation Questionnaire* item reflects the agreement of ≥50% of any three tracks. That is, if ≥50% of any three tracks chose *isn't* instead of *is* on any *Time Orientation Questionnaire* item, the discussion will focus on the popular choice. The *Time Orientation Questionnaire* is two pages long, in Appendix C.

Procedures

1. I contacted the principals of each high school to obtain permission to test one class from each of the four tracks (see Appendix D for a copy of the sample letter).

2. The *Cloze Test* and *Time Orientation Questionnaire* were given by the regular classroom teacher during the regular class period (please see Appendix E). A teacher orientation was given prior to testing to address the administration of the two instruments.

3. The *Cloze Tests* and *Time Orientation Questionnaires* were analyzed statistically. The quantitative data was organized and presented as appropriate.

Data was collected in March, 1989 during one week of testing in the regular classrooms by regular classroom teachers. Students were allotted 20 minutes for the *Cloze Test* (Scholz & Scholz, 1981, p. 4) and 20 minutes for the *Time Orientation Questionnaire*.

Chapter 4
Results

This study attempts to establish that *time orientation* and *temporal integration* are discrete and critical components of *PEG*, the schematic basis of reading comprehension. The instruments and the statistical applications were designed to show that *PEGs*, per track placement and *CTBS reading comprehension* scores, are statistically significant in terms of the temporal and linguistic variables that were hypothesized to be factors in reading comprehension development. The results from this study indicate that *PEGs* are theoretically predictable and a legitimate set of testable criteria which relate to both track placement and reading ability. Establishing these *PEG* factors as underlying components of track placement and reading comprehension supports the argument that *time orientation* and *temporal integration* are significant factors which impact student achievement, especially in reading comprehension development.

Major Findings

Cloze Test Results

In general, a stronger *future time orientation*, a more *extended temporal integration* of the past, present and future, and clear concept of the past were associated with a higher level of reading comprehension strength, on both the *CTBS* and *Cloze Test* instruments. A stronger *present time orientation*, along with a *shortened temporal integration* and an unclear concept of the past,

were associated with reading problems, on both the *CTBS* and *Cloze Test* instruments. Students with these characteristics anticipated a much more narrow range of meanings which typically did not include the past or present perfect tenses, which are linguistic manifestations of *future time orientation* and *extended temporal integration.*

The level of matching schemata decreased on a per-track basis, leading to lower levels of successful student processing of narrative information. In other words, the statistics showed that there is a significant correlation between *future time orientation*, *extended temporal integration* and reading strengths. Conversely, there was a significant correlation between *present time orientation*, *shortened temporal integration* and reading problems. These correlations were true for all of the analyses.

Time Orientation Questionnaire Results

In general, a strong *future time orientation*, with its underlying positive attitudes towards *positive work motivation* and *specific daily planning*, which indicate *internal locus of control*, was shown by the College Preparatory track. Each of the subsequent lower tracks showed progressively weaker responses.

In contrast, a weaker *present time orientation*, with its underlying *fatalistic* attitude, indicating *external locus of control*, was shown by both the College Preparatory and General tracks. The Remedial track, in comparison with the College Preparatory track, demonstrated a stronger *fatalistic* attitude, but the ESL track demonstrated a weaker one.

Statistical Analysis

The statistical analyses of the data for the ten research questions were performed by means of Statview +512 on the Macintosh SE/30. The following analyses include data collected from all sample students. Alpha was set at .05 for all significance tests, and all of the data presented in percentage tables were found to be statistically significant at the .05 level or higher. Because the data were all shown to be significant factors, the analyses focus on the relationships between significant factors in each instrument. These are expressed in terms of percentages to explore ways in which the relationships can be examined more precisely in subsequent research.

The general results from the first six research questions have been combined in the four following groups:

1. *CTBS* scores affected track placement, which correlated with 60% of the verb tense items on the *Cloze Test of Reading Comprehension*. This indicated relationships between *time orientation*, *temporal integration* and the 8th-grade *CTBS reading comprehension score* averages.

2. Track placement affected 63% of the verb tense items reflecting *time orientation* on the *Cloze Test*, and 55% of the verb tense items reflecting *temporal integration*. The *Cloze Test of Reading Comprehension* differentiated among the four track levels of reading ability, and showed that there are temporal factors which are involved. These temporal factors are

distributed according to variations in reading ability as tested by *CTBS*, but have not been understood as elements which mediate between levels of reading comprehension.

3. Track placement affected 35% of the responses on the *Time Orientation Questionnaire*, which addressed *future* and *present time orientations*. Four of the significant items focused on *future time orientation*, and three on *present time orientation*.

4) An unanticipated key finding was the critical presence of a measurable linguistic concept of the past, indicating its function as a prerequisite for the development of strong *future time orientation* and *extended temporal integration*. Students with a strong sense of the past anticipated a wider range of meanings, including the past and present perfect tenses. Students without a strong sense of the past anticipated a more narrow range of meanings, and tended to choose discrete tenses. The discrete tenses constitute the present (when given an alternate choice of the past) and the past (when given an alternate choice of the present perfect). This finding will be discussed further in Chapter 5.

In summary, the statistical findings showed that *PEGs* are statistically significant in terms of the temporal and linguistic variables that were hypothesized to be significant factors in reading comprehension. *PEGs* are theoretically predictable and a legitimate set of testable criteria which relate to both track placement and

reading ability. Two *PEG* factors, *time orientation* and *temporal integration*, constitute underlying components of both track placement and reading comprehension. *Time orientation* and *temporal integration* are significant factors which impact student achievement, especially in reading comprehension development.

Results of Research Questions 1 - 6

The data have been arranged in response frequency percentage tables as sources of information which contribute to an understanding of how *PEGs* function in schools and for students. Schools generally operate on the basis of test scores, a basic way in which student achievement is judged and student placements per track are made. Students are already different per track in terms of their reading achievement levels, which has been established through the *CTBS Test of Reading Comprehension*. *Time orientation* and *temporal integration* also vary in similar ways by track level. Although entire tracks were not uniform in their temporal dimensions, both linguistic and behavioral characteristics were arrayed in track-based ways.

This study examined the ten research questions. First, the purpose of asking these questions was to establish whether or not these temporal factors are significantly related to levels of reading achievement. The following research question results show that they are. Second, if established, then a sound theoretical argument for inclusion of these temporal characteristics in reading instruction could be made. The discussion in Chapter 5 will demonstrate that reading instruction should include these temporal characteristics. Third, the

issue of how to incorporate these characteristics in reading instruction will be addressed in Chapter 5, in terms of teacher involvement and reading materials revision.

Research Question 1

There was a significant relationship of track placement to 8th-grade *CTBS reading comprehension* scores for College Preparatory vs. General vs. Remedial vs. ESL tracks. The results of Research Question 1 are below in Table 1:

Table 1

Average Reading Comprehension Grade Levels on the California Test of Basic Skills: one-factor Anova

Tracks	n	Grade Levels
College Preparatory	45	11.464
General	31	9.2
Remedial	52	7.662
ESL	10	5.66

p=.0001

These results establish significant relationships between track placement and reading comprehension grade levels on the *CTBS test.*

Research Question 2

Track placement significantly affected reading comprehension (the number of correct responses) for 15 out of 25 verb tense choice answers on the *Cloze Test* (1, 2, 3, 5, 6, 7, 8, 9, 10, 14, 17, 19, 20, 23 and 24). The results are shown below in Tables 2 and 3:

Table 2

Relationships of Cloze Items Based on Track Placement: one-factor Anova

Cloze Test Items	**p** values
1	.0087
2	.0001
3	.0001
5	.0001
6	.0001
7	.0001
8	.0001
9	.0004
10	.0001
14	.0144
17	.0003
19	.0095
20*	.0487
23**	.0552
24	.0001

**Cloze Test* item 20 was not included in the analysis, because the correct answer was in the present tense.

** *Cloze Test* item 23 was included in the analysis.

These results from the one-factor Anova application establish that track placement significantly affected reading comprehension results on the *Cloze Test*. Please see Table 3 for the chi-square results:

Table 3

Relationships of Cloze Items Based on Track Placement [chi-square (df = 6, N=261)]

Cloze Test Items	**p** values
1	.0002
2	.0001
3	.0001
5	.0001
6	.0001
7	.0001
8	.0001
9	.0005
10	.0002
14	.0001
17	.0001
19	.0255
24	.0002

These results from the chi-square application establish that track placement significantly affected reading comprehension results on the *Cloze Test*. At this stage of the analysis, Research Questions 1

and 2 have established significant relationships between track placement and:

- reading comprehension grade levels on the *CTBS test*, and
- reading comprehension on the *Cloze Test*.

Research Question 3

Track placement affected 10 out of 16 verb tense choices reflecting *time orientation* in reading comprehension on the *Cloze Test* (1, 2, 3, 5, 6, 8, 9, 10, and 17) for College Preparatory vs. General vs. Remedial vs. ESL tracks. The results are shown below in Tables 4 and 5:

Table 4

Relationships of Time Orientation Cloze Items
Based on Track Placement:
one-factor Anova

Time Orientation Cloze Test Items	**p** values
1	.0087
2	.0001
3	.0001
5	.0001
6	.0001
8	.0001
9	.0004
17	.0003

These results from the one-factor Anova application establish that track placement significantly affected *time orientation* reading comprehension results on the *Cloze Test*. Please see Table 5 for the chi-square results:

Table 5

Relationships of Time Orientation Cloze Items Based on Track Placement [chi-square (6 df for all items, N=261)]

Time Orientation Cloze Test Items	**p** values
1	.0002
2	.0001
3	.0001
5	.0001
6	.0001
8	.0001
9	.0005
17	.0001

These results from the chi-square application establish that track placement significantly affected *time orientation* reading comprehension results on the *Cloze Test*. At this stage of the analysis, Research Questions 1, 2 and 3 have established significant relationships between track placement and:

- reading comprehension grade levels on the *CTBS test*;
- reading comprehension on the *Cloze Test*; and
- *time orientation* results on the *Cloze Test*.

Research Question 4

Track placement affected 5 out of 9 verb tense choices reflecting *temporal integration* in reading comprehension on the *Cloze Test* (7, 14, 19, 23 and 24) for College Preparatory vs. General vs. Remedial vs. ESL tracks. The four items which were common to both the one-factor Anova and chi-square applications included: 7, 14, 19 and 24. The results are shown below in Table 6:

Table 6

Relationships of Temporal Integration Cloze Items, Based on Track Placement: one-factor Anova

Temporal Integration Cloze Test Items	**p** values
7	.0001
14	.0144
19	.0095
24	.0001

These results from the one-factor Anova application establish that track placement significantly affected *temporal integration* reading comprehension results on the *Cloze Test*. Please see Table 7 for the chi-square results.

Table 7

Relationships of Temporal Integration Cloze Items Based on Track Placement [chi-square (6 df for all items, N=261)]

Temporal Integration Cloze Test Items	**p** values
7	.0001
14	.0001
19	.0255
24	.0002

These results from the chi-square application establish that track placement significantly affected *temporal integration* reading comprehension results on the *Cloze Test*. At this stage of the analysis, Research Questions 1, 2, 3 and 4 have established significant relationships between track placement and :

- reading comprehension grade levels on the *CTBS*;
- reading comprehension on the *Cloze Test*;
- *time orientation* results on the *Cloze Test*; and
- *temporal integration* results on the *Cloze Test*.

Research Question 5

Track placement affected 7 out of 20 responses on the *Time Orientation Questionnaire* (30, 31, 33, 34, 36, 37 and 40). The 2-factor repeated measures Anova, one-factor Anova, and chi-square were applied.

The 2-factor repeated measures Anova **p** value for Track (A) was .0364; repeated measure (B) was .0001; and AB was .0001. The seven items which were common to both the one-factor Anova and chi-square results were: 30, 31, 33, 34, 36, 37 and 40. The results are shown below in Tables 8 and 9:

Table 8

Relationships of Time Orientation Questionnaire Items Based on Track Placement: one-factor Anova

Time Orientation Questionnaire Items	**p** values
30	.0514
31	.0012
33	.0012
34	.0292
36	.0115
37	.0184
40	.0001

These results from the one-factor Anova application establish that track placement significantly affected *Time Orientation Questionnaire* results. Please see Table 9 for the chi-square results:

Table 9

Relationships of Time Orientation Items
Based on Track Placement
[chi-square (N=261)]

Time Orientation Questionnaire Items	df	**p** values
30	6	.001
31	6	.0025
33	12	.0042
34	9	.0001
36	9	.0134
37	9	.0186
40	12	.0086

These results from the chi-square application establish that track placement significantly affected *Time Orientation Questionnaire* results. At this stage of the analysis, Research Questions 1, 2, 3, 4 and 5 have established significant relationships between track placement and:

- reading comprehension grade levels on the *CTBS*;
- reading comprehension on the *Cloze Test*;
- *time orientation* results on the *Cloze Test*;
- *temporal integration* results on the *Cloze Test*; and
- *time orientation* results on the *Time Orientation Questionnaire.*

Research Question 6

Track placement affected four *Future Time Orientation* responses on the *Time Orientation Questionnaire* (30, 34, 37 and 40) and three *Present Time Orientation* responses (31, 33 and 36).

The categorization of *Future* vs. *Present Time Orientation Questionnaire* items was determined by the responses from the chi-square results, which focused on response frequency. The four-point scale was organized as follows: **NO!!**; no; yes; and **YES!!** All of the responses were aligned, within a yes/no division. In the following discussion, the wording of any *Time Orientation Questionnaire* item reflects the agreement of ≥50% of any three tracks. That is, if ≥50% of any three tracks chose *isn't* instead of *is* on any *Time Orientation Questionnaire* item, the discussion will focus on the popular choice. The results are shown below in Tables 10, 11, 12 and 13:

Table 10

Relationships of Future Time Orientation Questionnaire Items Based on Track Placement: one-factor Anova

Future Time Orientation Questionnaire Items	**p** values
30	.0514
34	.0292
37	.0184
40	.0001

These results from the one-factor Anova establish significant relationships between track placement and *Future Time Orientation Questionnaire* items 30, 34, 37 and 40. Please refer to Table 11 for the chi-square results:

Table 11

Relationships of Future Time Orientation Items Based on Track Placement [chi-square (N=261)]

Future Time Orientation Questionnaire Items	df	**p** values
30	6	.001
34	9	.0001
37	9	.0186
40	12	.0086

These results from the chi-square application establish significant relationships between track placement and *Future Time Orientation Questionnaire* items 30, 34, 37 and 40. Please see Table 12 for the Anova results for the *Present Time Orientation* items:

Table 12

Relationships of Present Time Orientation Questionnaire Items Based on Track Placement: one-factor Anova

Present Time Orientation Questionnaire Items	**p** values
31	.0012
33	.0012
36	.0115

These results from the one-factor Anova establish significant relationships between track placement and *Present Time Orientation Questionnaire* items 31, 33 and 36. Please refer to Table 13 for the chi-square results for the *Present Time Orientation* items:

Table 13

Relationships of Present Time Orientation Items Based on Track Placement [chi-square (N=261)]

Present Time Orientation Questionnaire Items	df	**p** values
33	12	.0042
36	9	.0134

These results from the chi-square application establish significant relationships between track placement and *Present Time Orientation Questionnaire* items 31, 33 and 36. At this stage of the analysis, Research Questions 1 ,2, 3, 4, 5 and 6 have established significant relationships between track placement and:

- reading comprehension grade levels on the *CTBS*;
- reading comprehension on the *Cloze Test*;
- *time orientation* results on the *Cloze Test*;
- *temporal integration* results on the *Cloze Test*;
- *future time orientation* results on the *Time Orientation Questionnaire*; and
- *present time orientation* results on the *Time Orientation Questionnaire*.

The Six Assessments of Temporality

There were six measurements of temporality in the study. The *Cloze Test of Reading Comprehension* established the linguistic characteristics of four temporal measurements: *future time orientation*, *present time orientation*, *extended temporal integration*, and *shortened temporal integration.* These four measurements will be discussed as follows.

Future Time Orientation

Students who chose the correct past tense instead of the present or future, based on the past-tense level of the text, were classified as future-oriented. These students were assessed as having a clear sense of the past, which is directly connected to a sense of the future.

Present Time Orientation

Students who chose either the present or future tenses instead of the correct past tense, based on the past-tense level of the text, were classified as present-oriented. These students were assessed as having unclear concepts of the past and the future.

Extended Temporal Integration

Students who chose the correct present perfect tense instead of the past or the future, based on the present-perfect level of the text, were classified as having *extended temporal integration* and a clear concept of the past.

Shortened Temporal Integration

Students who chose the past or future tenses instead of the correct present perfect, based on the present-perfect level of the text, were classified as having *shortened temporal integration* and an unclear concept of the past.

The *Cloze Test* results are the critical source of evidence for underlying temporality because they measure *PEGs*. The *Cloze Test* results weigh more heavily than the *Time Orientation Questionnaire* results because the *Cloze Test* directly accessed students' *PEGs* (Yaker, et. al 1971, p. 304). The *Time Orientation Questionnaire* is a less direct and reliable source of data because the questionnaire did not directly access students' *PEGs*.

The *Time Orientation Questionnaire* measured the self-described temporal behavior characteristics of two temporal measurements: *future time orientation* and *present time orientation*,

two key aspects of *PEG*. In the discussion, the wording of any *Time Orientation Questionnaire* item reflects the agreement of ≥50% of any three tracks.

Each test explored the following assumptions in some way:

1. Social class mediates one's *time orientation*, *temporal integration* and language use, helping an individual make sense of the world.

2. There is a crude relationship between reading level, social class and track placement, in that the students placed in the College Preparatory track tend to be more middle-class, and the other three tracks (ESL, Remedial and General) are typically more working-class.

3. Peer pressure from one's social class works against assimilation of the dominant culture's values, including *future time orientation*, *temporal integration*, and use of Standard English.

In summary, shortened temporal integration theoretically represents a lack of continuity between the past, present and future. Another way to think of this is that past, present, and future are not linked together in a linear fashion in one's thinking.

Two Assessments of Temporality: Cloze Test Results for Future and Present Time Orientations

The *time orientation* responses showed an overall, per-track decrease in correct past tense answers. In addition, the General, Remedial and ESL students' lack of clarity regarding the past also meant that they had an unclear understanding of both the present and the future. The following table of averaged response frequencies suggests an underlying lack of understanding of the past as a basic concept, which is directly connected to *future time orientation*. The following discussion will explore the average *time orientation* percentage answers for the *Cloze Test* responses on a per-track basis. Please refer to Tables 14 and 15:

Table 14

Average percentages of Future and Present Time Orientations, Based on Cloze Test data

Tracks	**Tenses**		
	Future TO	Present TO	
	(Past)	(Present)	(Future)
College Preparatory	96%	4%	0%
General	84	12	4
Remedial	75	18	7
ESL	60	22	17

The following table shows the clear percentage divisions between *Future* and *Present Time Orientations*:

Table 15

Average total percentages of Future and Present Time Orientations, Based on Cloze Test data

Tracks	Future	Present
College Preparatory	96%	4%
General	84	16
Remedial	75	25
ESL	60	39

The following discussion will explore the average *time orientation* percentage answers for the *Cloze Test* responses, and then each of the four tracks individually.

The average percentages for the nine *time orientation cloze test* responses per track showed a decrease of 36% in correct answers, from the College Preparatory track to the ESL track. The respective averages of correct answers were: College Preparatory, 96%; General, 84%; Remedial, 75%; and ESL, 60%. There was a corresponding increase in student choice of the two non-past tenses, the present and future, which were combined as the Present track in Table 15. The presence of an unclear concept of the past increased from the College Preparatory track (4%) to the ESL track (39%). This shows that percentage of students who have a *present time orientation* increased almost tenfold from the College Preparatory track to the ESL track. This suggests that there is an increasingly strong correlation between each successively lower track and larger

numbers of students who operate from within a *present time orientation* in terms of language behavior.

