

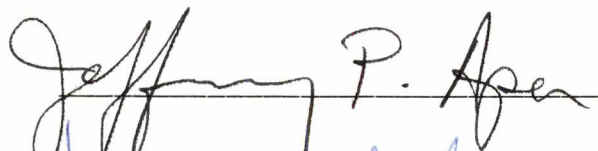
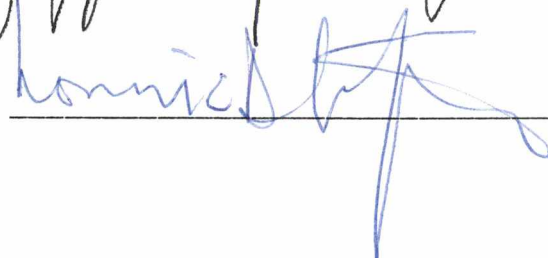
To the Graduate Council:

I am submitting herewith a dissertation written by Wanda June Hembree Manning entitled "The Relationship Between Critical Thinking and Attitudes Toward Reading of the Community College Student Enrolled in a Critical Reading Course at Roane State Community College." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Curriculum and Instruction.

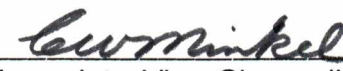

J. Estill Alexander, Major Professor

We have read this dissertation
and recommend its acceptance:



Accepted for the Council:


Associate Vice Chancellor
and Dean of the Graduate School

THE RELATIONSHIP BETWEEN CRITICAL THINKING AND ATTITUDES
TOWARD READING OF THE COMMUNITY COLLEGE STUDENT
ENROLLED IN A CRITICAL READING COURSE AT
ROANE STATE COMMUNITY COLLEGE

A Dissertation
Presented for the
Doctor of Education Degree
The University of Tennessee, Knoxville

Wanda June Hembree Manning
August, 1997

DEDICATION

This Dissertation is dedicated to the memory of my father

George Webster Hembree

who gave me the love of reading
and the passion for learning.

ACKNOWLEDGEMENTS

I would like to thank the many people who have helped me with this dissertation. I especially want to acknowledge Dr. J. Estill Alexander, the chairperson of my committee, whose advice, encouragement, and patience made this endeavor possible. I also want to express sincere appreciation to Dr. Jeffrey Aper, Dr. Lonnie McIntyre, and Dr. Thomas Turner who served as members of my doctoral committee and whose combined efforts made all this possible.

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Finally, I want to thank my family for their continued encouragement and support. I especially want to thank my husband for his patience and understanding while I completed this degree.

ABSTRACT

This study was designed to investigate the relationship between critical thinking and attitudes toward reading of community college students enrolled in a Critical Reading course at Roane State Community College.

The study was conducted with two sections with a total of 31 students enrolled in Critical Reading at Roane State Community College. One instructor taught both classes: one class was taught the regular curriculum and the other class was taught the regular curriculum plus instruction in five critical thinking skills. The design allowed for a comparison of the two different treatments one on the Roane County campus and the other on the Cumberland County Center campus. The research questions were:

1. Is there a significant relationship between gain scores on a measure for attitude toward reading and a measure for critical thinking skills?
2. Is there a difference in the means of the gain scores between pretest and posttest measures for attitude toward reading of community college, developmental reading students enrolled in a Critical Reading course?
3. Is there a significant difference in the means of the gain scores between pretest and posttest measures for critical thinking skills of community college, developmental reading students enrolled in a Critical Reading course?

The students in both groups were given a pretreatment reading attitude assessment and critical thinking test to determine if reading attitude and

critical thinking skills were comparable. Pretreatment measures were comparable for both groups.

Since pretreatment reading attitude and critical thinking were comparable, posttreatment measures of reading attitude and critical thinking were analyzed to see if they were comparable, and to see if there was a relationship between reading attitude and critical thinking. The results indicated that no statistically significant correlation existed between attitude toward reading and critical thinking. However, a statistically significant difference was found between the gain scores for critical thinking for the treatment group and the control group. This experiment did establish the need for more research on reading attitudes and critical thinking skills of community college students.

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CHAPTER I

INTRODUCTION

The factors that affect reading are a subject of continuing research. In recent years researchers have been aware of the importance of student attitude toward reading. Ivan Quandt (in Alexander & Filler, 1976) states that:

It is one thing to be aware that reading attitudes are important. To understand in what ways attitudes affect reading instruction is quite another matter, and to build strategies for dealing with attitudes becomes even more complex Do certain conditions foster more positive attitudes? What can a teacher do to build better attitudes? (p. v)

Not only has attitude toward reading been a focus of research, but critical thinking has received considerable attention in professional literature. Hoffman (1992) believes that this is the result of recent emphasis on "basic skills" approach to reading. Educational researchers and theorists from a wide range of academic areas have expressed concern about students' abilities to think critically about different topics (Ennis, 1987; Freire, 1982, Giroux, 1988, Langer & Applebee, 1987; Marzano, 1991). These scholars argue for the importance of developing students' abilities to direct their own reading and writing activities through taking notes, reading source material, outlining, writing a draft, and reading a draft, on their way to thinking critically. Lewis (191) viewed reading itself as an act of critical thinking , and thought that teachers of reading in colleges and secondary schools could effectively teach reading strategies that enhanced students' abilities to reflect reasonably on what they think, read, or write.

According to Newmann (1988), higher-order thinking (which includes critical thinking) can be taught, and there are three perspectives on thinking that may seem at odds with one another - - perspectives on content, skills, and

dispositions. He further explains that the dispositions perspective contends that higher order thinking requires something more fundamental than the mastery of knowledge or skills; this would be an underlying disposition of thoughtfulness which involves attitudes, personality or character traits, and general beliefs or world views about the nature of knowledge. Content and skills are important for mastery of reading, but without a disposition of thoughtfulness, content and skills may be taught and applied automatically and nonsensically. Marzano et. al. (1988) also state that critical thinking involves both dispositions and abilities. He further states that when students evaluate, plan, and regulate, they may also be monitoring and controlling commitment, attitudes and attention.

Being a reader means more than just possessing the skills required for reading. It means that a student reads because the student wants to read and likes to read. Cothorn and Collins (1992) have identified five dimensions of attitude:

1. Attitude gives rise to motivated behavior which is directed toward a particular referent (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975; Liska, 1984; Shaw & Wright, 1967);
2. The intensity, quality, and degree of an attitude varies on a continuum from negative to neutral to positive (Krech, Crutchfield & Ballachey, 1962; McGrath, 1964; Newcomb, Turner & Converse, 1965);
3. Attitudes exist within systems, and the attitudes within a system are interrelated (Ajzen & Fishbein, 1980; Fishbein & Ajzen & Fishbein, 1975; Krech, Crutchfield & Ballachey, 1962; Liska, 1984; McGrath, 1964);
4. Attitudes have an enduring, stable nature due to the fact that they are based on beliefs (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975; Liska, 1984; Newcomb, Turner & Converse, 1965); and
5. Attitudes are learned (Ajzen & Fishbein, 1980; Elwood, 1975; Fishbein & Ajzen, 1975; Liska, 1984; Midkiff, Burke, Hunt & Ellison, 1986; Strain, Guralnick & Walker, 1986). (p. 87)

Therefore, the importance of obtaining knowledge on the affective domain (including attitude), and its interaction with the cognitive domain is important.

Irene Athey indicated this when she stated:

. . . by increasing our knowledge of the affective life of the child, we broaden our understanding of his total functioning in the academic situation. In other words, the intellectual variables involved in reading do not operate in isolation but are modified by the individual's attitudinal and personality characteristics (Athey, 1976, p. 352).

Mathewson (1994) states that reasons for little research in affective influences on reading is that it is difficult to research affective variables, and there is a strong emphasis on cognitive variables.

There is much information available on attitudes and factors influencing attitude such as gender, ethnicity, reading ability, comprehension, and specific teaching techniques. There is no information on the possibility of critical thinking skills being a factor, even though at-risk students tend to not demonstrate critical thinking ability. These same students have a negative attitude toward reading.

Statement of the Problem

There is much research in the area of reading comprehension, but not as much research in the affective domain of reading, especially on the college level. The area of critical thinking has had much research, but there is little information on critical thinking and how this might affect a reader's attitude toward reading.

In order to foster positive attitudes toward reading, it is important for a teacher to know where to begin. Dattillo (1974) suggested that teachers begin by measuring the student's attitude toward reading. Once such a measurement has been obtained, a program can be constructed which will

promote a more positive attitude. This is especially important for at-risk students. When at-risk students are taught thinking skills, they gain more control over their learning and take more responsibility for it. This, then, raises students' awareness of the quality of their own thinking (Willis, 1993).

Purpose of the Study

The purpose of this study was to determine if there is a relationship between critical thinking and reading attitudes of students enrolled in developmental studies Critical Reading courses. Specifically, the study attempted to determine what, if any, relationship existed between gain scores on a measure of critical thinking and gain scores on a measure of reading attitudes after one section (treatment) had received information about critical thinking and another section (control) had not received any information about critical thinking.