The College Preparatory track seemed to possess an exceptionally clear *Future Time Orientation*, as shown by the 96% average of correct verb tense choices of the past tense. Only 4% in this track chose the present tense, and none chose the future. The majority of the College Preparatory track was clearly future-oriented in its language behavior, in that a clear and stable student-text connection was made with the past tense level of the text. Only 4% of this track manifested *present time orientation* through the use of the present tense. This suggests that the College Preparatory track tends to operate within a *future time orientation.*

The General track manifested a less clear concept of the past, with an 84% average for correct past tense verb choices. In addition, 12% of this group chose the present tense and 4% chose the future. The General track began to show a discrepancy between the past tense level of the narrative and some students' *present time orientation*, in that 16% of the students did not manifest a clear concept of the past. Although the majority of the General track was clearly future-oriented in its language behavior, 16% manifested *present time orientation* through their choices of the present and future tenses. This suggests that the General track tends to operate within a *future time orientation.* Even so, in comparison with the College Preparatory track, the General track shows a fourfold increase in the number of students operating within a *present time orientation.*

The Remedial track continued and intensified this trend towards confusion between personal time and textual time. The Remedial students' preference for the past tense dropped to 75%, concurrently increasing the present tense choices to 18% and the future tense choices to 8%. In this track, 26% of the students did not demonstrate a clear concept of the past. The Remedial track was even less strongly oriented towards the future, compared with the College Preparatory track. Although the majority of the Remedial track was clearly future-oriented in its language behavior, 26% manifested *present time orientation* by choosing present and future verb tenses. This suggests that the Remedial track tends to operate within a *future time orientation.* Even so, compared with the College Preparatory track, the Remedial track shows a sixfold increase in the number of students operating within a *present time orientation.*

The ESL track continued in the decrease of preference for the past tense, to 60%, demonstrating even more confusion between some students' internal *time orientation* and the external one of the narrative. Again, concurrently, these students increased their choice of the present tense to 22%, and their choice of the future tense to 17%. In this track, 39% of the students did not demonstrate a clear concept of the past. The ESL track was even less strongly oriented towards the future, compared with the College Preparatory track. Although the majority of the ESL track was clearly future-oriented in its language behavior, 39% manifested *present time orientation* by choosing present and future verb tenses. This suggests that the ESL track tends to operate within a *future time orientation.* Even so, compared with the College Preparatory track, the ESL track shows a

tenfold increase in the number of students operating within a *present time orientation.*

In assessing the *Cloze Test* results, the unclear concept of the past appeared to be central to an understanding of the role of the future in each track. For all tracks, the decrease in choosing the correct past and present perfect verb tense choices was accompanied by a corresponding increase in the present and future verb tense choices. There was an inverse relationship between the College Preparatory track components and those of the General, Remedial and ESL tracks This suggests that for the lower three tracks, failure to comprehend the past tense interfered with reading comprehension 16% of the time for the General track, 25% for the Remedial track, and 39% for the ESL track. If we accept the results of Labov (1967), who found that failure to understand the past tense interfered with junior high school students' reading comprehension from 45% to 65% of the time, then the *Cloze Test* has confirmed his results.

Summary

The *time orientation* component of track-based *PEGs* is clearly a powerful underlying factor which affects reading comprehension. The data clearly indicate significant increases in *present time orientation* from the College Preparatory track to the ESL track. First, the number of *present time orientation* responses increased fourfold from the College Preparatory track to the ESL track. Second, the number of *present time orientation* responses increased sixfold from the College Preparatory track to the Remedial track. Third, the

number of *present time orientation* responses increased almost tenfold from the College Preparatory track to the ESL track. These results suggest that *present time orientation* becomes increasingly more powerful as CTBS reading comprehension scores decrease. In other words, students in the General, Remedial and ESL tracks who operate from a *present time orientation* demonstrate reading comprehension problems.

Two Additional Assessments of Temporality: Cloze Test Results for Extended and Shortened Temporal Integration

Temporal integration was manifested linguistically through the present perfect verb tense responses for the *Cloze Test of Reading Comprehension*. The responses below in Tables 16 and 17 show a per-track decrease in correct present perfect tense answers, demonstrating a lack of understanding of the present perfect tense, which links the past, present and future. Please see Tables 16 and 17:

Table 16

Average percentages of Extended and Shortened Temporal Integration

Tracks	Extended	Shortened	
	(Present Perfect)	[(Present)	(Future)]
College Preparatory	71%	28%	1%
General	56	39	5
Remedial	62	29	9
ESL	48	38	14

The following table shows the clear percentage divisions between *extended* and *shortened temporal integration*.

Table 17

Average total percentages of Extended and Shortened Temporal Integration

Tracks	Extended	Shortened
College Preparatory	71%	29%
General	56	44
Remedial	62	38
ESL	48	52

The following discussion will explore the average *temporal integration* percentage answers for the *Cloze Test* responses, and then each of the four tracks individually.

The average percentages for the five *temporal integration* cloze test responses per track showed a decrease of 23% in correct present perfect verb tense answers, from the College Preparatory track to the ESL track. The respective averages of correct answers per track were: College Preparatory, 71%; General, 56%; Remedial, 62%; and ESL, 48%. There was a corresponding increase in student choice of the two non-present perfect tenses, the present and future, which were combined as the *shortened temporal integration*. In addition, the unclear concept of the present perfect increased from the College Preparatory track (29%) to the ESL track (52%). This shows that percentage of students who have a *shortened temporal integration* almost doubled from the College Preparatory track to the ESL track. This suggests that there is an increasingly strong

correlation between each successively lower track and larger numbers of students who operate from within a *shortened temporal integration* in terms of language behavior.

The level of *temporal integratio*n assessed through the use of the present perfect tense for the College Preparatory track was at 71%, much lower than the comparable level for correct past tense verb choices (96%). This test may have caught these students partway in the shift from a *present time orientation* and *shortened temporal integration* to a *future time orientation* and *extended temporal integration*. In this group, 28% of the students preferred the past tense to the present perfect, and 1% chose the future tense. Although the majority of the College Preparatory track showed evidence of *extended temporal integration* in its language behavior, 29% manifested *shortened temporal integration*. This suggests that almost one-third of the students in the College Preparatory track may have been in transition from the concrete to the formal operations stage.

The level of *temporal integration* for the General track was at 56%, again much lower than the comparable level for correct past tense verb choices (84%). In this group, 39% of the students preferred the definite past tense to the indefinite present perfect, and 5% chose the future. Although the majority of the General track showed evidence of *extended temporal integration* in its language behavior, 44% manifested *shortened temporal integration*. This suggests that almost one-half of the students in the General track may have been in transition from the concrete to the formal operations stage.

The level of *temporal integration* for the Remedial track was at 62%, again lower than the level for comparable correct past tense verb choices (75%). In this group, 29% of the students preferred the definite past tense to the indefinite present perfect, and 9% chose the future tense. Interestingly, the Remedial track manifested a slightly higher level of *temporal integration* than the General track. Although the majority of the Remedial track showed evidence of *extended temporal integration* in its language behavior, 38% manifested *shortened temporal integration*. This suggests that over one-third of the students in the Remedial track may have been in transition from the concrete to the formal operations stage.

The level of *temporal integration* for the ESL track was at 48%, again lower than the level for comparable correct past tense verb choices (60%). In this group, 38% of the students preferred the definite past tense to the indefinite present perfect, and 14% chose the future tense. The majority of the ESL track (52%) showed evidence of *shortened temporal integration* in its language behavior, and only 48% manifested *extended temporal integration*. This suggests that over one-half of the students in the ESL track may have been in transition from the concrete to the formal operations stage.

Summary

The *temporal integration* component of track-based *PEGs* is clearly a powerful underlying factor which affects reading comprehension. The data indicate significant increases in *shortened temporal integration* from the College Preparatory track to the ESL track. First, the number of *shortened temporal integration* responses

increased 15% from the College Preparatory track to the General track Second, the number of *shortened temporal integration* responses increased 9% from the College Preparatory track to the Remedial track. Third, the number of *shortened temporal integration* responses increased 23% from the College Preparatory track to the ESL track. Failure to comprehend the present perfect tense interfered with reading comprehension 29% of the time for the College Preparatory track, 44% for the General track, 38% for the Remedial track, and 52% for the ESL track. These data suggest that the development of *extended temporal integration* lags somewhat behind the development of *future time orientation.* In other words, the first temporal component of *Future PEG* to emerge is *future time orientation*, followed by *extended temporal integration.*

Correlation of PEGs, Text, and CTBS Scores

This section will combine the *Cloze Test* data from *time orientation* and *temporal integration* responses as *PEGs*, not only as tracks. Student confusion about the interpretation of text-based instances of the past, present, present perfect and future increased in the General, Remedial and ESL *PEGs*, as shown below in Table 18 in the relationships between assessments of *time orientation* and *temporal integration* on the *Cloze Test*, and *CTBS scores*. Please see Table 18:

Table 18

Average Percentages of Cloze Test Time Orientation (TO) and Temporal Integration (TI) Text Confusion, with CTBS Scores

PEGs	TO *Text Confusion*	TI *Text Confusion*	CTBS
College Prep	4%	29%	11.464
General	16	44	9.2
Remedial	26	38	7.662
ESL	9	52	5.66

There was a significant relationship between *future time orientation* with *extended temporal integration* and high 8th-grade *CTBS reading comprehension* score averages. According to the *CTBS reading comprehension* scores, the College Preparatory students had an advantage of 3.064 years in applying their reading comprehension skills and *PEG* s to the *Cloze Test of Reading Comprehension* (designed to have a grade level equivalent of 8.4, using the Fry formula). The General students had an advantage of .8 year. The Remedial and ESL students, who had disadvantages of .738 and 2.74 years, were the two groups whose reading comprehension levels were lower that of the *Cloze Test.* As the *CTBS* grade-level equivalent reading comprehension scores rose, *future time orientation* and *extended the temporal integration*, both of which are grounded in a clear concept of the past, became stronger. This

suggests that reading comprehension, *time orientation* and *temporal integration* are intimately linked in the cognitive, temporal and linguistic developmental process.

Summary of Findings

In assessing *Cloze Test* responses, the unclear concept of the past appeared to be central to an understanding of the role of the future in *temporal integration*. As student choices of the past and present perfect tenses decreased, so did the grade-level *CTBS reading comprehension* scores. For all tracks, the decreases in choosing the correct past and present perfect verb tense choices were accompanied by corresponding increases in the present and future verb tense choices. This suggests that for the lower three tracks, failure to comprehend the present perfect tense interfered with reading comprehension 29% of the time for the College Preparatory track, 44% for the General track, 38% for the Remedial track, and 52% for the ESL track. If we accept the results of Cottle (1967), whose visual *temporal integration* test showed 60% of the 18-to-22-year-old male and female lower-middle class subjects to be have a complete lack of integration of the past, present and future, then the *Cloze Test* data have confirmed his findings in terms of temporal language behavior.

It appears that a clear concept of the past, as it relates to the present and the future, is an essential pre-condition for the development of a *future time orientation* (Cottle & Klineberg, 1974; Harner, 1976; Craig, 1992). The data suggest that, for increasing numbers of students in the General, Remedial, and ESL tracks,

events tend to happen in the present without connections to the past or involvement with the future. Since *future time orientation* is dependent on the development of a clear sense of the past, the sequential emergence of tenses tends to be as follows: present, past, future, and then present perfect. The question is: to what level do the concepts of past and future develop?

The data support the following argument from the literature: that fuller development of the concepts of past and future, both of which are inherently related to *time orientation* and *temporal integration*, can be affected by life experiences and socialization for day-to-day survival. This effect can lead to an overfocus on the present, including a *shortened temporal integration*, and an overuse of the discrete tenses. The discrete tenses constitute the present (when given an alternate choice of the past) and the past (when given an alternate choice of the present perfect). In addition, the data support the following argument: that fuller development of the interrelated concepts of past and future, both of which are directly related to *time orientation* and *temporal integration*, can be affected by reading comprehension development. In other words, life experiences in the classroom which focus on reading as an interactive activity can positively socialize students in the direction of *future time orientation* and *extended temporal integration*, leading to higher levels of reading comprehension, achievement, and school retention. What has been accomplished, temporally, in terms of of unconscious learning at home and in the street, can be manipulated through conscious teaching in school. The school can be temporally enabling, through the teachers and curriculum.

At-risk students seem to apply a binary template to the concept of time: it is either present/current, or past/finished. However, a dualistic approach to knowledge/reading, described as "an unorganized set of discrete and absolute truths" (Ryan, 1984b, p. 1227), functions only so far as similar dualism occurs in a given text (Ryan, 1984a, 1984b). The text which was chosen for the *Cloze Test of Reading Comprehension* component of this study is not dualistic. "A Book That Grew From Love and Poverty" incorporates all three divisions of temporality: past, present and future.

Students who chose the future can be said to be choosing what they perhaps wish would happen in their lives:

Cloze 1

...Carolyn Chute will be separated from a man ...

or a romantic view of the future:

Cloze 3

...what she will want in a man.

or a realistic, adolescent view of the future:

Cloze 6

...she will drive the wooded roads of Maine.

Nonetheless, all of the above student-interpreted views of the future have no textual basis in the "A Book That Grew From Love and Poverty", although they may have bases in student lives. These are

all examples of student *PEGs* overriding the textual *PEG*, resulting in low levels of reading comprehension. The *Cloze Test of Reading Comprehension* narrative was developed to be situated in the present, with a temporal integration span of seven years ago up to, and including, today and the future. If the very basis of literacy is the skill of transcending the present context, then it appears that large numbers of at-risk students do not yet have that skill.

Assessment of Temporality: Future Time Orientation Questionnaire Results

In each track, the sub-group which chose the three *Future Time Orientation* responses (30, 34, 37 and 40) tended to be supported by the corresponding results on the *Cloze Test*, which manifested *future time orientation* and *extended temporal integration.* The four *Future Time Orientation* responses focused on *positive work motivation perseverance* and *specific daily planning,* Future Factors 1 and 4 in the Gonzalez and Zimbardo (1985) research:

> Future Factor 1: Future, work motivation perseverance. This factor embraces those with a positive work motivation and the "Protestant Work Ethic" of completing a task regardless of intrusions (Gonzalez & Zimbardo, p. 24).

> Future Factor 4: Future, specific daily planning. This factor described individuals who are obsessed with the specifics of getting ahead. They manifest a "compulsive attitude

toward daily planning, make lists of things to do, set subgoals and pay attention to details" (Ibid., p. 26).

In assessing the *Time Orientation Questionnaire* choices, each of the lower three tracks tended to demonstrate subsequently larger decreases in *future time orientation* and corresponding increases in *present time orientation.* Please refer to the following table:

Table 19

Percentages of agreement for Future Time Orientation Questionnaire Item 30

Tomorrow's homework is more important than tonight's party.

Track	Percentages
College Preparatory	71%
General	67
Remedial	58
ESL	72

The results showed a decrease per track in students' positive attitude towards the the values of *work motivation perseverance* and *specific daily planning.* In other words, there was a decrease per track in students' ability to defer gratification. Interestingly, the ESL track manifested a stronger, more positive attitude about homework than the Remedial, General or College Preparatory tracks. This suggests that the ESL track is basically immigrant and sees a relationship

between success and personal survival. Please refer to Table 20 for Future Time Orientation Questionnaire item 34 results:

Table 20

Percentages of agreement for Future Time Orientation Questionnaire Item 34

I don't feel that it's more important to enjoy what I'm doing than to get the work done on time.

Track	Percentages
College Preparatory	78%
General	70
Remedial	58
ESL	47

These results show a clear decrease per track in students' positive attitude towards the future values of *work motivation perseverance* and *specific daily planning*. Again, there was a decrease per track in students' ability to defer gratification. This *future time orientation* item showed a decrease of 46% from the College Preparatory to the ESL track. This suggests that many students in the Remedial and ESL tracks are not engaged by their schoolwork, leading to lack of involvement in the school. Please refer to Table 21 for *Future Time Orientation Questionnaire* item 37 results:

Table 21

Percentages of agreement for Future Time Orientation Questionnaire Item 37

I meet my obligations to friends and teachers on time.

Track	Percentages
College Preparatory	91%
General	80
Remedial	68
ESL	64

These results show a clear decrease per track in students' positive attitude towards the future values of *work motivation perseverance* and *specific daily planning.* This *time orientation* item shows a 27% decrease from the College Preparatory to the ESL track. This suggests that the Remedial and ESL tracks have not made a connection between individual persistence with their responsibilities on a daily basis, and future rewards. Please refer to Table 22 for *Future Time Orientation Questionnaire* item 40 results:

Table 22

Percentages of agreement for Future Time Orientation Questionnaire Item 40

I

It seems to me that it makes sense to worry about the future, since luck doesn't determine what will happen.

Track	Percentages
College Preparatory	80%
General	72
Remedial	61
ESL	61

These results show a clear decrease per track in students' positive attitude towards the future values of *work motivation perseverance* and *specific daily planning.* This time orientation item shows a 19% decrease from the College Preparatory to the ESL track. This suggests that students in the Remedial and ESL tracks have not made a connection between personal academic effort and future rewards.

Summary of Findings

In general, *future time orientation* was demonstrated by the College Preparatory track. An average of 80% agreed with the four significant questionnaire items (30, 34, 37 and 40), which assessed *future time orientation*, compared with the General (72%); Remedial

(61%); and ESL (61%) tracks. There was an average difference of 21% between the College Preparatory and ESL tracks.

First, the College Preparatory track averaged 80% agreement with their self-assessments of *future time orientation* beliefs. In contrast, 20% of the College Preparatory track did not agree with these future-oriented beliefs; they can be described as present-oriented. Second, the General track averaged 72% agreement with the self-assessments of *future time orientation* beliefs. In contrast, 28% of this group did not agree with these future-oriented beliefs; they can be described as present-oriented. Third, the Remedial track averaged 61% agreement with the self-assessments of *future time orientation* beliefs. In contrast, 39% of this group did not agree with these future-oriented beliefs; they can be described as present-oriented. Fourth, the ESL track averaged 61% agreement with the self-assessments of *future time orientation* beliefs. In contrast, 39% of this group did not agree with these future-oriented beliefs; they can be described as present-oriented. In conclusion, a higher percentage of each track agreed with *future time orientation* beliefs, for an overall average of 69%.

Assessment of Temporality: Present Time Orientation Questionnaire Results

In each track, the sub-group which chose the three *Present Time Orientation* responses (31, 33 and 36) tended not to be supported by the corresponding results on the *Cloze Test*, which manifested *future time orientation* and *extended temporal integration.*

The three *Present Time Orientation* responses focused on *fatalism*, Present Factor 5 in the Gonzalez and Zimbardo (1985) research:

> **Present Factor 5: Fatalistic, worry-free, avoid planning.**
>
> Individuals with this orientation can be characterized as living one day at a time; they avoid planning into the near future and believe that their fate is controlled by destiny rather than their efforts (Gonzalez & Zimbardo, 1985, p. 24).

This factor correlates strongly with a sense of resignation in that an individual's future success or failure is affected only by luck, in conjunction with little ability to defer gratification. According to Cottle and Klineberg (1974):

> It is clear that "impulse deferral" is likely to occur only when future rewards can be confidently predicted, and when people sense that the goals that they anticipate are at least to some degree under their personal control. Such conditions are rarely found among those who live in poverty. Most are likely instead to develop a fatalistic perspective on their lives, if only to protect their self-esteem in the face of repeated frustration (Cottle & Klineberg, 1974, p. 189).

For the working class and the poor, the concept of powerful external control, such as luck or fate, is paramount. For this group, powerful external control easily outmatches the development of internal control. If the external world is all-powerful, then the individual is always powerless to affect positive change in his life.

In each track, the present-oriented sub-group tended not to be supported by the results on the *Cloze Test*. Each of the lower three tracks tended to manifest subsequently larger increases in *present*

time orientation. Please refer to Table 23 for Present Time Orientation Questionnaire item 31 results:

Table 23

Percentages of agreement for Present Time Orientation Questionnaire Item 31

I think it is useless to plan too far ahead because things don't ever turn out the way I want.

Track	Percentages
College Preparatory	50%
General	57
Remedial	67
ESL	46

These results show both increases and decreases in students' *fatalistic* attitude. Predictably, the General and Remedial tracks are more *fatalistic* than the College Preparatory track, but the ESL and College Preparatory tracks are very close in agreement levels. This suggests that students' expectations, based on their changing roles, tend *not* to be congruent with reality. Please refer to Table 24 for Present Time Orientation Questionnaire item 33 results:

Table 24

Percentages of agreement for Present Time Orientation Questionnaire Item 33

I try to live one day at a time.

Track	Percentages
College Preparatory	79%
General	70
Remedial	78
ESL	59

These results show a decrease per track in students' *fatalistic* attitude. There was a total decrease of 20% from the College Preparatory to the ESL track, and the College Preparatory, General and Remedial tracks were within 8% of agreement. This suggests that the three higher tracks feel less pressure to plan for the future, in contrast with the ESL track. Please refer to Table 25 for Present Time Orientation Questionnaire item 36 results:

Table 25

Percentages of agreement for Present Time Orientation Questionnaire Item 36

I don't make lists of things I must do.

Track	Percentages
College Preparatory	61%
General	66
Remedial	75
ESL	58

These results show both increases and decreases in students' *fatalistic* attitudes. The College Preparatory, General and ESL tracks were within 8% of agreement. This suggests that these tracks depend more on adult intervention to keep them organized. The Remedial track appears to depend the most on adult intervention.

Summary of Findings for Research Questions 7 - 10

In general, *present time orientation* was demonstrated by each of the four tracks. An average of 61% of the College Preparatory track expressed agreement with the three *present time orientation item*s (31, 33, and 36), which assessed *present time orientation*, compared with the General (66%); Remedial (75%); and ESL (58%). There was an average difference of only 3% between the College Preparatory and ESL tracks.

First, the College Preparatory track averaged 63% agreement with their self-assessments of *present time orientation* beliefs. In contrast, 37% of the College Preparatory track did not agree with these present-oriented beliefs; they can be described as future-oriented. Second, the General track averaged 64% agreement with the self-assessments of *present time orientation* beliefs. In contrast, 36% of this group did not agree with these present-oriented beliefs. Third, the Remedial track averaged 73% agreement with the self-assessments of *present time orientation* beliefs. In contrast, 27% of this group did not agree with these present-oriented beliefs. Fourth, the ESL track averaged 54% agreement with the self-assessments of *present time orientation* beliefs. In contrast, 46% of this group did not agree with these present-oriented beliefs. In conclusion, a higher percentage of each track identified with *present time orientation* beliefs, for an overall average of 65%.

In comparing the average overall percentage of students in agreement with *future time orientation* (69%) with the overall average percentage of students in agreement with *present time orientation* (65%), it would seem that this *Time Orientation Questionnaire* may have caught many of the students in transition from the present focus to the future. However, if we accept the results of Cottle (1967b), whose visual *temporal integration* test showed 60% of the 18-to-22-year-old male and female lower-middle class subjects to have a complete lack of integration of the past, present and future, then the *Time Orientation Questionnaire* has confirmed his findings through a different instrument.

Overall Summary of Findings for Research Questions 1 - 6

The results for Research Questions 1, 2, 3, 4, 5 and 6 have established that *time orientation* and *temporal integration* are discrete and critical components of *PEG*. The Anova and chi-square applications showed that *PEGs*, per track placement and *CTBS reading comprehension* scores, are statistically significant in terms of the temporal and linguistic variables that were hypothesized to be significant factors in reading comprehension development.

The results from this study indicate that *PEGs* are theoretically predictable and a legitimate set of testable criteria which relate to both track placement and reading ability. Establishing these *PEG* factors as underlying components of track placement and reading comprehension supports the argument that *time orientation* and *temporal integration* are significant factors which impact student achievement, especially in reading comprehension development.

The data indicate significant relationships between track placement, *time orientation*, *temporal integration*, *CTBS reading comprehension* scores and *Cloze Test reading comprehension* results. In addition, the data showed significant relationships between track placement and *time orientation*, as self-described on the *Time Orientation Questionnaire*. The sets of *time orientation* and *temporal integration* data from the *Cloze Test* and the *Time Orientation Questionnaire* show the underlying temporal and linguistic variables of track-based *PEGs*. Together, the *time orientation* and *temporal integration* data have shown clearly defined *PEGs* which affect both track placement and reading comprehension.

In the next section, the results from Research Questions 7, 8, 9 and 10 will be discussed. These research questions focus on relationships between correlations of data from the *Time Orientation Questionnaire* and the *Cloze Test*, linking together temporal and linguistic variables which show track-based *PEGs*.

Summary of Findings for Research Questions 7-10

There was a clear, per-track decrease from the College Preparatory to the ESL track in students' ability to both conceptualize and linguistically describe the past, and a striking division between the three higher track levels and the ESL track in conceptualizing and linguistically describing linear time linking past, present and future. These are critical issues linked with life experiences, *time orientation*, *temporal integration* and Time Orientation Factors 5 (present, fatalistic, worry-free, avoid planning); 1 (future, work motivation perseverance); and 4 (future, specific daily planning). An exploration of the interrelationships of these issues follows (please see Appendices F and G).

Working Class Students

A reader's predictions about the meaning of a text or a *cloze test* are driven by his or her temporal schemata and locus of control. A working-class student's temporal schemata are developed through daily life experiences in interaction with social environments, primarily at home. The verb tense schemata are experiential networks of psycho-linguistic interconnections. These interconnections relate

both deep- and surface-levels of the choice and use of possible syntactic constructions which describe interaction in social environments. Lack of continuity and unpredictability of change in the past tend to be the daily life experiences of a child who grows up in a poor or working-class environment, and an unpredictable past impacts the present both temporally and linguistically. Given these students' unpredictable pasts, external locus of control, and the *Cloze Test* options to focus on the present, many working-class students preferred not to access their own personal pasts, thereby avoiding the use of the past tense. Working-class adolescents tend to overfocus on the present, which seems more predictable and controllable, and use the present tense.

Many working-class students refracted the largely past tense *Cloze Test* selection through the *present time orientation/ shortened temporal integration* frame through which they view the world. Since the working-class student's present tense schema is so much stronger than the past, and so easily tapped, that is the one which drives his reading comprehension efforts. Overuse of the present tense leads towards reading comprehension failure, followed by eventually dropping out from the educational process completely. The combination of the working-class student's unpredictcable past, *present time orientation* and *shortened temporal integration* tended to result in agreement with *Time Orientation Questionnaire* item 40, "It seems to me that it doesn't make sense to worry about the future, since luck determines what will happen." For the working-class student, if the past in the home environment was unpredictable and uncontrollable, then present efforts in the school environment cannot

be depended on to result in predictable and controllable success in the future.

If the text presumes a clearly defined and easily accessible past tense schemata, the working-class student with a weakly-defined and not easily accessible past tense schemata will fail to achieve comprehension of a text, due to a mismatch of schemata strengths. As reading proceeds, the temporal schemata frame of the text is overpowered by that of the working-class student, whose weakly defined set of past tense schemata fail to interlock effectively with the text's strong set.

What working-class students revealed about their attitude towards*time orientation* was not supported by their verb tense usage, which indicated a strong *present time orientation*, as established by the relationships in both the *Time Orientation Questionnaire* and *Cloze Test* data from Research Question 7. In the *temporal integration Cloze Test* items, students were given a choice between a definite tense, the past, and an indefinite tense, the present perfect. The working-class students' attitude towards their past life experiences of unpredictability and lack of orderly change strongly affected their tendency to choose the past, and more definite, verb tense. They were much less likely to choose the present perfect tense, which is more ambiguous in its range of past through the present, towards the future. Working-class students clearly preferred the discrete, or definite past tense (Cohen, 1968) rather than the indefinite present perfect tense. The working-class students' underlying *present time orientation* strongly affected their tendency to

choose the present and past verb tenses, when given respective choices of the past and present perfect verb tenses.

Middle-Class Students

What middle-class students revealed about their attitude towards *time orientation* was not supported by their verb tense usage, which indicated a strong *future time orientation* and internal locus of control, as established by the relationships in the both the *Time Orientation Questionnaire* and *Cloze Test* data from Research Question 8. The middle-class students' underlying *future time orientation* strongly affected their tendency to choose the past verb tense.

The *temporal integration Cloze Test* items presented an interesting contrast. For example, all four tracks agreed in their choice of the present perfect tense that the man referred to in Cloze Item 7 had been seen several times in the indefinite past, and might be seen again in the future. Sixty-six per cent of the ESL track was aware the immediate present in the high school environment, a world involving many repetitive interactions with the same people. In contrast, 33% of the ESL track favored the past tense, showing a possible belief that the man in question had been seen once, and only once, by the individual who was being asked for information.

Overall Summary

This study examined the degree of differences in *time orientation* and *temporal integration* among four high school tracks, and is significant in three areas. First, information about the

correlations between *time orientation*, *temporal integration* and reading comprehension will improve our knowledge base aimed at educational reform of programs for at-risk students. Second, this knowledge base focuses on developing ways to increase minority and working-class student achievement and lower the dropout rate. Third, more information about the interaction of minority students and majority-culture materials will help in revising the English/ language arts curriculum to make it more sensitive to the temporality and language development needs of lower-track students.

CHAPTER 5
IMPLICATIONS AND RECOMMENDATIONS

To review, this paper began with the view that at-risk students have acquired, through family and community socialization, the present tense as their main linguistic characteristic of an underlying combination of *present time orientation* and *shortened temporal integration*. This problem, which affects student reading achievement, placement, growth, acculturation and opportunities, has been unaccounted for in educational instruction. This chapter takes the position that it is possible to take advantage of the *present time orientation* that this population has acquired, affirm it, and build on it to make school function equally for all the students. That is, it is possible to teach at-risk students a sense of the future and its connections with the present and the past, giving them more options to use the school as middle-class students do–to prepare for their individual futures.

To accomplish this purpose, Piaget's schema theory and Oller's *pragmatic expectancy grammar* (*PEG*), which is a combination of *time orientation* and *temporal integration,* have been used as key constructs to explore reading comprehension and achievement for four track levels in high school. It should be noted again that this study works on the assumption that social class socialization takes primacy over second language acquisition factors. To some extent, the ESL track results suggest some form of interaction because they do not follow the predicted outcomes as clearly as the other tracks. This would appear to be the result of the interaction of the

psycholinguistic-based theory of second language acquisition with social class factors.

The theoretical orientation of this study obviously guides the interpretation of these results. While the data do not support conclusive proof of the theoretical position taken here, neither do they deny it. The position established here reflects a strong consistency with the data, but it should be acknowledged that other theoretical positions have not been eliminated. Rather, the theoretical position of this study receives support, but not exclusive confirmation.

From the social class socialization theoretical perspective , this chapter will review the support for developing a temporally-sophisticated strategy to improve the reading comprehension and retention of low-achieving students, because these students can achieve at much higher levels. Second, the underlying priorities of a cohesive effort towards this goal will be examined. Literacy development theoretically and practically takes place in a pragmatic, communicative competence framework. Functional literacy development should link the acquisition of language forms and language functions, using track-based *PEGs* as the guides to complement the at-risk students' learning experiences outside of school. Facilitating literacy development also means facilitating temporal development, concurrently.

Theoretical Orientation for Reading Instruction

Piaget's schema theory asserts that an individual's acceptance and integration of new information will be based on previously

established ways of making sense of the world. Schemata are labelled knowledge slots, or containers which are dynamically arrranged in temporal, linguistic, and conceptual relationships. This arrangement functions both socially and personally in the development of self-concept, motivation, the expression of ability, and in the exercise of reading comprehension. When the temporal schemata are limited to the present, then an individual will tend to assign all incoming past, present or future temporal information, from either the social environment or the print environment, into the present-time oriented slot. In other words, when the only relevant temporal schemata are limited to the present, then all temporal schemata along the continuum from the past to the future will be interpreted by an individual as the present.

At-risk students initially predict and interpret new print input based on *present time orientation* and *shortened temporal integration*, which have been socially constructed at home and in the community. According to Piaget, these students are responding in predictable ways.

Prediction and anticipation, which are critical to efficient reading, are based on what the reader already knows and expects. Prediction is possible only by actively accessing the reader's prior knowledge, and applying it to print. Anticipation involves the reader's positive emotional response to the meaning in the next paragraph during the act of reading. Anticipations of future meaning, in the next paragraph *and* in one's life, are inextricably linked. Anticipation functions in gauging the meaning of the next paragraph in a given reading assignment and in assessing job possibilities. Those

students who believe that the print in the next paragraph is controllable, also tend to believe that they can and do influence the *causes of events* in their lives through *internal locus of control.* In contrast, those students who believe that the print in the next paragraph is not controllable, also tend to believe that cannot and do not influence the *causes of events* in their lives through *external locus of control.* If the student has no identifiable present or future goals, then his low reading comprehension level tends to reflect that issue.

Reading is driven by anticipation, which can either be shortened or extended. If there is positive anticipation of the future, then the reader is more likely to be future-oriented, with an *internal locus of control.* If there is negative anticipation of the future, then the reader is more likely to be present-oriented, with an *external locus of control,* discounting both the immediate reading task and the concept of using education as a vehicle for self-determination.

Oller's construct, *PEG*, is a predictive theory of reality which is grounded in schema theory and used to generate temporal language behavior. It anticipates the limits of a range of temporal meanings, as experienced in life and in print. These limits are framed within a combination of an individual's particular *time orientation* and range of *temporal integration.* These temporal constructs are cognitive and motivational, developmental and learned. Both of these temporal concepts, in concert, act schematically to predict a reality of print, a meaning of a text as it interacts with a reader's *PEG.*

There are temporal similarities in the *PEGs* of at-risk students, who are usually placed on the lowest tracks. These groups of students tend to experience *shortened temporal integration,* a limited

conception and use of the past and present perfect verb tenses. These students systematically overfocus on the present tense, to exclusion of other tenses which have, as their referents, the past and the future. Disadvantaged students have acquired, through language experience directly connected to their need to survive, the present tense. The present tense, which focuses on the current relevance of an activity or state, contrasts with the past tense, which describes a finished activity or state. The present perfect tense, the most commonly used tense which expresses process from the past through the present and towards the future, has a very small place in the communicative competence and *Present PEG* of remedial readers. The lack of use of the present perfect and past tenses and their underlying temporal construct, a *future time orientation*, is *not* a deficit, but a difference which is based on the interaction of language socialization and temporal conceptualization.

Oller's schematic concept of *PEG* integrates *time orientation* and *temporal integration* with reading comprehension through verb tenses, which form a schema locating an individual in a particular *time orientation. PEGs*, which are both socially constructed and internalized, construct textual meaning through a continuum of limits of possible ranges of meanings. *PEGs* can be more compressed, as experienced by those students who operate through a *present time orientation* and *shortened temporal integration.* In contrast, other *PEGs* can be more expansive, as experienced by those students who operate through a *future time orientation* and *extended temporal integration.*

If the appropriate past and future schemata that are represented in the text are not available to the reader, then those patterns of understanding cannot be accessed and applied during text processing. Since reading comprehension is the defined as the level of successful integration of internal schemata with extrernal schemata, the results for an individual operating from a *Present PEG* position will be very low. Distinguishing a past textual event from a present one will tend to be difficult, if not impossible, without appropriate intervention. In addition, arranging narrative events in sequence through chronological order will also tend to be very difficult.

Bernstein believes that school failure stems from language code differences between social classes. This researcher believes that school failure stems from a combination of underlying *present time orientation* and the resulting present verb tense choices. Since temporal schemata are initially acquired in a home-based social context, they can be modified and expanded through another social context–school. The student's task at home has been to figure out what adults mean when they use different verb tenses, mapping those temporal distinctions of tenses onto their own experiences. If the adults use a variety of tenses which represent the linear time continuum of the past through the present to the future, then the student learns to use the same range of tenses. However, if the caregivers perceive their world through a present lens only, then that is the only section of the time continuum which is initially acquired by the student at home and in the community.

At school, the student's task is to figure out what the text means when it presents a different blueprint of reality through using a range of tenses. For those students who have grown up in a middle-class environment, the temporal range of language of the text is simply a continuation of the temporal range of language of the home. However, for those students who have grown up in a working-class or poor environment, the temporal language of the text is in sharp contrast to the temporal language of the home.

Verb tenses, which tend to be arrayed in social class-based ways, are systematically connected to the life experiences of language users. For example, Labov's (1967) research focused on the past tense morpheme **-ed**, but not the underlying *present time orientation* which informed his junior high students' perception of what is temporally relevant and what is not. Their temporal and linguistic failure to perceive the past, as expressed in the past tense form of the verbs in context, impacted their reading comprehension from 45% to 65%.

According to the data in this study of 9th-grade students, the lack of a clear concept of the past correlates with the lack of a clear concept of the future, and both of these results indicate that a given individual would *not* tend to use either the past or present perfect tenses in describing his reality, whether in life or in print. In other words, failure to perceive the past, as expressed in the past tense form of verb choices in context, affected the General track's comprehension 16%, the Remedial track 25%, and the ESL track 40%. In addition, failure to perceive the linkage between the past and the future, as expressed in the present perfect form of verb choices in

context, affected the College Preparatory track 29%, the General track 44%, the Remedial track 38%, and the ESL track 52%. Clearly, the *Present Pegs*, consisting of *present time orientation* and *shortened temporal integration,* adversely affects their reading comprehension of majority materials.

The very basis of literacy is the skill of transcending the present context. *Transcending is second: establishing the present context is first.* The students who operate from the *Present PEG* should access real time first as an anchor, and then learn to establish connections to the near past and near future through past-referenced and predictive framing of their life experiences, interests and goals. After all, the past and future, which include causality and predictive skills, are only that in relationship to the present. The past and future can be gradually expanded to include more distance from the present.

Reading comprehension is directly related to an individual operating on the conceptual and motivational basis of time as a temporally logical, linear sequence of events in his life, stretching from the past, through the present, and directed towards his personal future. The *future time orientation* is the accepted norm for a well-adjusted middle-class individual with good reading comprehension skills. However, the *present time orientation* is the norm for a well-adjusted working-class or poor individual. Since the *future time orientation* is necessary for both academic and occupational success in a modern industrial society, establishing the past in its cause-and-effect linkage with the present is the first step, for both the school and its *Present Peg* students. For the adolescent to achieve a high level of reading comprehension, he must first integrate past events with

present experiences, and then connect both the past and the present with future possibilities. The *Present PEG* student's temporal range should be elasticized through appropriate curriculum and materials in order to clearly articulate the causal connections between past, present and future experiences, both in life and in a text.

The school's task is to acknowledge the *present* and *future time orientations*, and then promote and facilitate the expansion of temporal schemata for low-achieving groups. The temporal schemata expansion can be designed to promote literacy skills which will enable all students to succeed. The first level of activity is participatory interaction, including what-questions and explanations, according to the linearity of the story. The second level is providing links with the students' worlds, past, present and anticipated, which can be knit into the sequential exploration of a narrative. The third level is demonstrating that textual reality can be both alluded to and suspended, so that the students can learn how to move easily into the past from the present topical base, and also apply expectations to the future. All of these literacy-based skills are interdependent with the schematic development of a *future time orientation* and *extended temporal integration.*

"The problem from an educational point of view is how to take advantage of the expectancies that a learner has already acquired in trying to teach new material" (Oller, 1979, p. 31; Freire, 1970). The issue is how to aid in the generation of new schemata in the at-risk student's *Present PEG* , which lead developmentally towards a more *Future PEG.* New schemata can be generated in two concurrent ways. First, the *Future PEG* schemata can be approached through

the modification of the *Present PEG*, through *tuning* (Rumelhart, 1980, p. 53). *Tuning* constitutes modification of schemata that is already in place, through learning by analogy (Rumelhart & Norman, 1978). Second, the *Future PEG* can be formed through *schema induction*, which involves the repetition of a series of *Future PEG*-based literacy activities (Rumelhart & Norman, 1978).

In the continuum of possible *PEGs*, the first task is to match the students' track-based *PEG* to a given textual *PEG*, as represented by both topical currency and embedded verb tenses, in various narrative reading materials. In other words, adjust a text's temporal schemata to the reader's temporal schemata, in order to facilitate a higher level of reading comprehension through syntactic and semantic processing. The facts presented should be, to some degree, aligned with students' belief systems, providing a more comfortable print environment for better learning. Since the at-risk student addresses his home world and his school world through a *Present PEG*, then a bridge from the school to the home must be built.