Importance of the Study

There are many studies that deal with the attitude of students toward reading (Alexander & Cobb, 1992; Colthern, & Collins, 1992; Mikulecky, 1978; Moore & Lemons, 1982; Smith, 1992), but few on the adult level. Previous research has indicated that attitude toward reading is a very important factor in the decision to read (Alexander and Filler, 1976, p. 1; Nieratka & Epstein, 1981; Roe, Stoodt, & Burns, 1991; Alexander & Cobb, 1992; Mathewson, 1994); therefore, programs directed toward positive attitude change should be studied analytically. There is, therefore, every indication that a relationship exists

between the affective domain of reading and the cognitive domain of reading. Even so, no research was identified by this researcher that linked critical thinking with attitude toward reading. Instructional methods should be such that would help students gain the most from that instruction.

Research Questions

In order to determine the relationship between critical thinking skills and attitude toward reading of college developmental studies critical reading students the following questions were answered.

1. Is there a significant relationship between gain scores on a measure for attitude toward reading and a measure for critical thinking skills?
2. Is there a significant difference in the means of the gain scores between pretest and posttest measures for attitude toward reading of community college, developmental reading students enrolled in a Critical Reading course?
3. Is there a significant difference in the means of the gain scores between pretest and posttest measures for critical thinking skills of community college, developmental reading students enrolled in a Critical Reading course?

Assumptions

The following assumption was made in this study.
Students will respond honestly on the reading attitude survey and the critical thinking test.

Limitations

The study was limited because the researcher was the teacher of record for both sections. The study was also limited to one section that was given treatment and one section that was not. (Two other sections were canceled by the college due to low enrollment.) The students, who registered for the two classes, were assigned to the treatment groups via the registration processes. The study was also limited to a small number of students. Each class section had a maximum of 22 and a minimum of 15. The actual number of students who completed the two sections of Critical Reading, and were, therefore, part of the study, were 15 students in the Treatment section and 16 students in the Control section.

Delimitations

The subjects involved in this study were students who were enrolled in DSR 086 Critical Reading on the Cumberland County Campus and the Roane County Campus of Roane State Community College. Only data from those students who completed the course were included in the results of the study.

Definitions of Terms

The following terms were used in this study.

1. Attitude- Attitude is the predisposition to behave in a specific way to a specific stimulus (Crespi, 1965, p.9).
2. Attitude scale- An attitude scale is a set of self-report items for measuring

one's reactions to something to which a range of reactions is possible (Harris & Hodges, 1981, p. 24). The attitude scale used in this study was the Rhody Secondary Reading Attitude Assessment.

3. Critical Thinking- Critical thinking is reasonable and reflective thinking that is focused upon deciding what to believe or do (Norris & Ennis, 1989, p. 3). For the purpose of this study critical thinking will include skills of (1) perceiving - actively selecting, organizing, and interpreting what is experienced by our senses; (2) identifying concepts - general ideas that we use to identify and organize our experience; (3) problem solving - using an organized approach to problem solving; (4) classifying - grouping things based on similarities; and (5) identifying patterns and relationships - relating and organizing, using thinking patterns to make sense of the world.

4. Critical Thinking Tests- Critical thinking tests are paper and pencil tests to test critical thinking skills. For this study the Cornell Critical Thinking Test, Level X, third edition by Ennis, Millman, Tomko, 1985 was used.

5. Developmental Studies Critical Reading course- The Critical Reading developmental studies course is the last course in a series of three, the first is remedial and the next two are developmental level courses. This last course is known as DSR 086, Critical Reading.

6. Reading Attitude- Reading attitude can be defined as a system of feelings related to reading which causes the learner to approach or avoid a reading situation (Alexander & Filler, 1976, p. 1)

Techniques of Analysis of Data

The data from the Rhody Secondary Reading Attitude Assessment and

Cornell Critical Thinking Test, Level X, were analyzed using parametric tests since the data was interval data which approximated a normal distribution. Pearson's product-moment correlation coefficient which shows the linear relationship between two variables that have been measured on interval scales (Vogt, 1993) and *t* - test which is a test of the statistical significance of the results of a comparison between two group averages or means (Vogt, 1993) were used. A nondirectional test or two-tailed *t* - test on the mean gain scores from the Rhody Secondary Reading Attitude Assessment and Cornell Critical Thinking Test, Level X was used to show the two sides or tails. A *t* - test was appropriate when looking for the absolute magnitude of difference, regardless of sign. Pearson correlation coefficients were run to see if there was any significant relationship between gain scores on measures of attitude and critical thinking, pre- and posttests. The interview data were analyzed to see if any themes or patterns emerged relating to the relationship between attitude toward reading and critical thinking.