The second task is to elasticize the students' comfort levels in operating within a gradually expanding *temporal integration*, through narratives with a subtext of the benefits of future temporality. Expanding the operational base of the present-oriented *PEG* would mean that the individual would begin to make sense of past and anticipated events, in terms of how those events relate to the present.

The third task is to incorporate those literacy-based skills which are interdependent with the schematic development of a *future time orientation* and *extended temporal integration*. A person operating within the present-oriented *PEG* would begin to see a relationship

between what one did in the past, what one does today, and what one can achieve in both the near and distant future. This temporal and pro-active relationship would be taught in an environment in which print is presented as both controllable and functional through an individual's interactions with it. The following discussion will explore the ways in which temporal schemata generation can be applied in educational practice.

Temporal Intervention

The educational problem is how to accomplish temporal intervention by teaching about temporality (Bateman, 1968; Berry, 1987; Freire, 1970, 1973). The teaching should focus on establishing a sense of the future, by starting from the present and incorporating the definite (past tense) and then the indefinite past (present perfect). The vehicle to use is language and temporally-designed reading materials throughout the curriculum, so that a temporally-sophisticated curriculum can be designed to meet the needs of at-risk students.

Teaching the future involves analysis of both the students' temporal reality and the underlying temporal assumptions in the secondary curriculum, in order to bridge the two and align students' psychological time and textual time. Stages can be undertaken to minimize the temporal incongruities between the students and the school. These stages would involve developing reading materials which both respect and reflect students' *present time orientation* and *shortened temporal integration*, while embedding those materials within *Future PEG* language use which will aid their academic

success. It is possible to integrate popular culture topics, which are focused on student interests, and academic concepts. The key in the task of developing reading materials is to use the students' life experiences, interests and temporality as the foundation for teaching literacy-based skills.

The results of the two instruments used in this study, the *Cloze Test of Reading Comprehension* and the *Time Orientation Questionnaire*, indicate that it is possible to teach *future time orientation* and *extended temporal integration* through the use of carefully designed materials. These temporal concepts can be introduced into the classroom in stages, beginning with the school's recognition and acceptance of differing temporalities within the school's clientele. There would be school accomodation of the students' *present time orientation* and *shortened temporal integration*, along with the teaching of the mainstream *future time orientation* and *extended temporal integration*. According to Cook-Gumperz (1986):

> Since the essential character of the school learning process is verbal exchange, it is language usage differences that are likely to be and remain the biggest focus of concern. ... Literacy learning takes place in a social environment through interactional exchanges in which what is to be learnt is to some extent a joint construction of teacher and student. It is the purpose of educational settings to make possible this mutual construction (Cook-Gumperz, 1986, p. 8).

Students are participants in socially constructed, or "community knowledge" (Bernstein, 1975, p. 99), otherwise known as popular culture, which is "open to criticism," (Olson, 1980), *unlike the authority vested in a textbook*. The everyday community knowledge can be

validated by the curriculum, leading to more connections between the student and the school. As Muskal (1983) asserts:

> The inclusion of a learner's everyday life as part of the curriculum is a form of official recognition that the learner's life is valued. It is an acceptance of the individual and a validation of his or her worth. Inclusion effectively legitimates the learner's life, while exclusion denies its importance. *Inclusion [of the learner's everyday life] promotes the involvement of learners in the classroom; exclusion limits personal involvement* (Muskal, 1983, p. 5; emphasis not in original).

Oakes and Lipton (1992) support the approach of "tak[ing] informal knowledge seriously [and] ... promot[ing] socially constructed knowledge" (Oakes & Lipton, 1992, p. 450). Personal involvement is risky, and at-risk students' vulnerability stems from not having been explicitly taught the otherwise implicit temporal assumptions of the elaborated middle-class language code of the school.

As we have seen, education is only one of the three socialization processes. The other two processes are the home and the community, both of which are bridged by popular culture via the visual and auditory media: TV, movies and radio. As Muskal (1983) asserts, "HOME, SCHOOL and STREET are the three main subcultures common to each learner's everyday life. By junior high age, STREET [popular culture] is the dominant culture in the learner's life" (Muskal, 1983, p. 12).

Popular culture in the form of "immediate facts" (Logan & O'Hearn, 1982), the students' primary source of socialization both at home and in the street, provides unlimited current topics which can form presently-true springboards to use in developing *Future PEG* via appropriate verb tense usage. The one temporal section in the

continuum of past, present and future that is shared by all students is the present, the starting point for reading instruction. Current and real topics anchor students in the present, their only clear frame of temporal reference, which they can use as a pivot point to access the past, the future, and the interim connections between them.

By emphasizing the current truth value of the reading material, students can be required to use the appropriate tenses in developing and answering their own comprehension questions. The reading task can be reframed as a complex problem to be solved (Freire, 1970, 1973; Oakes & Lipton, 1992). In this way, students must use their critical thinking and reading comprehension skills in order to determine meaning. By using popular culture materials, the curriculum will validate the student's informal, community-based knowledge and language. Students will receive new information based on what they know, with a closer match between the at-risk student's internal *Present PEG* and the external *Future PEG* of the written word. If educational practice is aware of this knowledge and underlying temporality system, the impact of teachers' lessons will be enhanced. The cluster of three chronic problems, reading comprehension, achievement, and retention among in at-risk populations, can be addressed with intervention in *time orientation* and *temporal integration* through curriculum and materials revision.

Toward A Temporally-Empowering Curriculum

The following program development steps (Tillman, 1978) can be considered a beginning in providing at-risk students with temporal intervention instruction and materials.

Teachers tend to teach from within their own *future time orientation*. They need to learn about and accept their students' temporality as valid in order to bridge the two *time orientations*, present and future. It is possible to accept alternate ways of interpreting the *time orientations* in which the world works for others. Since "the ability to bring linear order to the chaos of daily experience is central to the cognitive processes tapped by academic pursuits" (Craig, 1992, p. 67; cf. Feagans, 1982), *the development of sequence within the context of what is personally significant in the immediate past and present of at-risk students should be the primary focus of teacher inservices*. Instead of atomism, the curriculum should be based on thematically connected materials which gradually elasticize the temporal distance between the present and the past, the present and the future, and the past and the future (Freire, 1970, 1973). The goal of the curriculum as a whole should be temporal compatibility (Cohen, 1968) through "incorporat[ing] the social context of language acquisition into the instructional context" (Williams, 1970, p. vi). Improving the temporal congruence between the at-risk population and the materials which they use to maximize reading comprehension may become a deciding factor in student success.

A teacher's understandings about language and cultural differences should be based on a cognitive theory perspective, which

is based on the theory that all knowledge is schematic, including conceptual knowledge and knowledge about everyday experiences, language itself, and norms for how to use language. For example, Bernstein (1970) argues that:

> ... *If the culture of the teacher is to become part of the consciousness of the child, then the culture of the child must first be in the consciousness of the teacher.* ... Much of the context of our schools is, unwittingly, drawn from aspects of the symbolic world of the middle class; when ... a [working-class] child steps into school he is stepping into a symbolic system which does not provide for him a linkage with his life outside (Bernstein, 1970, p. 57; emphasis not in original).

Bernstein's "symbolic system" is most easily accessed through instructional materials whose verb tenses may be mapped onto a different student temporal reality than the middle-class one that was intended by the writer. As Freire (1970) asserts, "the process of searching for the meaningful thematics should include a concern for the links between themes, a concern to pose themes as problems, and a concern for their historical-cultural context" (Freire, 1970, p. 99).

As demonstrated by the data in this study, "if a stimulus word elicits an entirely different set of associations in one group from those it elicits in another group, the stimulus word can be considered to mean two different things" (Entwisle, 1970, p. 132). The stimulus verbs should be carefully evaluated. Teachers should be aware of the temporal norms for themselves and for their students, just as students need to learn the temporal norms of the school. As Muskal (1983) asserts,

> ...The teacher must be willing and eager to reverse roles with the student. ... The teacher must become a learner.... . The teacher must be willing to share his or her everyday life with other learners. The learner's expertise, one's own life, is the core of a successful program; it is the subject matter which the teacher shapes into a successful curriculum (Muskal, 1983, p. 5-6).

The goals of this reading comprehension development program should be achieved through:

> the representation of reality through language. This mean[s]]using the words already in the [student's] repertoire so as to allow him both to see their relevance to particular situations and to extend their meaning to a wider framework. It also mean[s] having the [student] test out the relevance of his verbalizations by giving him the opportunity to demonstrate whether his language reflect[s] or differ[s] from (Blank, 1970, p. 75)

the reality of the text.

Teachers should not expect students to follow a unilinear path of language and temporal development. When teachers are aware of the magnitude and multiple dimensions of temporal differences among working-class students, then they will be more able to build in flexibility. In addition, they will be able to affirm and use the background knowledge of their working-class students to facilitate their comprehension of text material. Literacy learning should take place in a social environment through interactional exchanges in which what is to be learned is a joint, collaborative construction of teacher and student, providing *opportunities to teach linear order through the concept of cause and effect, or the connections between the past with the present, (what happened to produce a present*

effect) , and the present with the future (what will happen, based upon a present cause). In other words, the concept of cause and effect has two dimensions: past (expressed through the past tense) and future (expressed through the present perfect). For those students who operate through internal locus of control, these temporal relationships tend to be clearly articulated and connected. However, for those students who operate through external locus of control, these temporal relationships tend to be atomistic, and not at all integrated.

Developing teachers' professional knowledge is crucial, for what the teacher knows and practices is as important as the reading materials or reading comprehension tests. It is critical for reading teachers in the General, Remedial and ESL tracks to become familiar with the properties of text analysis and procedures for text editing for several reasons. To move in a direction that is temporally sensitive to low-achieving students, the following six issues must be addressed.

One: Identify Temporal and Reading Behaviors of Students

The school should accept the reality that its student clienteles operate within varying *time orientations* which affect student response to print material. The school's task of owning the problem means taking into account the fact that difference socio-economic populations, functioning as track levels, operate within radically different *time orientations*. For example, FEP (full-English proficient) ESL students typically receive no supplementary language instruction, and tend to be considered by the school system as fluent English speakers. It is assumed that these students can use the past

and present perfect tenses correctly, in addition to comprehending and predicting the outcome of a given narrative. However, based on the averaged results of this study, only 60% of the ESL students used the past tense correctly, and only 48% of them used the present perfect tense correctly.

Other tracks responded in similar ways. In the General track, 84% of the students used the past tense correctly, but only 56% of them used the present perfect tense correctly. In the Remedial track, only 75% of the students used the past tense correctly, and 62% of them used the present perfect tense correctly. These results establish that there are large numbers of students in each of the three lower tracks who require intervention in temporal concepts and the linguistic forms which represent those concepts.

Reading teachers can learn how to examine and appreciate the differential responses of at-risk readers to text features, beyond the grade levels determined by readability formulas. (Barnitz, 1985) By themselves, readability formulas rely only on surface-level attention to "standards of length and complexity of words or sentences" (De Beaugrande, 1980, p. 283). Carrell (1987) argues that readability formulas "ignore the reader and reader variables such as background knowledge. ... This can be devastating, particularly if the reader and the text come from different cultural backgrounds" (Carrell, 1987, p. 17).

Background knowledge should be taken into account, and the interaction between the reader's prior knowledge schemata, including temporality, and the text structure is paramount. As De Beaugrande and Dressler (1980) argue: "Readability must **not** be defined as the

expenditure of the least effort, ... but rather as the appropriate proportion between required effort and resulting insights" (De Beaugrande & Dressler, 1980, p. 213). In other words, one of the criteria for choosing materials is that the temporal range be a degree farther into the past and/or the future than the students' current *temporal integration* range.

The curriculum goal is to gradually graft *Future PEG* characteristics onto a thematically-connected series of *Present PEG* topics, extending from the familiar popular culture topic to include the unfamiliar middle-class temporal description of it. This means mapping social working-class realities onto middle-class forms of verbs and temporal adverbs which function as linguistic manifestations of *future time orientation* and *extended temporal integration* through the *Future PEG*. Bernstein (1970) argues that:

> We should start to realize that the social experience the [student] already possesses is valid and significant, and that this social experience should be reflected back to him as being valid and significant. It can only be reflected back to him if it is part of the texture of the learning experience we create (Bernstein, 1970, p. 58).

The teacher should use FACTS (sic., Schmidt, 1979) which are framed within *present time orientation* and *shortened temporal integration*, and nest them within the verb forms of the *future time orientation* and *extended temporal integration* BELIEF SYSTEM (Cohen, 1969). The development of the *Future PEG* should not be at the expense of the *Present PEG*, but emerge as a parallel reality to it (Taft, 1977; Taylor, 1991).

Since at-risk students tend to lack clear concepts of the past and future, it is necessary to build them gradually, matching the *Present PEG* with the currency of the topic choice, and expanding temporal schemata through the use of *Future PEG* in the narrative surrounding the topic. According to Fraser (1978), "future and past make sense only in reference to the present" (Fraser, 1978, p. 342). To increase the comfort level of the at-risk students, the materials should use "knowledge that makes [them] feel secure" (Obah, 1983, p. 130; cf. Smith, 1975, 1978). This process involves knitting connections from the recent past, through immediate facts, and into the near future via a sequential, problem-solving exploration of the story itself (Heath, 1982b).

This cause-and-effect chain, linking the past with the future through the present, functions best with the use of narrative. According to Labov and Fanshel (1977), "narrative [is] one means of representing past experience by a sequence of ordered sentences that present the temporal sequences of these events by that order. Temporal sequencing is a central focus of the narrative form" (Labov & Fanshel, 1977, p. 105; cf. Goleman, 1993; Kemper, 1983; Warren, Nicholas & Trabasso, 1979). The choices of narrative should include "*temblón*, shiver stories. These overtly entertain, but are meant to cause listeners to experience a shiver of awareness that leads to thoughtfulness, contemplation, and action" (Estes, 1992, p. 303).

Teachers can begin with a present-oriented topic, and edit short, one-page stories in a gradually elastic way: from a range of yesterday to tomorrow; last week to next week; last month to next month, etc. They can encourage student development of both the

past and present perfect tenses, along with the notion of process and change over time. A broader, more elastic continuum of past to the future will begin to form. The emergence of a sense of time continuum will coordinate with a more flexible, interpretive approach to reading comprehension.

Two: Diagnose Temporal and Reading Behaviors of Students

Reading teachers can own the problem by closely analyzing the scope and sequence in curriculum design with a temporally-sensitive lens. Teachers can learn about the text demands placed on at-risk readers by assessing their students' *time orientations* and range of *temporal integration*, by means of a *cloze test* such as the one used in this study (Brown, 1986). The information gained from such a test would establish a basis for systematically and comprehensively teaching particular temporal concepts. Later, the *cloze test* could be used in group instruction, to provide teacher-student and student-student interaction and feedback. For example, Brown (1986) suggested using a typed reading selection on an overhead transparency:

> By covering the transparency with a piece of paper when projecting it, the teacher could disclose a portion of the passage; ask the students to write down their predictions (in 15 seconds); disclose another predetermined segment (say 10 or 15 words at a time); and have the students check their answers. These steps could then be repeated throughout the passage (Brown, 1986, p. 7).

Ruffner (1982) has written two reading textbooks, Americana Articles, Vols. I and 2, which use both *cloze* reading comprehension exercises

and underlying temporality principles as central strategies in teaching reading. Another *cloze* source, for individual use, is the software that has been developed by Chomsky and Schwartz (1984).

Temporally sensitive materials should use the maximum amount of semantic/syntactic redundancy and explicitness for clarity of text. The grade-level of the materials should be coordinated with both the students' general reading comprehension level, and the currency of the topic. Popular culture provides an unlimited array of current topics which can form springboards to develop temporal sophistication via appropriate past and present perfect verb tense usage.

Current and real topics, framed to focus on contextual learning and problem-solving, will provide the student with a sense of security. Short, nonfiction stories about real people are especially effective, particularly when they manifest socio-historical trends over time, because students are intrigued by information which is grounded in current reality, which is critical. They are engaged by what is real, true, possible, strange, inside or outside of their everyday experience. In addition, topics can be chosen with connections to other topics or subject areas.

These thematically-linked, contemporary, short non-fiction stories should support a continuous, cohesive subtext of an ever-expanding time continuum featuring pro-active individuals who demonstrate internal locus of control. A well-designed series of current, real human interest stories from popular culture can enable students to make connections with past experience, while developing temporal skills which incorporate the future.

Three: Develop and Implement an Instructional Program to Meet the Temporal and Reading Needs of Students

Teachers can own the solution by assessing student performance by track level, in light of the knowledge of students' initial levels of *present* or *future time orientation*, and *shortened* or *extended temporal integration*. Students can be viewed as having different kinds of temporal competencies, rather than lacking *future orientation* and *extended temporal integration*, the validated middle-class model.

Reading teachers can learn about the relevance and plausibilty of an at-risk reader's text-based inferences. For example, the human interest stories can include a critical incident of student misunderstanding, based on General, Remedial, and ESL *PEGs*. This will provide a focused, guided exposure to temporal schemata. The text-based critical incident should emerge as the result of students' interaction with the text via integrated comprehension questions which highlight various temporal areas of difficulty. These elements can be involved in the students' discovery process. In other words, the misunderstanding will be learner-generated (Darnell, 1970). The teacher should incorporate direct quotations within the comprehension questions, adding a face-to-face quality to the reader-text interaction.

The target past and present perfect tenses should be naturally and strategically embedded in the reading task, so that reading skills would be taught holistically within context and content. The past tense should be the initial focus, so that students receive a great deal

of practice in clearly conceptualizing the past. By emphasizing the truth value and currency of the text, students can be required to use the appropriate target tenses in answering the comprehension questions, either orally or in complete sentence answers

Questions can be developed at the literal and inferential levels to help students focus on specific tenses within the narrative. The comprehension questions must be carefully constructed so that students can demonstrate temporal, syntactic, and semantic understanding relative to the information in the narrative. Teacher-student and peer interaction, plus the careful construction of the comprehension questions in terms of the information in the reading, guide the students and ensure that they process the information. The readings should be no more than one to two pages in length, double-spaced, to provide light space and counteract visual density. The resulting lightness makes the text more accessible, along with the use of clean typeface design.

Students can be taught to conceptualize the past and the future by using the linguistic forms which describe them. Students can be taught to connect present actions to past events and future goals, through temporally-based reading materials which are based on popular culture and feature pro-active individuals. The questions that reading teachers could ask during this interactive process include:

•What can a teacher do to help manage the temporal and linguistic transition?

- How can an instructional action build on the learner's strengths and improve on his limitations? In other words, how can we help students to detect, recognize, retain and then utilize temporal patterns of which they may be unaware?

- How can a learner best be moved from his or her *time orientation* towards a more desirable one?

- How can the teacher design a solution which helps a learner make the passage from where he is, temporally, to a more desirable place?

- How is this student trying to make sense of a new temporal concept?

- What does the student seem to be thinking?

Four: Exploration of a Temporally-Sensitive Reading Program

The point to consider here is that the learner is in transition, and transition is a confusing state. Any analysis of a temporally-sensitive incident must raise the issue of transition in diagnostic and prescriptive senses. Both the diagnostic and prescriptive approaches should take Bernstein's (1960a) caution into account:

> ... The later linguistic change is attempted the more difficult it becomes. ... Resistance, especially unconscious resistance, ... is likely to be very high, for there is every probability that attempts to modify the linguistic orientation will be perceived by the speaker as attempts to change the means whereby he has been socialized. Such language change may involve for the

> speaker the experiences of isolation, bewilderment, and defencelessness; whilst the structure of the 'teaching' situation may well be felt as persecutory (Bernstein, 1960a, p. 321-22).

Reality testing, a method through which a student learns to separate text-based ideas from personal perceptions, can be very useful. According to Fraser (1981):

> Reality testing, although at first approach it seems to pertain only to the present, demands the mobilization of a broad spectrum of feelings and ideas which relate to the human sense of time. ...Reality testing ... ought not be thought of as the exploration of an external, objective temporal organization but must signify, instead, the capacity to create and maintain a peculiar mental set. (Fraser, 1981, p. 4-5).

The key to teaching the future is creating and maintaining an elastic mental set which gradually incorporates the concept of process as occurring from the past through the present and into the future.

This *Future PEG* mental set can be expanded and maintained through focused classroom interaction. Berger and Luckman (1967) have suggested that "the most important vehicle of reality maintenance is conversation. One may view the individual's everyday life in terms of the working away of a conversational apparatus that ongoingly maintains, modifies and reconstructs his subjective reality" (Berger & Luckman, 1967, p. 172). In addition, Williams (1970) argues that "the more ... two individuals do not share a knowledge of one another's social structure, ... the more likely they are to initiate and to focus speech upon what they do share, that is, experience of the speech context" which focuses on the everyday, popular culture world (Williams, 1970, p. vi). According to Scollon and Scollon (1981), this "reality set ...

[indicates] a cognitive orientation toward the everyday world including the learning of that world" (Scollon & Scollon, 1981, p. 42).

For example, one key reading comprehension strategy is that of determining a statement of fact from a statement of opinion. Facts are shared and accepted as given by those who share in community knowledge, while opinions are not necessarily shared or accepted. For example, what is a fact for a middle-class individual may be viewed as opinion by a working-class individual.

Depending upon how the community knowledge is framed for the participants, the meaning within the frame changes drastically (Bateson, 1972). Bateson's concept of *frame* explains how people exchange facts at a mutually agreed-upon level of abstraction. For the purpose of this study, *frame* refers to the level of disembedded, abstracted textual context in relation to the students' levels of understanding. The temporal load can be controlled, so that material is written and presented by consciously taking into account the level of *present time orientation* and *shortened temporal integration* of the students.

When the fact vs. opinion strategy is examined on the micro level of verb tenses in statements related to a narrative, intriguing perceptions of what constitutes "fact" are revealed. First, the temporal reference frame is established by College Preparatory, General, Remedial and ESL track English teachers in their respective classes. For example:

Temporal Load Reference Frame 1:

Teacher:

> We are going to read a true story *which was in the newspaper yesterday* [*low temporal load*]. This story is about a young woman named Carolyn, who has just written a book about her family's life over the last seven years [*an immediate fact*]. The book was just published, and has become a best-seller. Based on this information, which of the following two sentences is correct?
> 1) Carolyn wrote a book.
> 2) Carolyn has just written a book.

Based on the averaged *time orientation* and *temporal integration* cloze test data results alone, this researcher would make the following predictions: that 84% of the College Preparatory students would choose the correct second item using the present perfect tense, along with 70% of the General students, 69% of the Remedial students, and 54% of the ESL students. In contrast, the students who chose the incorrect first item would include 17% of the College Preparatory track, 30% of the General, 32% of the Remedial, and 46% of the ESL. In other words, the teachers in each track, to different degrees, would be faced with very clear differences in student perception of fact vs. opinion.

Class discussion could be initiated regarding the shared knowledge regarding Carolyn, and how that knowledge can be interpreted. What is true about Carolyn's current situation can be explored interactively, so that hidden temporal assumptions can be

revealed and discussed. This example serves as a beginning point at which curriculum can start the process of change.

Temporal Load Reference Frame 1

The following reading comprehension lesson is a continuation of Temporal Load Reference Frame 1, including a glossed analysis of temporal principles with examples of answers where appropriate (Ruffner, 1982):

A Book That Grew from Love and Poverty

Brainstorming Questions - What Do You Think?

First, look at the picture and read the title. What information do they give you about the article? Remember, sometimes there isn't enough information in the title and picture to answer the questions.

What's the purpose of the woman's list? (*what question, state verb, present tense*)

Do you think she is foolish? Is she practical? (*links with the students' world; state verb, present tense)*

Is the man real? *(links with the students' world; state verb, present tense)*

Vocabulary

The following sentences have the new vocabulary from this article. Do you or your student partner know what the underlined words mean? The words or phrases are followed by a word (synonym) or phrase (definition). These words or phrases have the first letters, but not the complete spelling. Can you guess the missing letters? Each space is for one letter.

1. Carolyn Chute was separated from a man. (mar _ _ _ _ to, b _ _ n _ _ li _ _ _ _ wi _ _) (*past tense -> married to, but not living with*)

2. Its family of characters, the Beans, are the ideas that the Chutes' neighbors had of them. (pe _ _ _ _ i _ a st _ _ _) (*present and past tenses -> people in a story*)

3. The couple has lived for the last three years on food stamps. (gover _ _ _ _ _ he _ _ t _ bu _ f _ _ _) (*present perfect tense; government help to buy food*)

Questions for the First Reading

Read the following article without using your dictionary. Think about this question as you read:

Is it possible for a poor person to write a book? (*link with the students' world; state verb, present tense)*

A Book That Grew from Love and Poverty

A little more than seven years ago, Carolyn Chute was separated from a man who had made her feel so terrible about herself that she could no longer write stories. She sat down and wrote a list of what she wanted in a man. What she wrote was this: "Green work pants. Black and red flannel shirt. Black hair. Black beard. Brown eyes. Green truck with fish and deer decals. From the Cornish part of Maine." The Cornish area of Maine is a rugged land of mountains and forests, and it was essentially a mountain man that she was describing. She even painted his picture: black hair parted in the middle, dark, deep-set eyes, a strong, straight nose, and a beard like a black bib framing his face.

Then she went looking for him. With her daughter and sometimes her grandmother along, she drove the wooded roads of Maine. She searched the taverns and showed people her list. "Have you seen this man?" she would say.

"Then I went to a turkey shoot," she said, "and I couldn't believe my eyes–it was him." He looked exactly like her portrait. She was too shy to approach him, but "about two months later, I was in a tavern, and he just walked up to me and stood there looking at me with a big smile on his face." The man who was her date had left the table for a moment. "By the time hecame back," she said, "we were off in a corner, talking about our chickens."

If that seems improbable, then think of this: Carolyn Hawkes, then 30, married Michael Chute, then 22, and began to write again. She has regained the self-confidence to produce a first book that has become very popular and successful. In the poor but loving life that they have made together for the last seven years, Chute has found the raw material and strength to produce her extraordinary first novel, The Beans of Egypt, Maine. Published this month, it is in its third printing. Like its author, it is a book of original language, force, imagination and humor. Its family of characters, the Beans, are the ideas that the Chutes' neighbors had of them. Carolyn said, "They hated us because we were poor, because we didn't have jobs." She half-giggled at the thought.

Chute quit high school at 16 for marriage and motherhood. She finished school at night and then took writing courses at the University of Maine. She wrote the first draft of The Beans in longhand. Since her second husband has worked for a minimum wage when he can find a job–and frequently finds none–the couple has lived for the last three years on food stamps, sometimes without heat, and sometimes with no way to use the bathtub.

Carolyn speaks of her husband, Michael, the mountain man who can neither read nor write, as her co-author. "He kind of wrote it with me," she says. "He and I would talk over characters. Writing it was part of our relationship. He was out of work, so he was around all of the time."

She was thrilled when the publisher sent her first check. "It was like a dream. We all took turns holding it. Even my neighbors." The money was welcome, and she has bought her husband a used truck, with which he hopes to go to work for himself. Even though she's afraid for her privacy, Carolyn has installed a telephone–listed in the names of her geese. "They haven't had any calls," she said.

Question after the First Reading

What do you and your student partner think is the message of this article? (*state verbs, present tense; message = meaning, which may not be directly stated*)

Question for the Second Reading

Remember this question as you read the article for the second time:

Is it possible for a person who doesn't know how to read or write to help write a book? (*state verb, present tense; direct connection with the message discussion for the previous exercise*)

Comprehension Questions

Read each question carefully with your student partner. Answer the questions in complete, written sentences.

1. How long ago did Carolyn feel so terrible about herself that she could no longer write stories? (*state verb, past tense*)
   She felt terrible about herself seven years ago.

2. What would she say to people when she went looking for the mountain man? (*would say = repeated action over time; past tense*)

   She would say, "Have you seen this man?"

3. When she found him, what did he look like? (*past tense; sequence in the past*)

   He looked just like her picture.

4. How long after she found him did she meet him? (*action verb, past tense; sequence in the past*)

   She met him about two months later.

5. How does she describe the characters in her book? (*action verb, present tense*)

   She describes the characters them as the ideas that her neighbors had of them.

6. How did their neighbors feel about the Chutes? (*state verb, past tense*)

   They hated them because they were poor and didn't have jobs.

7. Why did Carolyn quit high school? (*action verb, past tense*)

   She quit form marriage and motherhood.

8. She never finished high school, did she? (*tag question, action verb, past tense)*

Yes, she did.

9. Her husband has a regular job, doesn't he? (*tag question, action verb, present tense)*

No, he doesn't.

10. What have they lived without for the last three years? (*action verb, present perfect tense)*

They have lived without heat, and sometimes with no way to use the bathtub.

11. How did Carolyn feel when she got her first check? (*state verb, past tense*)

She felt thrilled.

12. What has she bought her husband? (*action verb, present perfect tense*)

She has bought him a used truck.

13. Who has a telephone now? (*action verb, present tense*)

The geese do.

Finding the Main Ideas *(teacher-directed in a large group with an overhead, or pair work. The issue is to separate student schemata from text schemata)*

Complete these sentences with the main idea of each paragraph:

The main idea of the first paragraph is: _____

_____

The main idea of the second paragraph is: _____

_____

The main idea of the third paragraph is: _____

_____

What's the Writer's Opinion?

How do you and your partner think that the writer feels about the Chutes? Does she or he approve? Does she or he disapprove? (*the issue is to separate student schemata from text schemata)*

Word Group Practice

Find 11 words or phrases in the article that are connected with *writing*. Examples: book, stories, list [*This is an example of* ***tuning****, which constitutes modification of schemata that is already in place, through learning by analogy (Rumelhart & Norman, 1978)*]

1. _____	5. _____	9. _____
2. _____	6. _____	10. _____
3. _____	7. _____	11. _____
4. _____	8. _____	

What Does the Pronoun Mean?

Find the word or group of words that the underlined words refer to in the following sentences. Can you guess the missing letters? Each space is for one letter.

1. She even painted <u>his</u> picture.
   his = M _ _ _ _ _ _ ' _ (*Michael's*)
2. I couldn't believe my eyes - it was <u>him</u>.
   him = M _ _ _ _ _ _ (*Michael*)

3. By the time <u>he</u> came back, we were off in a corner, talking about our chickens.
   he = th _ m _ _ w _ _ _ s _ _ h _ _ co _ _ w _ _ _
   (t*he man whom she had come with*)

4. <u>Its</u> family of characters, the Beans, are the ideas that the Chutes' neighbors had of <u>them</u>.
   a. Its = th _ b _ _ _ 's (*the book's*)
   b. them = th _ Ch _ _ _ _ (*the Chutes)*

5. Writing it was part of our relationship.
   it = Th _ B _ _ _ _ o _ Eg _ _ _ , M _ _ _ _
   (*The Beans of Egypt, Maine*)

6. It was like a dream.
   It = ge _ _ _ _ _ th _ ch _ _ _ (*getting the check*)

Discovering Your Inferences

An inference is an opinion that you develop from facts or critical thinking. (*links with the students' world*)

This information is in the article: Carolyn Chute was separated from a man who made her feel so terrible about herself that she could no longer write stories.

What can you infer? Example: *She had to find a way to believe in herself again.*

This information is in the article: The couple has lived for the last three years on food stamps.

What can you infer? _____

_____

This information is in the article: Carolyn has installed a telephone - listed in the names of her geese.

What can you infer? _____

_____

Discussion Questions

If you were as poor as Carolyn, would you think of writing a book? Why or why not? (*links with the students' world; hypothetical thinking-> If I were as poor as Carolyn, ...)*

If you were looking for a girlfriend or boyfriend, wife or husband, would you use Carolyn's method? Why or why not?(*links with the students' world; hypothetical thinking-> If I were as poor as Carolyn, ...*)

Temporal Load Reference Frame 2:

The following example demonstrates the next higher level of abstraction. Contrast the first example of a true story from yesterday's newspaper with one in a reading textbook (Olson, 1980):

Teacher:

> We are going to read a true story. This story is about a young woman named Carolyn, who wrote a book about her family's life during a seven-year period. The book was published in 1982, and became a best-seller [*less* immediate fact, which adds to the temporal load]. Based on this information, which of the following sentences are correct?
>
> 1) Carolyn wrote a book about her family.
> 2) Carolyn has written a book about her family.
> 3) Carolyn is writing a book about her family.

According to Ong (1982), "reading ... is always a preterite activity. It deals with something that is over with. Texts come out of past time. They are things, not events" (Ong, 1982, p. 174).
given the 11-year gap between the writing of the book and the use of the article about Carolyn in a reading class, and based on the averaged *cloze test* data results alone, this researcher would make the following predictions. In the College Preparatory track, 84% of the students would choose the correct first item using the past tense, along with 70% of the General students, 69% of the Remedial students, and 54% of the ESL students. In contrast, the students

who chose the incorrect third item would include 17% of the College Preparatory track, 30% of the General, 32% of the Remedial, and 46% of the ESL. Again, the teachers in each track would be faced with very clear differences in student perception of fact vs. opinion.

Class discussion could be initiated regarding the shared knowledge regarding Carolyn, and how that knowledge can be interpreted from the vantage point of 1993 vs. 1982. The last example demonstrates the highest level of abstraction:

Temporal Load Reference Frame 3:

Contrast the first and second examples of a true story with one in a reading textbook, one with *no* particular temporal reference (Olson, 1980):

> Teacher:
>
> > We are going to read a story about a young woman named Carolyn, who wrote a book about her family. She wrote about their lives during a seven-year-period [*no immediacy*, which adds even more to the temporal load]. Based on this information, which of the following sentences are correct?
> >
> > 1) Carolyn wrote a book about her family.
> > 2) Carolyn has written a book about her family.
> > 3) Carolyn is writing a book about her family.

Based on the averaged *cloze test* data results alone, this researcher would make the following predictions: that 84% of the College Preparatory students would choose the correct first item using the past tense, along with 70% of the General students, 69% of the

Remedial students, and 54% of the ESL students. In contrast, the students who chose the incorrect second and third items would include 17% of the College Preparatory track, 30% of the General, 32% of the Remedial, and 46% of the ESL. Again, the teachers in each track would be faced with very clear differences in student perception of fact vs. opinion.

Five: Implement the Reading Program

The provision of cooperative in-services for teams of teachers and administrators will create a broad base of support at the site level. The inservices should pay particular attention to the temporal and cognitive profile of at-risk students, so that the educators can consciously plan to teach these students that their actions as individuals truly affect what happens and will happen to them. This is a significant step and must receive careful attention in any training program.

This experiential, affective layer must be integrated by the students before the educational environment can assume that the students will accept the concept of individual responsibility for their learning, representing a shift along the continuum of locus of control from external to internal (cf. Rotter, 1966). After all, "if the facts of a person's past and present are extremely dismal, then about the best he can do is show that he is not responsible for what has become of him" (Goffman, 1961, p. 150-1). It takes time for some students to adapt to the emotionally-laden concept that personal accountability leads to more control over one's successes in the present and further achievement in the future (Craig, 1992; Rotter, 1966, 1973).

Other steps in the program include the following. First, provide help in planning and carrying out curriculum changes, in order to stay focused on the basic temporal needs of the students. Second, articulate the gaps between the two realities: that of the students' personal lives, and that of the educational environment. An approach to bridging the gap must be articulated, so that teachers can become conscious of the degree to which temporal meaning is conveyed in a given interaction or activity. Third, instructional and testing procedures that are consistent with text demands on General, Remedial, and ESL students can be developed.

Six: Develop a Comprehensive Evaluation Plan

A comprehensive evaluation plan would include a number of points. First, monitor and evaluate the changes in progress, by providing assistance throughout the process of implementing curriculum and materials changes. For example, student progress should be monitored, and materials modified as needed on a per-school basis. Second, "learning activities that convey the 'big picture' rather than many discrete facts [*or skills*] will be more meaningful to this type of student" (Craig, 1992, p. 70). In other words, focus on cohesive, thematically-organized units, rather than traditional discrete skills. Third, further cloze testing with real and recent materials can determine the extent to which identified student needs are being met.

Summary

The results of this study suggest that any reading curriculum should offer exposure in a continuum from concrete to abstract,

expanding student understanding and usage of temporality. A temporally sophisticated curriculum can be designed to meet developmental standards and cognitive/linguistic developmental needs for the full range of students.

The first step is to use materials that affirm at-risk students' *present time orientation* and *shortened temporal integration*. Success for at-risk students results from materials which are congruent with the home and community environment of the student. If the school capitalizes on the student's world outside the school, then successful student adaptation will be fostered. In short, students receive information that is embedded in teaching materials based on what learners know through living. If teachers are aware of that social knowledge, then the impact of their lessons will be maximized (Hauser, 1990). Developing student reading comprehension leads to improving reading achievement, which is followed by social mobility through education.

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Appendix A

LEP Students

Accomodating a student's *time orientation* and *temporal integration* as key elements in planning and developing curriculum implicitly takes place at some levels. For example, the **Language Proficiency Summary** of oral language abilities for identifying **NEP/LEP/FEP** students focuses on the following verb tense and reading comprehension issues:

At Level B, a student can:

1. Use the present tense of the verb "to be".

At Level C, a student can:

1. Express himself/herself using the present progressive tense of common verbs.

At Level D, a student can:

1. Ask simple future tense questions
2. Understand and identify moods in a simple story
3. Express himself/herself using the present and future tenses.

At Level E, a student can:

1. Use the past tense correctly.
2. Ask past tense questions.

At Level F, a student can:

1. Use the conditional and present perfect tenses.
2. Express himself/herself using the past tense correctly.
3. Comprehend and predict the outcome of a story.
4. Recall and retell the main facts of a story.

Levels E and F are categorized as full-English proficient students (FEP), who receive no supplementary language instruction and are considered to be fluent English speakers.

APPENDIX B

Cloze Reading Comprehension Test

Student Directions:

Part One

This is a new kind of reading test. The following three pages are from a **TRUE STORY THAT WAS IN A NEWSPAPER YESTERDAY**. Some of the words were left out of the story and blanks were put in where the words were taken out. YOUR JOB WILL BE TO CHOOSE WHICH WORD OR WORDS FROM THE 3 POSSIBILITIES WOULD BEST FIT IN THAT SPACE. Please write your choice for each blank on the test. It will help you in taking the test to remember the following things:

1. Try to choose an answer for each blank.
2. You may skip difficult blanks and come back to them later.
3. Read the entire story even though it may be difficult.

THANK YOU !

Illustration

A Book That Grew From Love and Poverty

A little more than seven years ago, Carolyn Chute (1) _____ separated from a man who had made her feel so

(1) (a) is (b) was (c) will be

terrible about herself that she could no longer write stories. She (2) _____down and wrote a list of what she (3) _____

(2) (a) sat (b) will sit (c) sits (3) (a) will want (b) wants (c) wanted

in a man. What she wrote was this: "Green work pants. Black and red flannel shirt. Black hair. Black beard. Brown eyes. Green truck with fish and deer decals. From the Cornish part of Maine." The Cornish area of Maine is a rugged land of mountains and forests, and it was essentially a mountain man that she was describing. She even (4) _____ his picture: black hair parted in the middle,

(4) (a) will paint (b) painted (c) paints

dark, deep-set eyes, a strong, straight nose, and a beard like a black bib framing his face.

Then she (5) _____looking for him. With her daughter

(5) (a) goes (b) will go (c) went

and sometimes her grandmother along, she (6) _____the

(6) (a) drove (b) drives (c) will drive

wooded roads of Maine. She searched the taverns and showed people her list. "(7) _____ you _____ this man?" she

(7) (a) Did ... see (b) Have ... seen (c) Will ... see

would say.

"Then I went to a turkey shoot," she said, "and I couldn't believe my eyes–it was him." He (8) _____ exactly like her

(8) (a) looks (b) looked (c) will look

portrait. She was too shy to approach him, but "about two months later, I was in a tavern, and he just (9) _____ up to me and

(9) (a) walks (b) will walk (c) walked

stood there looking at me with a big smile on his face." The man who was her date had left the table for a moment. "By the time he (10) _____back," she said, "we were off in a corner, talking

(10) (a) came (b) comes (c) will come
about our chickens."

If that seems improbable, then think of this: Carolyn Hawkes, then 30, (11) _____ Michael Chute, then 22, and began to
(11) (a) will marry (b) married (c) marries
write again. She (12) _____ the self-confidence to produce a
(12) (a) has regained (b) will regain (c) regained
first book that(13) _____very popular and successful. In the
(13) (a) became (b) has become (c) will become
poor but loving life that they have made together for the last seven years, Chute (14) _____the raw material and strength to
(14) (a) will find (b) found (c) has found
produce her extraordinary first novel, The Beans of Egypt, Maine. Published this month, it is in its third printing. Like its author, it is a book of original language, force, imagination and humor. Its family of characters, the Beans, are the ideas that the Chutes' neighbors (15) _____ of them. Carolyn
(15) (a) had (b) have (c) will have
said, "They hated us because we were poor, because we didn't have jobs." She half-giggled at the thought.

Chute quit high school at 16 for marriage and motherhood. She (16) _____ school at night and then took writing courses at
(16) (a) finishes (b) finished (c) will finish
the University of Maine. She (17) _____ the first draft of The
(17) (a) will write (b) writes (c) wrote
Beans in longhand. Since her second husband (18) _____ for
(18) (a) has worked (b) worked (c) will work
a minimum wage when he can find a job–and frequently finds none–the couple (19) _____ for the last three years on food
(19) (a) has lived (b) lived (c) will live
stamps, sometimes without heat, and sometimes with no way to use the bathtub.

Carolyn (20) _____ of her husband, Michael, the
(20) (a) speaks (b) spoke (c) will speak

mountain man who can neither read nor write, as her co-author. "He kind of wrote it with me," she says. "He and I would talk over characters. Writing it was part of our relationship. He was out of work, so he was around all of the time."

She (21) _____ thrilled when the publisher sent her
(21) (a) is (b) was (c) will be
first check. "It was like a dream. We all (22) _____ turns
(22) (a) will take (b) took (c) take
holding it. Even my neighbors." The money was welcome, and she (23) _____ her husband a used truck, with which he hopes to
(23) (a) will buy (b) bought (c) has bought
go to work for himself. Even though she's afraid for her privacy, Carolyn (24) _____ a telephone–listed in the names of her
(24) (a) has installed (b) installed (c) will install
geese. "They (25) _____ any calls," she said.
(25) (a) won't have (b) didn't have (c) haven't had

APPENDIX C

TIME ORIENTATION QUESTIONNAIRE

Part 2

How well do each of the following statements describe YOU? After reading statements26 through 47 , please mark a for NO !; b for No; c for Yes, or d for YES !! on the Scantron sheet. THANK YOU !

26. I believe that getting together with my friends to party is one of life's important pleasures.
27. I believe that my day should be planned ahead each morning.
28. If things don't get done on time, I don't worry about it.
29. I enjoy thinking about the future.
30. Tomorrow's homework is more important than tonight's party.
31. I think it is useless to plan too far ahead because things don't ever come out the way I planned anyway.
32. It upsets me to be late for appointments.
33. I try to live one day at a time.
34. I feel that it's more important to enjoy what I'm doing than to get the work done on time.
35. I tend to lose my temper.
36. I make lists of things I must do.
37. I meet my obligations to friends and teachers on time.
38. I don't do things that will be good for me if they don't feel good now.
39. I get upset at people who keep me waiting when we have agreed to meet at a given time.
40. It seems to me that it doesn't make sense to worry about the future, since luck determines that whatever will be, will be.
41. I complete assignments on time by making steady progress.
42. I am able to resist temptations when I know that there is work to be done.
43. I take risks to put excitement into my life.
44. I keep working at a difficult, uninteresting task if it will help me get ahead.
45. I believe that it is important to save money.

46. What do you plan to be doing in 3 years? _____

_____

_____

_____

47. Sex: M F (circle one)

Appendix D

Sample Permission Letter

February 28, 1989

Dear Principal:

The purpose of this letter is to formally request that students from X High School be allowed to participate in research for my dissertation through the University of the Pacific School of Education. This study is an attempt to examine the relationship between time orientation and reading comprehension for high school freshmen.

The present study may have implications in contributing to research on the reading comprehension of adolescents. In terms of curriculum design, it is hoped that the resulting data from this investigation could offer insights that may lead to a better understanding of the processes involved in an adolescent's response to reading and grammar in context.

My design calls for the administration of a brief reading comprehension cloze test and questionnaire to one class of freshmen from each track level: English as a Second Language, Basic Skills, General and College Preparatory. The total time to give directions, take the cloze test and fill out the questionnaire will take approximately one class period.

I realize that your teachers are very busy. Therefore, it is my intention to pay each teacher $10 or ten lottery tickets to administer the test and questionnaire to each class. Furthermore, I would be happy to share my results with your school. The time frame for this project is in March, 1989. Enclosed are copies of the types of measures that I plan to use.

Any information or help that you can give me will be greatly appreciated. I will be contacting you by phone next week to make arrangements.

Sincerely,

Tacey Ruffner

APPENDIX E

Teacher Instructions for Administering the Two Instruments

Cloze Test Instructions

Instructions for giving the cloze reading comprehension test.

Instruction to teachers

Before giving this test to your class, read through the test instructions below as many times as you need to be sure that you know exactly what to do. The instructions that must be followed exactly are enclosed in boxes. These instructions are to be read clearly and slowly and you must add no words of your own.

There are other instructions not enclosed in boxes where you may make up the words to suit the level of your class. These instructions are used when marking the practice examples on the front page.

You will need a watch or clock. This is important because the time allowed is exactly 20 minutes. Check that each student in the class has a pen or pencil.

TEST INSTRUCTIONS

Hand out the cloze reading comprehension test papers, face upwards, and instruct the students not to open the papers or turn them over until they are told.

At the bottom of the page where it says Name, print your name. Where it says Name of School, print the name of your school. Where it says Name of Teacher, print your teacher's name.

Quickly check to see if the students have printed their names, the name of their school, and your name in the right places.

This is a test to see how well you can read. This is a **TRUE** story that was in a newspaper yesterday, but some of the words are missing. Some of the words were left out of the story and blanks were put in where the words were taken out. You have to read the story, and then PRINT in each blank your choice from the three possible words: a, b, or c. Here are the rules. They will be helpful to you.
1. Read the whole sentence first and then choose one of the 3 possible answers for the blank. It helps if you read "blank" when you come to the blank space.
2. Choose only one answer for each blank.
2. Fill in every blank if possible. Guess, even if you aren't sure.
3. If a blank seems extra hard to fill in, then skip it. You can try it later.
4. Remember, just choose the word which you think fits the best in the sentence.
5. Reread the completed passage to make sure it makes sense.
Do you see where the words are missing on the front page? (Student directions as yet incomplete on first page).

Point to the missing words on the front page.

Let's do one together. Read the story called _____. (Hold up to demonstrate.) Then I want you to print in each space the one choice that you choose from the three possibilities. What word do you think should go in the first space? (Obtain the answer orally.)

"_____"

Now I want you to do the next one yourselves. Just PRINT in the next blank the word you choose from the three possibilities. Do that. Then put down your pen. What word do you think should go in the second space? (Obtain the answer orally.)

"_____".

When most students have finished:

Well, that is what I want you to do. Just read the story and PRINT your choice from the three possibilities. Don't be afraid to guess. When you finish the test, go back and try to guess the words you left out. Try every blank. If you make a mistake, cross the word out or erase it. Then print your choice. Does anyone want to ask any questions? (Answer any questions.) Is everyone ready? When you turn over the test, there are three pages. As you finish each page, go straight on to the next page without waiting for me to tell you. Is everyone ready? You have 20 minutes. Turn over and begin.

Allow all students exactly 20 minutes to complete the test. Take careful note of the time. It is a good idea to write the time on the blackboard and work out what the time will be after 20 minutes. Walk around and check that students are recording their answers in the right place. If any student does not understand, explain the main instructions quickly. DO NOT HELP IN ANY WAY. After 15 minutes, you may tell the students that there are 5 minutes left. As students finish and check through their work, collect papers and allow them to carry on with some other activity quietly.

Appendix F

Analyses of Research Questions 7-10

This study has established that *time orientation* and *temporal integration*, as expressed on the *Cloze Test* and self-assessed on the *Time Orientation Questionnaire*, are underlying components of *PEG*. The Anova and chi-square applications showed that *PEGs*, per track placement and *CTBS* reading comprehension scores, are statistically significant factors in reading comprehension development.

Research Questions 7, 8, 9 and 10 attempted to establish correlations between *time orientation* and *temporal integration*, as expressed in significant *Cloze Test* items and self-expressed in other significant *Time Orientation Questionnaire* items. Establishing these correlations supports the argument that *time orientation* and *temporal integration* are significantly linked factors which affect student achievement.

Major Findings

In general, a stronger *future time orientation*, a more *extended temporal integration* of the past, present and future and clear concept of the past were associated with a higher level of reading comprehension strength on the CTBS, *Cloze Test* and *Time Orientation Questionnaire* instruments.

A stronger *present time orientation*, along with a *shortened temporal integration* and an unclear concept of the past, were

associated with reading problems, on the CTBS, *Cloze Test* and *Time Orientation Questionnaire* instruments.

The general results from the last four research questions have been combined as follows:

> The correlated samples of *Cloze Test* verb tense item answers and *Time Orientation Questionnaire* responses yielded track-based correlations between students' ability to both conceptualize and linguistically express *future time orientation*, which is linked to the past.

Research Question 7

Significant relationships occurred between *Time Orientation Cloze Test* items 1, 2, 3, 5, 6, 10 and 17 and Future *Time Orientation Questionnaire* items 34, 37 and 40. The correlations will discussed in order of appearance in Table 1:

Table 1

Relationships of Future Time Orientation Items 34, 37 and 40, and Time Orientation Cloze Test Items 1, 2, 3, 5, 6, 10 and 17: Multiple Regression

Future Time Orientation Questionnaire Items	Time Orientation Cloze Test Items	**p** values
34	1	.0209
34	5	.0018
34	10	.0317
34	17	.0016
37	2	.035
37	17	.033
40	1	.0432
40	2	.0376
40	3	.0001
40	5	.0057
40	6	.0015
40	10	.0269

These results from the multiple regression application establish that *Time Orientation Questionnaire* items significantly correlated with *Cloze Test* items. At this stage of the analysis, Research Question 7 has established a significant relationship between track placement, *Future Time Orientation Questionnaire* items 34, 37 and 40; and *Time Orientation Cloze Test* items 1, 2, 3, 5, 6, 10 and 17.

The three *Future Time Orientation Questionnaire* items, 34, 37 and 40, correlated with three sets of *Time Orientation Cloze Test* answers. Each of the following *Time Orientation Questionnaire* items:

- "I (don't) feel that it's more important to enjoy what I'm doing than to get the work done on time" (34);
- "I meet my obligations to friends and teachers on time" (37); and
- "It seems to me that it (does) make sense to worry about the future, since luck (doesn't) determine what will happen" (40)

incorporated the following two *Future Time Orientation Factors*:

Factor 1: Future, work motivation perseverance.

This factor embraces those with a positive work motivation and the "Protestant Work Ethic" of completing a task regardless of intrusions (Gonzalez & Zimbardo, p. 24).

Factor 4: Future, specific daily planning.

This factor described individuals who are obsessed with the specifics of getting ahead. They manifest a "compulsive attitude toward daily planning, make

lists of things to do, set subgoals and pay attention to details" (Ibid., p. 26)

Future Time Orientation Questionnaire Item 34 and Cloze Test Correlations

First, the factors of *work motivation perseverance* and *specific daily planning* in *Future Time Orientation Questionnaire* item 34 ("I {don't} feel that it's more important to enjoy what I'm doing than to get the work done on time") correlated with four *Time Orientation Cloze Test* items, 1, 5, 10 and 17, in which the correct answers were in the past tense. The results show a clear decrease per track in students' positive attitude towards the future by getting the academic work done, as well as a decrease per track in students' clear concept and linguistic expression of the past, which is linked to the future. Please refer to Table 2:

Table 2

Relationships of Future Time Orientation Questionnaire Item 34 and the Averages of Time Orientation Cloze Test Items 1, 5, 10 and 17: Multiple Regression

PEGs	34	Averages of 1, 5, 10 and 17 (Past Tense)
College Preparatory	77%	100%
General	70	90
Remedial	58	85
ESL	45	68

The average percentages of the four *Time Orientation Cloze Test* item answers per track showed a decrease of 32% in correct answers, from the College Preparatory track to the ESL track. There was a corresponding 32% decrease in student self-assessment of a positive attitude towards getting the academic work done, from the College Preparatory track to the ESL track.

The College Preparatory track tended to agree with the underlying values of *work motivation perseverance* and *specific daily planning,* with a response of 77% for *Time Orientation Questionnaire* item 34. This group also agreed, with an average of 100%, that:

- ...Carolyn Chute <u>was separated</u> from a man ...(1).
- Then she <u>went</u> looking for him. (5)
- By the time he <u>came</u> back, ... (10).
- She <u>wrote</u> the first draft of <u>*The Beans*</u> ... (17).

The General track level of agreement with the values of *work motivation perseverance* and *specific daily planning* dropped to 70% for *Time Orientation Questionnaire* item 34. This showed a decrease of 7%, as compared with the College Preparatory track. This group also tended to respond to *Cloze Test* items 1, 5, 10 and 17 in the past tense, with an average of 90%. This showed a decrease of 10%, as compared with the College Preparatory track.

The Remedial track level of agreement with the values of *work motivation perseverance* and *specific daily planning* dropped to 58%

for *Time Orientation Questionnaire* item 34. This showed a decrease of 19%, as compared with the College Preparatory track. This group responded to *Cloze Test* items 1, 5, 10 and 17 in the past tense, with an average of 85%. This showed a decrease of 15%, as compared with the College Preparatory track.

In contrast, the ESL track tended not to agree with the values of *work motivation perseverance* and *specific daily planning*, with a response of 45% for *Time Orientation Questionnaire* item 34. This showed a decrease of 32%, as compared with the College Preparatory track. This group responded to *Cloze Test* items 1, 5, 10 and 17 in the past tense, with an average of 68%. This showed a decrease of 32%, as compared with the College Preparatory track.

In the correlation set of *Future Time Orientation Questionnaire* item 34 and the averages of *Cloze Test* items 1, 5, 10 and 17, the data for each track indicated that the students' linguistic expression of *future time orientation* was 23% to 27% stronger than their self-description of *future time orientation* on the *Time Orientation Questionnaire*. In other words, the *Cloze Test*, functioning as a direct access to the *PEGs*, uncovered a stronger *future time orientation* than the students perceived in themselves through self-assessment.

Future Time Orientation Questionnaire Item 37
and Cloze Test Correlations

Second, *Future Time Orientation Questionnaire* item 37, "I meet my obligations to friends and teachers on time", incorporated the same two *Future Time Orientation Factors*. The factors of *work*

motivation perseverance and *specific daily planning* correlated with two *Time Orientation Cloze Test* items, 2 and 17, in which the correct answers were in the past tense. The results show a clear decrease per track in students' positive attitude towards the future through meeting social and academic obligations in a timely manner, as well as a decrease per track in students' clear concept and linguistic expression of the past, which is linked to the future. Please refer to Table 3:

Table 3

Relationships of Future Time Orientation Questionnaire Item 37 and the Averages of Time Orientation Cloze Test Items 2 and 17: Multiple Regression

Tracks	37	Averages of 2 and 17 (Past Tense)
College Preparatory	91%	99%
General	81	91
Remedial	68	87
ESL	63	60

The average percentages of the four *Time Orientation Cloze Test* item answers per track showed a decrease of 28% in correct answers, from the College Preparatory track to the ESL track. There was a 39% decrease in student self-assessment of a positive attitude towards meeting social and academic obligations in timely manner, from the College Preparatory track to the ESL track.

The College Preparatory track tended to agree with the values of *work motivation perseverance* and *specific daily planning*, with a response of 91% for *Time Orientation Questionnaire* item 37. This group also agreed, with an average of 99% for *Cloze Test* items 2 and 17 that:

- She sat down ... (2).
- She wrote the first draft of The Beans... (17).

The General track level of agreement with the values of *work motivation perseverance* and *specific daily planning* dropped to 81% for *Time Orientation Questionnaire* item 37. This showed a decrease of 10%, as compared with the College Preparatory track. This group also tended to respond to *Cloze Test* items 2 and 17 in the past tense, with an average of 91%. This showed a decrease of 8%, as compared with the College Preparatory track.

The Remedial track level of agreement with the values of *work motivation perseverance* and *specific daily planning* dropped to 68% for *Time Orientation Questionnaire* item 37. This showed a decrease of 23%, as compared with the College Preparatory track. This group tended to respond to *Cloze Test* items 2 and 17 in the past tense, with an average of 87%. This showed a decrease of 12%, as compared with the College Preparatory track.

The ESL track level of agreement with the values of *work motivation perseverance* and *specific daily planning* dropped to 63% for *Time Orientation Questionnaire* item 37. This showed a decrease

of 28%, as compared with the College Preparatory track. This group tended to respond to *Cloze Test* items 2 and 17 in the past tense, with an average of 60%. This showed a decrease of 39%, as compared with the College Preparatory track.

In the correlation set of *Future Time Orientation Questionnaire* item 37 and the averages of time orientation *Cloze Test* items 2 and 17, the data for each track indicated that the College Preparatory, General and Remedial tracks' linguistic expression of *future time orientation* was 8% to 19% stronger than their self-description on the *Time Orientation Questionnaire*.

In other words, the *Cloze Test*, functioning as a direct access to the *PEGs*, uncovered a stronger *future time orientation* than the students in the College Preparatory, General and Remedial tracks perceived in themselves through self-assessment. In contrast, the ESL track's cloze test average was 3% less than the score for 37, indicating a close match between language performance and self-perception of *future time orientation*.

Future Time Orientation Questionnaire Item 40
and Cloze Test Correlations

Third, *Future Time Orientation Questionnaire* item 40, "It seems to me that it (does) make sense to worry about the future, since luck (doesn't) determine what will happen", incorporated *Future Time Orientation Factors* 1 and 4. The *work motivation perseverance* and *specific daily planning* factors correlated with *Time Orientation Cloze*

Test items 1, 2, 3, 5, 6 and 10, in which the correct answers were in the past tense. The results show an decrease per track in students' attitude towards worrying about the future, as well as a decrease per track in students' clear concept and linguistic expression of the past, which is linked to the future. Please refer to Table 4:

Table 4

Relationships of Future Time Orientation Questionnaire Item 40 and the Averages of Time Orientation Cloze Test Items 1, 2, 3, 5, 6, and 10: Multiple Regression

PEGs	40	Averages of 1, 2, 3, 5, 6 and 10 (Past Tense)
College Preparatory	82%	78%
General	73	84
Remedial	52	76
ESL	61	59

The average percentages of the four *Time Orientation Cloze Test* item answers per track showed a decrease of 21% in correct answers, from the College Preparatory track to the ESL track. There was a 19% decrease in student self-assessment of a positive attitude towards worrying about the future, from the College Preparatory track to the ESL track.

The College Preparatory track tended to agree with the values of *work motivation perseverance* and *specific daily planning*, with a response of 82% for *Time Orientation Questionnaire* item 40. This group also agreed, with an average of 78%, that:

- ... Carolyn Chute was separated from a man ... (1).
- She sat down ... (2).
- ... what she wanted in a man" (3).
- Then she went looking for him. (5)
- ... she drove the wooded roads of Maine. (6)
- By the time he came back ... (10).

The General track level of agreement with the values of *work motivation perseverance* and *specific daily planning* dropped to 73% for *Time Orientation Questionnaire* item 40. This showed a decrease of 9%, as compared with the College Preparatory track. This group tended to respond to *Cloze Test* items 1, 2, 3, 5, 6 and 10 in the past tense, with an average of 84%. This showed an interesting increase of 6%, as compared with the College Preparatory track.

The Remedial track level of agreement with the values of *work motivation perseverance* and *specific daily planning* dropped to 52% for *Time Orientation Questionnaire* item 40. This showed a decrease of 30%, as compared with the College Preparatory track. This group responded to *Cloze Test* items 1, 2, 3, 5, 6 and 10 in the past tense, with an average of 76%. This showed a decrease of 2%, as compared with the College Preparatory track.

The ESL track level of agreement with the values of *work motivation perseverance* and *specific daily planning* dropped to 61% for *Time Orientation Questionnaire* item 40, which was 9% higher than the Remedial level. This showed a 21% decrease, as compared with the College Preparatory track. This group responded to *Cloze Test* items 1, 2, 3, 5, 6 and 10 in the past tense, with an average of 59%. This showed a 19% decrease, as compared with the College Preparatory track.

In the correlation set of *Future Time Orientation Question* 40 and the averages of *Cloze Test time orientation* items 1, 2, 3, 5, 6 and 10, the data for each track indicated that the General and Remedial tracks' linguistic expression of *future time orientation* was 2% to 24% stronger than their self-descriptions on the *Time Orientation Questionnaire.* The College Preparatory track's cloze test average was only 4% stronger than the score for 40, indicating a close match between language performance and self-perception of *future time orientation.*

In other words, the *Cloze Test*, functioning as a direct access to the *PEGs*, uncovered a stronger *future time orientation* than the students in the General and Remedial tracks perceived in themselves through self-assessment. In contrast, the ESL track's cloze test average was only 3% below the score for 40, indicating a close match between language performance and self-perception of *future time orientation.*

Research Question 8

Significant relationships occurred between *Cloze Test Time Orientation* items 2, 3, 5 and 6 and *Present Time Orientation Questionnaire* items 31, 33 and 36. The correlations will discussed in order of appearance in Table 5:

Table 5

Relationships of Present Time Orientation Items 31, 33, and 36; and Time Orientation Cloze Test Items 2, 3, 5, and 6: Multiple Regression

Present Time Orientation Questionnaire Items	Time Orientation Cloze Test Items	**p** values
31	6	.0369
33	2	.0001
33	5	.0033
33	6	.0424
36	3	.002

These results from the multiple regression application establish that *Time Orientation Questionnaire* items significantly correlated with *Cloze Test* items. At this stage of the analysis, Research Question 8 has established significant relationships between track placement, *Present Time Orientation Questionnaire* items 31, 33 and 36; and *Time Orientation Cloze Test* items 1, 2, 3, 5, 6 and 10.

Present Time Orientation Questionnaire Item 31 and Cloze Test Correlations

First, *Present Time Orientation Questionnaire* item 31, "I think it is useless to plan too far ahead because things don't ever work out the way I want", incorporated *Present Time Orientation Factor* 5:

> Factor 5: Fatalistic, worry-free, avoid planning. Individuals with this orientation can be characterized as living one day at a time; they avoid planning into the near future and believe that their fate is controlled by destiny rather than their efforts (Gonzalez & Zimbardo, p. 24).

This *fatalistic* factor correlated with *Time Orientation Cloze Test* item 6, in which the correct answer was in the past tense. The following results show a clear increase per track in students' negative attitude towards planning for the future, as well as a decrease per track in students' clear concept and linguistic expression of the past, which is linked to the future. Please refer to Table 6:

Table 6

Relationships of Present Time Orientation Questionnaire Item 31 and Time Orientation Cloze Test Item 6: Multiple Regression

Tracks	31	6
College Preparatory	50%	99%
General	57	75
Remedial	67	66
ESL	46	49

The percentages of *Time Orientation Cloze Test* item 6 per track showed a decrease of 50% in correct answers, from the College Preparatory track to the ESL track. There was a 4% decrease in student self-assessment of a negative attitude towards planning for the future, from the College Preparatory track to the ESL track.

The College Preparatory track was divided in agreement with *fatalism*, with a response of 50% for *Time Orientation Questionnaire* item 31. The other 50% indicated a belief in their ability to impact their futures. In this group, 99% agreed that:

- ... she drove the wooded roads of Maine. (6)

The General track tended to agree with *fatalism*, with a response of 57% for *Time Orientation Questionnaire* item 31. This level was 7% higher than for the College Preparatory track, indicating

a stronger degree of *fatalism*. This group tended to respond to *Cloze Test* item 6 in the past tense, with an average of 75%. This showed a decrease of 24%, as compared with the College Preparatory track.

The Remedial track tended to agree with *fatalism*, with a response of 67% for *Time Orientation Questionnaire* item 31. This track was 17% higher than for the College preparatory track, indicating a much stronger degree of *fatalism*. This group tended to respond to *Cloze Test* item 6 in the past tense, with an average of 66%. This showed a decrease of 33%, as compared with the College Preparatory track.

In contrast, the ESL track tended to disagree with *fatalism*, with a response of 46% for *Time Orientation Questionnaire* item 31. In the ESL track, 54% of the students indicated a belief in their ability to impact their futures. This showed a 4% decrease in the attitude towards *fatalism*, as compared with the College Preparatory track. This group was divided almost equally, with 49% responding to *Cloze Test* item 6 in the past tense. This showed a decrease of 50%, as compared with the College Preparatory track.

In the correlation set of *Present Time Orientation Questionnaire* item 31 and *Cloze TestTme Orientation* item 6, the data for the College Preparatory, General and ESL tracks indicated that the students' linguistic expression of *future time orientation* was 3% to 49% stronger than their self-description of *present time orientation* on the *Time Orientation Questionnaire*. The Remedial track's *Cloze Test*

time orientation score was only 1% less than *Cloze Test* time orientation item 6. The ESL track's *Cloze Test* time orientation item score was only 3% more than the *Time Orientation Questionnaire* item score. All of these score differences indicated a discrepancy between language performance and self-perception of *present time orientation*.

Present Time Orientation Questionnaire Item 33
and Cloze Test Correlations

Second, *Present Time Orientation Questionnaire* item 33, "I try to live one day at a time", incorporated *Present Time Orientation Factor 5*. This *fatalistic* factor correlated with *Time Orientation Cloze Test* items 2, 5 and 6, in which the correct answer was in the past tense. The following results show a decrease per track in students' attitude towards living one day at a time, as well as a decrease per track in students' clear concept and linguistic expression of the past, which is linked to the future. Please refer to Table 7:

Table 7

Relationships of Present Time Orientation Questionnaire Item 33 and Averages of Time Orientation Cloze Test Items 2, 5 and 6: Multiple Regression

Tracks	33	Averages of 2, 5, and 6
College Preparatory	79%	98%
General	70	84
Remedial	78	77
ESL	59	55

The average percentages of *Cloze Test Time Orientation* items 2, 5 and 6 per track showed a decrease of 43% in correct answers, from the College Preparatory track to the ESL track. There was a 20% decrease in student self-assessment of living one day at a time, from the College Preparatory track to the ESL track.

The College Preparatory track tended to agree with *fatalism*, with a response of 79% for *Time Orientation Questionnaire* item 33. This group also agreed, with an average of 98%, that:

- She sat down ... (2).
- Then she went looking for him. (5)
- ... she drove the wooded roads of Maine. (6)

The General track tended to agree with *fatalism*, with a response of 70% for *Time Orientation Questionnaire* item 33. This

showed a decrease of 9%, as compared with the College Preparatory track. This group tended to respond to *Cloze Test* items 2, 5 and 6 in the past tense, with an average of 84%. This showed a decrease of 14%, as compared with the College Preparatory track.

The Remedial track tended to agree with *fatalism*, with a response of 78% for *Time Orientation Questionnaire* item 33. This showed a decrease of 1%, as compared with the College Preparatory track. This group tended to respond to *Cloze Test* items 2, 5 and 6 in the past tense, with an average of 77%. This showed a decrease of 43%, as compared with the College Preparatory track.

The ESL track tended to agree with *fatalism*, with a response of 59% for *Time Orientation Questionnaire* item 33. This showed a decrease of 20%, as compared with the College Preparatory track. This group tended to respond to *Cloze Test* items 2, 5 and 6 in the past tense, with an average of 55%. This showed a decrease of 43%, as compared with the College Preparatory track.

In the correlation set of *Present Time Orientation Questionnaire* item 33 and the averages of *Cloze Test* items 2, 5 and 6, the data for the College Preparatory and General tracks indicated that the students' linguistic expression of future time orientation was 14% to 19% stronger than their self-description of present time orientation on the *Time Orientation Questionnaire*.

The Remedial track's average *Cloze Test* time orientation score was only 1% less than the *Present Time Orientation* item 33 score, indicating a discrepancy between language performance and self-perception of present time orientation. The ESL track's average *Cloze Test* time orientation score was only 4% less than the Time Orientation Questionnaire, again indicating a discrepancy between language performance and self-perception of *present time orientation.*

Present Time Orientation Questionnaire Item 36
and Cloze Test Correlations

Third, *Present Time Orientation Questionnaire* item 36, "I (don't) make lists of things I must do", incorporated *Present Time Orientation Factor 5.* This *fatalistic* factor correlated with *Time Orientation Cloze Test* item 3, in which the correct answer was in the past tense. The following results show a clear decrease per track in students' positive attitude towards planning for the future, as well as a decrease per track in students' clear concept and linguistic expression of the past, which is linked to the future. Please refer to Table 8:

Table 8

Relationships of Present Time Orientation Questionnaire Item 36 and Time Orientation Cloze Test Item 3: Multiple Regression

Tracks	36	3 (Past Tense)
College Preparatory	61%	76%
General	66	57
Remedial	75	43
ESL	58	39

The percentages of *Time Orientation Cloze Test* item 3 per track showed a decrease of 37% in correct answers, from the College Preparatory track to the ESL track. There was a 3% decrease in student self-assessment of not making lists of things to do, from the College Preparatory track to the ESL track.

The College Preparatory track tended to agree with *fatalism*, with a response of 61% for *Time Orientation Questionnaire* item 36. This group also tended to agree, with a response of 76%, with:

- ... what she <u>wanted</u> in a man. (3)

The General track tended to agree with *fatalism*, with a response of 66% for *Time Orientation Questionnaire* item 36. This showed an interesting increase of 5%, as compared with the College

Preparatory track. This group tended to respond to *Cloze Test* item 3 in the past tense, with an average of 57%. This showed a decrease of 19%, as compared with the College Preparatory track.

The Remedial track tended to agree with *fatalism*, with a response of 75% for *Time Orientation Questionnaire* item 36. This showed an increase of 14%, as compared with the College Preparatory track. This group tended to respond to *Cloze Test* item 3 in the past tense, with an average of 43%. This showed a decrease of 33%, as compared with the College Preparatory track.

The ESL track tended to agree with *fatalism*, with a response of 58% for *Time Orientation Questionnaire* item 36. This showed a decrease of 3%, as compared with the College Preparatory track. On this item, the self-assessments of the College Preparatory and ESL tracks were very close. This ESL group did not tend to respond to *Cloze Test* item 3 in the past tense, with an average of 39%. This showed a decrease of 37%, as compared with the College Preparatory track.

In the correlation set of *Present Time Orientation* item 36 and *Cloze Test* item 3, the data for the College Preparatory track indicated that the students' linguistic expression of *future time orientation* was 15% stronger than their self-description of *present time orientation* on the *Time Orientation Questionnaire*. In contrast, the General track's *Cloze Test* time orientation score was 9% less than the *Time Orientation Questionnaire* item 36 score, indicating

more consistency with this study's hypotheses. In addition, the Remedial track's *Cloze Test* time orientation score was 32% less than the *Time Orientation Questionnaire* item 36 score, and the ESL track's *Cloze Test* time orientation score was 19% less than the *Time Orientation Questionnaire* item 36 score.

Research Question 9

Significant relationships occurred between *Temporal Integration Cloze Test* items 7, 14, 19 and 24 and *Future Time Orientation Questionnaire* items 30, 34 and 37. Please refer to Table 9:

Table 9

Relationships of Future Time Orientation Items 30, 34 and 37 and Temporal Integration Cloze Test Items 7 and 19: Multiple Regression

Future Time Orientation Questionnaire Items	Temporal Integration Cloze Test Items	**p** values
30	7	.0034
34	19	.0385
37	7	.0458

These results from the multiple regression application establish that *Future Time Orientation Questionnaire* items significantly correlated with *Cloze Test* items. At this stage of the analysis, Research Question 9 has established significant relationships between track

placement, *Future Time Orientation Questionnaire* items 30, 34 and 37; and *Temporal Integration Cloze Test* items 7 and 19.

Present Time Orientation Questionnaire Item 30
and Cloze Test Correlations

First, *Future Time Orientation Questionnaire* item 30, "Tomorrow's homework is more important than tonight's party", incorporated *Future Time Orientation Factors* 1 and 4. These factors of *work motivation perseverance* and *specific daily planning* correlated with *Temporal Integration Cloze Test* item 7, in which the correct answer was in the present perfect tense. The following results show a decrease fot the General and Remedial in students' positive attitude towards completing homework, as well as a decrease per track in students' clear concept and linguistic expression of the present perfect, which is linked to the future. Please see Table 10:

Table 10

Relationships of Present Time Orientation Questionnaire Item 30 and Temporal Integration Cloze Test Item 7: Multiple Regression

Tracks	30	7
College Preparatory	71%	98%
General	67	100
Remedial	59	93
ESL	73	66

The percentages of *Cloze Test Temporal Integration* item 7 per track showed a decrease of 32% in correct answers, from the College Preparatory track to the ESL track. Interestingly, there was a 2% increase in student self-assessment of a positive attitude towards completing homework, from the the ESL track to the College Preparatory track.

The College Preparatory track tended to agree with the values of *work motivation perseverance* and *specific daily planning*, with a response of 71% for *Time Orientation Questionnaire* item 30. This group also tended to agree, with a response of 98%, with:

- Have you seen this man? (7)

The General track tended to agree with the values of *work motivation perseverance* and *specific daily planning*, with a response of 67% for *Time Orientation Questionnaire* item 30. This showed a 4% decrease, as compared with the College Preparatory track. This group responded to *Cloze Test* item 7 in the present perfect tense, with 100%. This showed an interesting 2% increase, as compared with the College Preparatory track.

The Remedial track tended to agree with the values of *work motivation perseverance* and *specific daily planning*, with a response of 59% for *Time Orientation Questionnaire* item 30. This showed a12% decrease, as compared with the College Preparatory track.

This group responded to *Cloze Test* item 7 in the present perfect tense, with 93%. This showed a 5% decrease, as compared with the College Preparatory track.

The ESL track tended to agree with the values of *work motivation perseverance* and *specific daily planning,* with the highest of the four responses, 73%, for *Time Orientation Questionnaire* item 30. This showed a surprising 2% increase, as compared with the College Preparatory track. This group tended to respond to *Cloze Test* item 7 in the past tense, with 66%. This showed a decrease of 32%, as compared with the College Preparatory track.

Summary of Findings

In the correlation set of *Present Time Orientation* item 30 and *Cloze Test Temporal Integration* item 7, the data for the College Preparatory track indicated that the students' linguistic expression of *extended temporal integration* was 27% stronger than their self-description of *present time orientation* on the *Time Orientation Questionnaire.* The General track's *Cloze Test* temporal integration score was 33% stronger than the *Time Orientation Questionnaire* item 30 score. In addition, the Remedial track's *Cloze Test* temporal integration score was 34% stronger than the *Time Orientation Questionnaire* item 30 score. In contrast, the ESL track's *Cloze Test* temporal integration score was 7% less than the *Time Orientation Questionnaire* item 30 score.

Present Time Orientation Questionnaire Item 34
and Cloze Test Correlations

Second, *Future Time Orientation Questionnaire* item 34, "I (don't) feel that it's more important to enjoy what I'm doing than to get the work done on time", incorporated *Future Time Orientation Factors* 1 and 4. These factors of *work motivation perseverance* and *specific daily planning* correlated with *Temporal Integration Cloze Test* item 19, in which the correct answer was in the present perfect tense. The following results show a clear decrease per track in students' positive attitude towards completing academic work, as well as a decrease for the Remedial and ESL tracks in students' clear concept and linguistic expression of the present perfect, which is linked to the future. Please see Table 11:

Table 11

Relationships of Present Time Orientation Questionnaire Item 34 and Temporal Integration Cloze Test Item 19: Multiple Regression

Tracks	34	19
College Preparatory	77%	64%
General	70	71
Remedial	58	57
ESL	45	43

The percentages of *Cloze Test Temporal Integration* item 19 per track showed a decrease of 21% in correct answers, from the College

Preparatory track to the ESL track. There was a 32% decrease in student self-assessment of a positive attitude towards completing academic work, from the College Preparatory track to the ESL track.

The College Preparatory track tended to agree with the values of *work motivation perseverance* and *specific daily planning*, with a response of 77% for *Time Orientation Questionnaire* item 34. This group also tended to agree, with a response of 64%, with:

- ... the couple has lived sometimes without heat ... (19).

The General track tended to agree with the values of *work motivation perseverance* and *specific daily planning,* with a response of 70% for *Time Orientation Questionnaire* item 34. This showed a decrease of 7%, as compared with the College Preparatory track. This group tended to respond to *Cloze Test* item 19 in the present perfect tense, with 71%. Interestingly, this showed a 7% increase, as compared with the College Preparatory track.

The Remedial track tended to agree with the values of *work motivation perseverance* and *specific daily planning*, with a response of 58% for *Time Orientation Questionnaire* item 34. This showed a 19% decrease, as compared with the College Preparatory track. This group tended to respond to *Cloze Test* item 19 in the present perfect tense, with 57%. This showed a 7% decrease, as compared with the College Preparatory track.

The ESL track tended to disagree with the values of *work motivation perseverance* and *specific daily planning*, with a response of 45% for *Time Orientation Questionnaire* item 34. This showed a decrease of 32%, as compared with the College Preparatory track. This group tended to respond to *Cloze Test* item 19 in the past tense, with 43%. This showed a decrease of 21%, as compared with the College Preparatory track.

Summary of Findings

In the correlation set of *Present Time Orientation* item 34 and *Cloze Test Temporal Integration* item 19, the data for the College Preparatory track indicated that the students' linguistic expression of *extended temporal integration* was 13% weaker than their self-description of present time orientation on the *Time Orientation Questionnaire*. The General track's *Cloze Test temporal integration* score was 1% stronger than the *Time Orientation Questionnaire* item 34 score. In addition, the Remedial track's *Cloze Test temporal integration* score was 1% weaker than the *Time Orientation Questionnaire* item 34 score. In contrast, the ESL track's *Cloze Test temporal integration* score was 2% less than the *Time Orientation Questionnaire* item 34 score.

Present Time Orientation Questionnaire Item 37
and Cloze Test Correlations

Third, *Future Time Orientation Questionnaire* item 37, "I meet my obligations to friends and teachers on time", incorporated *Future Time Orientation Factors* 1 and 4. These factors of *work motivation*

perseverance and *specific daily planning* correlated with *Cloze Test Temporal Integration* item 7, in which the correct answer was in the present perfect tense. The following results show a clear decrease per track in students' positive attitude towards meeting social and academic obligations in a timely manner, as well as decreases for the Remedial and ESL tracks in students' clear concept and linguistic expression of the present perfect, which is linked to the future. Please see Table 12:

Table 12

Relationships of Present Time Orientation Questionnaire Item 37 and Temporal Integration Cloze Test Item 7: Multiple Regression

Tracks	37	7
College Preparatory	91%	98%
General	81	100
Remedial	68	93
ESL	63	66

The percentages of *Cloze Test Temporal Integration* item 7 per track showed a decrease of 32% in correct answers, from the College Preparatory track to the ESL track. There was a 28% decrease in student self-assessment of a positive attitude towards meeting social and academic obligations in a timely manner, from the College Preparatory track to the ESL track.

The College Preparatory track tended to agree with the values of *work motivation perseverance* and *specific daily planning*, with a response of 91% for *Time Orientation Questionnaire* item 37. This group also tended to agree, with a response of 98% with:

- Have you seen this man? (7)

The General track tended to agree with the values of *work motivation perseverance* and *specific daily planning*, with a response of 81% for *Time Orientation Questionnaire* item 37. This showed a decrease of 10%, as compared with the College Preparatory track. This group responded to *Cloze Test* item 7 in the present perfect tense, with 100%. This showed a 2% increase, as compared with the College Preparatory track.

The Remedial track tended to agree with the values of *work motivation perseverance* and *specific daily planning*, with a response of 68% for *Time Orientation Questionnaire* item 37. This showed a decrease of 23%, as compared with the College Preparatory track. This group tended to respond to *Cloze Test* item 7 in the present perfect tense, with 93%. This showed a decrease of 5%, as compared with the College Preparatory track.

The ESL track tended to agree with the values of *work motivation perseverance* and *specific daily planning*, with a response of 63% for Time Orientation Questionnaire item 37. This showed a decrease of 28%, as compared with the College Preparatory track.

This group tended to respond to *Cloze Test* item 7 in the present perfect tense, with 66%. This showed a decrease of 32%, as compared with the College Preparatory track.

Summary of Findings

In the correlation set of *Present Time Orientation* item 37 and *Cloze Test temporal integration* item 7, the data for the College Preparatory track indicated that the students' linguistic expression of *extended temporal integration* was 7% stronger than their self-description of *present time orientation* on the *Time Orientation Questionnaire*. The General track's *Cloze Test* temporal integration score was 19% stronger than the *Time Orientation Questionnaire* item 37 score. In addition, the Remedial track's *Cloze Test temporal integration* score was 25% stronger than the *Time Orientation Questionnaire* item 37 score. In contrast, the ESL track's *Cloze Test temporal integration* score was only 3% more than the *Time Orientation Questionnaire* item 37 score.

Research Question 10

A significant relationship occurred between *Cloze Test Temporal Integration* item 7 and *Present Time Orientation Questionnaire* item 40, as shown below in Table 13:

Table 13

Relationship of Present Time Orientation Item 40 andTemporal Integration Cloze Test Item 7: Multiple Regression

Present Time Orientation Questionnaire Item	Temporal Integration Cloze Test Item	**p** value
40	7	.0239

Future Time Orientation Questionnaire item 40, "It seems to me that it (does) make sense to worry about the future, since luck (doesn't) determine what will happen", incorporated *Future Time Orientation Factors* 1 and 4. These *work motivation perseverance* and *specific daily planning* factors correlated with *Time Orientation Cloze Test* item 7, in which the correct answer was in the present perfect tense. The results show a clear decrease per track in students' attitude towards worrying about the future, as well as a decrease per track in students' clear concept and linguistic expression of the present perfect, which is linked to the future. Please refer to Table 14:

Table 14

Relationships of Present Time Orientation Questionnaire Item 40 and Temporal Integration Cloze Test Item 7: Multiple Regression

Tracks	40	7
College Preparatory	82%	98%
General	72	100
Remedial	52	93
ESL	61	66

The percentages of *Temporal Integration Cloze Test* item 7 per track showed a decrease of 32% in correct answers, from the College Preparatory track to the ESL track. There was a 21% decrease in student self-assessment of a positive attitude towards worrying about the future, from the College Preparatory track to the ESL track.

The College Preparatory track tended to agree with the values of *work motivation perseverance* and *specific daily planning*, with a response of 82% for *Time Orientation Questionnaire* item 40. This group also tended to agree, with a response of 98%, with:

- Have you seen this man? (7)

The General track tended to agree with the values of *work motivation perseverance* and *specific daily planning*, with a response of 72% for *Time Orientation Questionnaire* item 40. This showed a 10% decrease, as compared with the College Preparatory track. This

group agreed 100% that *Cloze Test* item 7 should be in the present perfect tense. This showed a surprising 2% increase, as compared with the College Preparatory track.

The Remedial track tended to agree with the values of *work motivation perseverance* and *specific daily planning*, with a response of 52% for Time Orientation Questionnaire item 40. This showed a 30% decrease, as compared to the College Preparatory track. This group tended to respond to *Cloze Test* item 7 in the present perfect tense, with an average of 93%. This showed a 5% decrease, as compared with the College Preparatory track.

The ESL track tended to agree with the values of *work motivation perseverance* and *specific daily planning*, with a response of 61% for *Time Orientation Questionnaire* item 40. This showed a 21% decrease, as compared with the College Preparatory track. This group tended to respond to *Cloze Test* item 7 in the present perfect tense, with an average of 66%. This showed a 32% decrease, as compared with the College Preparatory track.

Summary of Findings

In the correlation set of *Present Time Orientation* item 40 and *Cloze Test* temporal integration item 7, the data for the College Preparatory track indicated that the students' linguistic expression of *extended temporal integration* was 16% stronger than their self-description of *present time orientation* on the *Time Orientation Questionnaire*. The General track's *Cloze Test temporal integration*

score was 28% stronger than the *Time Orientation Questionnaire* item 40 score. In addition, the Remedial track's *Cloze Test temporal integration* score was 41% stronger than the *Time Orientation Questionnaire* item 40 score. In contrast, the ESL track's *Cloze Test temporal integration* score was only 5% more than the *Time Orientation Questionnaire* item 40 score.

Appendix G

Two Micro-Analyses

First Micro-Analysis:

Individual Time Orientation Cloze Test Item Results

McClure and Platt's (1988) temporal categories of syntax analysis will be used to identify and discuss each temporally cohesive indicator in the *Cloze Test*:

1) Verb tense
2) Wh-subordination indicating sequentiality or simultaneity (Diver, 1963)
3) Temporal adverbials
   a) adverbs:
      no longer, then
   b) prepositional phrases:
      about two months later, by the time

Using the Chi-square calculations, the percentage relationships of correct to incorrect answers per item and per track are as follows:

Cloze 1

A little more than seven years ago, Carolyn Chute was separated from a man who had made her feel so terrible about herself that she could no longer write stories.

The context of the past is explicitly established in the first seven words of the text. From the beginning of the story, the past tense

level of the narrative is richly supported, both with past tense verbs (who had made her feel; she could no longer write stories) and temporal adverbials (a little more than seven years ago; no longer). Please refer to the following Table 1:

Table 1

Track-Based Responses to Time Orientation
Cloze Item 1

Track	Past	Present	Future
College Preparatory	100%	0%	0%
General	98	2	0
Remedial	93	0	7
ESL	78	4	18

The percentages of the past choice category show a decrease per track in students' ability to clearly conceptualize the past (100%->98->93->78). Concurrently, the decrease in percentages of the past choice for the Remedial and ESL tracks corresponds with increases in the future choice category, especially for the ESL track. Within this portion of the text, 18% of the ESL track chose the future tense ("A little more than seven years ago, Carolyn Chute *will be separated from a man ...").

Cloze 2
She sat down and wrote a list of what she wanted in a man.

The critical clue to the correct verb tense choice for both cloze items 2 and 3 is the use of wrote, a verb in the past tense which textually follows the past tense level of the reading from the beginning. Please refer to Table 2 below:

Table 2

Track-Based Responses to Time Orientation
Cloze Item 2

Track	Past	Present	Future
College Preparatory	100%	0%	0%
General	98	2	0
Remedial	90	2	7
ESL	56	21	23

Even though this is a clear example of parallelism with matched-tense verbs ("She sat down and wrote a list ..."), the percentages of the past tense category responses show a clear per-track decrease in students' ability to clearly conceptualize the past, especially between the Remedial and ESL tracks (100%->98->90->56). The decrease in percentages of the past tense choice for the Remedial and ESL tracks corresponds with increases in the present and future choice categories, especially for the ESL track. Twenty-one percent of the ESL students chose the present tense, indicating a confusion about the past tense level of the reading passage ("She *sits down and wrote a list ..."). Twenty-three percent of the ESL track chose the future tense ("She *will sit down and wrote a list ...").

Cloze 3
She sat down and wrote a list of what she wanted in a man.

The example of wh-subordination indicating simultaneity in ("... what she wanted in a man") refers directly to the past tense of (wrote). Please refer to Table 3:

Table 3

Track-Based Responses to Time Orientation
Cloze Item 3

Track	Past	Present	Future
College Preparatory	76%	24%	0%
General	57	39	4%
Remedial	43	51	6
ESL	39	43	26

Again, the percentages of the past tense category respones show a decrease in students' ability to clearly conceptualize the past (76%->57->43->39). The decrease in percentages of the past choice for the College Preparatory and General tracks corresponds with increases in the present choice category, ("... of what she *wants in a man.")

Major trends developed for the Remedial and ESL tracks. The Remedial track preferred the present tense to the past (51%-> 43%; "... of what she *wants in a man"). The ESL track manifested a more even division between the present and the past tenses (43%->39%),

indicating a confusion about the past tense level of the reading passage ("She sat down and wrote a list of what she *wants in a man"). Twenty-six percent of this track also chose the future tense ("... she *will want in a man").

Cloze 5
Then she went looking for him.

Then is a temporal adverbial explicitly referring to the past tense environment of the activity ("... she went looking for him ..."). Please refer to Table 4:

Table 4

Track-Based Responses to Time Orientation
Cloze Item 5

Track	Past	Present	Future
College Preparatory	100%	0%	0%
General	88	6	6
Remedial	75	11	14
ESL	61	19	19

Again, the percentages for the past tense category show a clear decrease in students' ability to clearly conceptualize the past (100%->88->75->61). The decrease in percentages of the past choice for the General, Remedial and ESL tracks corresponds with increases in the present and future choice categories, especially for the ESL track

(19% for both the present and future categories: "Then she *goes looking for him"; "Then she *will go looking for him").

Cloze 6
... she drove the wooded roads of Maine.

By this stage of the narrative, the past tense markers, which are separate from cloze test blanks, number seven:

1) A little more than seven years ago
2) who had made her feel
3) she could/ no longer/ write
4) wrote a list
5) what she wrote/was
6) it was essentially a mountain man
7) she was describing

Based on these past-tense markers, it is clear that the textual level of the reading is in the past. Please refer to Table 5:

Table 5

Track-Based Responses to Time Orientation
Cloze Item 6

Track	Past	Present	Future
College Preparatory	93%	7%	0%
General	75	18	8
Remedial	66	24	10
ESL	49	10	24

Again, the percentages for the past tense category show a decrease in students' ability to clearly conceptualize the past (93%->75->66->49). Even though the College Preparatory track clearly preferred the past tense, large percentages of the General, Remedial and ESL tracks chose the present tense (18%->22%->10%; "... she *drives the wooded roads of Maine").

The ESL track manifested the highest percentage for the future tense (24%; "...she *will drive the wooded roads of Maine"). The decrease in percentages of the past choice for the General, Remedial and ESL tracks corresponds with increases in the present and future choice categories, especially for the ESL track.

Cloze 8

He looked exactly like her portrait.

The past-tense level of the narrative continues to develop. At this stage of the narrative, eight more past tense markers have appeared (for a combined total of 15):

1) she searched the taverns
2) ... and showed people
3) she would say
4) Then ...(temporal adverbial)
5) I went to a turkey shoot ...

6) ... she said ...

7) I couldn't believe my eyes

8) it was him

Please refer to Table 6:

Table 6

Track-Based Responses to Time Orientation
Cloze Item 8, in percentages

Track	Past	Present	Future
College Preparatory	96%	4%	0%
General	82	16	2
Remedial	57	42	1
ESL	55	38	7

Again, the percentages for the College Preparatory, General, Remedial and ESL tracks show a clear per-track decrease in students' ability to clearly conceptualize the past (96%->82->57->55).

There was a dramatic decrease between General and Remedial tracks (82%->57). The decrease in percentages of the past choice for the General, Remedial and ESL tracks corresponds with increases in the present and future choice categories. In addition, The ESL track showed a 38% preference for the present tense ("He *looks exactly like her portrait").

Cloze 9

...he just walked up to me ...

At this stage of the narrative, three more past tense markers have appeared (for a combined total of 18):

1) she was too shy
2) about two months later (temporal adverbial–prepositional phrase
3) I was in a tavern

Please refer to Table 7:

Table 7

Track-Based Responses to Time Orientation
Cloze Item 9

Track	Past	Present	Future
College Preparatory	100%	0%	0%
General	86	12	2
Remedial	82	15	4
ESL	69	20	11

The percentages from the College Preparatory through ESL tracks show a decrease in students' ability to clearly conceptualize the past (100%->86->82->69). The decrease in percentages of the past choice for the General, Remedial and ESL tracks corresponds with increases in the present and future choice categories, especially for the ESL track (20% chose"... he just *walks up to me"; 11% chose "... he *will just walk up to me ...").

Cloze 10

By the time he came back, ...

At this stage of the narrative, four more past tense markers have appeared (for a combined total of 22):

1) stood there
2) the man who was her date (wh-subordination indicating simultaneity)
3) had left
4) by the time (temporal adverbial–prepositional phrase)

Please refer to Table 8:

Table 8

Track-Based Responses to Time Orientation
Cloze Item 10

Track	Past	Present	Future
College Preparatory	100%	0%	0%
General	90	8	2
Remedial	86	11	4
ESL	69	20	11

Again, the percentages all four tracks show a clear decrease in students' ability to clearly conceptualize the past (100%->90->86->69). The decrease in percentages of the past choice for the

General, Remedial and ESL tracks corresponds with increases in the present and future choice categories, especially for the ESL track.

Twenty percent of the ESL track chose the present tense, indicating a confusion about the past tense level of the reading passage ("By the time he *comes back ..."). In addition, 11% of the ESL track chose the future tense ("By the time he *will come back ...")

Cloze 17

She wrote the first draft of The Beans in longhand ...

At this stage of the narrative, eleven more past tense markers have appeared (for a combined total of 33):

1) she said
2) we were off in a corner
3) began to write again
4) published this month
5) Carolyn said
6) They hated us
7) we were poor
8) we didn't have jobs
9) she half-giggled
10) Chute quit high school
11) took writing courses

Please refer to Table 9:

Table 9

Track-Based Responses to Time Orientation
Cloze Item 17, in percentages

Track	Past	Present	Future
College Preparatory	98%	0%	2%
General	84	6	10
Remedial	84	4	12
ESL	63	21	16

Again, the percentages from all four tracks show a clear decrease in students' ability to clearly conceptualize the past (98%->84->84->63). The decrease in percentages of the past tense choice for the General, Remedial and ESL tracks corresponds with increases in the present and future choice categories, especially for the ESL track.

Twenty-one percent of the ESL track chose the present tense, indicating a confusion between the past tense level of the reading passage and their present time orientation ("She *writes the first draft ...". Sixteen percent of the ESL track chose the future tense ("She *will write the first draft ...")

Cloze 20

Carolyn speaks of her husband, Michael, the mountain man who can neither read nor write ...

The critical marker for the present tense usage of speaks is found in the simultaneous who-subordination of (" ...who can neither read nor write ..."). The past tense choice for this cloze item would only make sense if it had been written with the following substitution: "Carolyn spoke of her husband, Michael, the mountain man who could neither read nor write...". Please refer to Table 10:

Table 10

Track-Based Responses to Time Orientation
Cloze Item 20, in percentages

Track	Past	Present	Future
College Preparatory	62%	38%	0%
General	43	55	2
Remedial	51	45	5
ESL	49	34	18

Again, the percentages from all four tracks show a clear per-track decrease in students' ability to clearly conceptualize the past, by making the following choices of the present: (62%->43->51->49). The decrease in percentages of the present choice for the College Preparatory, General, Remedial and ESL tracks corresponds with increases in the past and future choice categories, especially for the ESL track. In addition, 18% of the ESL track chose the future tense ("Carolyn *will speak of her husband, Michael, the mountain man who can neither read nor write ...").

Second Micro Analysis:

Individual Temporal Integration Cloze Test Item Results

Cloze 7

"Have you seen this man?" (state-up-to-the-present re: Leech, 1971, p. 31). Please refer to Table 11:

Table 11

Track-Based Responses to Temporal Integration Cloze Item 7, in percentages

Track	Past	Present Perfect	Future
College Preparatory	2%	98	0%
General	0	100	0
Remedial	4	93	4
ESL	33	66	1

The three higher tracks (College Preparatory, General and Remedial) ranged from 93%-100% in favor of the present perfect tense choice. Sixty-six per cent of the ESL track agreed with the three higher tracks, in that the man in question had been seen several times in the indefinite past, and might be seen again in the future. In contrast, the ESL track manifested 33% who favored the past tense (showing a possible belief that the man in question had been seen once, and only once, by the individual who was being asked for information).

This difference in answers also describes the students' concept of interaction in the world at large. Sixty-six per cent of the ESL track was aware of a larger world than that of the immediate present in the high school environment. This larger, adult world involves many repetitive interactions with the same people. In that adult world of the future, it becomes more likely, as well, that a given individual will be seen once and no more in a lifetime.

Cloze 14

In the poor but loving life that they have made together for the last seven years, Chute has found the raw material and strength to produce her first extraordinary novel...(state-up-to-the-present re: Leech, 1971, p. 31)

According to Liebow (1967), "the future orientation of the middle-class person presumes ... a surplus of resources to be invested in the future ..." (Liebow, 1967, p. 65) and Cohen (1968) support this by adding, "Such concepts as those of social mobility, infinity, the value of money, ...improving one's performance, and so forth, ... assume a continuous distribution of critical variables ..." In addition, "conflicting assumptions of the discrete *(definite verb tenses such as the past and present)* in hard-core use and the continuous *(indefinite verb tenses such as the present perfect)* in standard use represent one area of mutual incompatability." (Cohen, 1968, p. _; emphasis not in original). Please refer to Table 12:

Table 12

Track-Based Responses to Temporal Integration
Cloze Item 14

Track	Past	Present Perfect	Future
College Preparatory	47%	51%	2%
General	69	25	6
Remedial	41	51	8
ESL	36	41	23

The College Preparatory track shows a close division between past and present perfect tense choices. For this group, 51% believed that it is possible to continue to find resources in the future. In contrast, 47% manifested an underlying belief that resources or growth are finite or limited to single events ("Chute *found the raw material and strength ...".

The General track demonstrated a dramatic shift in choice. This track chose the past tense over the present perfect (67%->25%), showing a clear preference for the belief that resources are finite.

The Remedial track showed a slightly stronger preference for the present perfect tense over the past tense (51%->41%), again indicating a clear division of opinion regarding resources.

The ESL track also manifests a slightly stronger preference for the present perfect tense over the past tense (41%->36%). However,

there was a strong showing in the number of students who chose the future tense (23%), misinterpreting the concept that "to produce her extraordinary first novel" actually took place over the past seven years. Perhaps these students are egocentrically looking forward to achieving their own "firsts".

Cloze 19

... the couple has lived for the last three years on food stamps ...

(state-up-to-the-present re: Leech, 1971, p. 31)

At this stage of the narrative, the two present perfect markers are as follows:

1) when he can find a job (wh-subordination indicating simultaneity)
2) frequently finds none (indicating many attempts over time)

The critical marker for the correct verb choice is found in the temporal adverbial, a prepositional phrase used primarily with the present perfect tense, "for the last three years"). Please refer to Table 13:

Table 13

Track-Based Responses to Temporal Integration
Cloze Item 19

Track	Past	Present Perfect	Future
College Preparatory	33%	64%	4%
General	25	71	4
Remedial	29	57	14
ESL	43	43	13

The choices of present perfect ranged from 71% (General) to 43% (ESL). Interestingly, the General track showed a stronger preference for the present perfect choice than the College Preparatory track. In addition, the Remedial and ESL tracks showed that 14% and 13%, respectively, believed that ("the couple *will live for the last three years on food stamps"). These students are most likely confusing the couple's financial situation with their own families'.

Cloze 24

...Carolyn has installed a telephone ...(indefinite past re: Leech, 1971, p. 32)

The critical marker for the correct verb tense choice is found in one key adjective: "first check". This adjective indicates that there will be more money in the future, especially when considering earlier information: ("Published this month, it is in its third printing"). Please refer to Table 14:

Table 14

Track-Based Responses to Temporal Integration
Cloze Item 24

Track	Past	Present Perfect	Future
College Preparatory	31%	69%	0%
General	61	29	10
Remedial	43	48	10
ESL	41	41	19

The percentage of choices of the present perfect tense ranged from 69% (College Preparatory) to 29% (General). Interestingly, the General track manifested a stronger preference for the past tense (61%). The Remedial and ESL tracks were more evenly divided between the present perfect and past choices (48%->43%; 41%->41%).

In addition, the General, Remedial and ESL tracks showed that 10%, 10%, and 19%, respectively, believed that (Carolyn *will install a telephone ...). Again, these students are most likely confusing the couple's financial situation with their own families'.