Organization of the Study

This study was organized into five major chapters. Chapter I contained background information, statement of the problem, purpose of the study, importance of the study, assumptions, limitations and delimitations of the study, definition of terms, questions to be addressed, and an organization of the study.

Chapter II presents a review of related literature relevant to history of remedial/developmental education, characteristics of remedial/developmental students, success of remedial/developmental students in college,

remedial/developmental reading, attitude, attitudes toward reading, attitudes toward reading in the elementary school, attitudes toward reading in secondary schools, attitudes toward reading in adults, critical thinking, and critical thinking and reading.

Chapter III describes the procedures followed and the instruments used in conducting the research project.

Chapter IV contains findings and analysis of the data.

Chapter V includes a summary of the study, conclusion, discussion, and recommendations for further research.

CHAPTER II

REVIEW OF RELATED LITERATURE

The purpose of this study was to determine the relationship between critical thinking and reading attitudes of students enrolled in developmental studies critical reading courses. Specifically, the study attempted to determine what, if any, relationship existed between scores on a measure of critical thinking and scores on a measure of reading attitudes.

This chapter presents a review of the literature related to the history of remedial/developmental education, characteristics of remedial/developmental students, success of remedial/developmental students in college, remedial/developmental reading, attitude, attitudes toward reading, attitudes toward reading in the elementary school, attitudes toward reading in secondary schools, attitudes toward reading in adults, critical thinking, and critical thinking and reading. A summary of the above related literature will be at the end of the chapter.

History of Remedial/Developmental Education

A brief review of the history of remedial/developmental education is important to get a better perspective of the educational atmosphere in which this study took place. This section presents a brief overview of the history, growth and scope of these programs for under prepared students from 1636 to the present. First, the overview includes a general review of literature on programs for the remedial/developmental student in America. Next, practices in the

institutions of higher education in the 15 state region of the Southern Regional Board of (SREB) are explained, followed by a look at the programs in Tennessee. Finally, the remedial/developmental program at Roane State Community College in East Tennessee is discussed.

Helping underprepared students prepare themselves for college has been part of American higher education since Harvard opened its doors in 1636. From then until the 1920s there was much controversy on the appropriateness of admitting students not adequately prepared for college. After 1920 remedial/developmental education was primarily left to the two year colleges. Even though two year colleges offered some type of remedial/developmental education, the success of such programs were in question prior to the 1960s (Spann & McCrimmon, 1994). A recent study conducted by the National Center for Developmental Education showed examples of success in preparing low-ability students for successful entry into college level courses (Spann & Thompson, 1986). A more recent study conducted by the National Center for Education Statistics (NCES) (1991) of 546 randomly selected institutions revealed that 90 percent of community colleges offered remedial/developmental education, compared to 88 percent in 1983. This same study showed that 36 percent of entering community college freshmen enrolled in a remedial reading, writing, or math course (Span, & McCrimmon, 1994). Roueche (1994) states

Entire institutions must work hard in changing times to respond to all of their students, and the fact that an increasing majority of their students can now be characterized as at risk is special cause for heightened concern. Colleges must think beyond the special groups that can be identified as needing specialized help; they must address the needs of the larger population of hundreds of thousands of community college students who will not be successful in any academic arena

unless their colleges are willing to take a more holistic approach to serving them. In view of the responses to the questions we posed to current directors of 12 award-winning programs, we can believe that community colleges are most capable of assessing the "winds of change" and adjusting the sails of the ship accordingly. (p.10)

A study commissioned in 1988 by the Exxon Education Foundation and conducted by the National Center for Developmental Education Foundation from 1989 to 1992 found, in a random sample of 5,566 students from 160 two year and four year institutions, that 67 % were white, 23 % were African Americans, 6 % were Latinos, 3 % were Asian/Pacific Islanders, and 1 % were American or Alaskan Indian . The mean age was 23 in the two year institutions, even though ages ranged from 16 to 55, the majority were in the traditional college age group of 18 to 24 years old. Retention and graduation rates of these developmental students in community colleges was 24 percent. This is a group who would most probably not graduate if not for developmental programs in community colleges (Boylan, et al, 1994).

Over the last few decades more and more students have entered college without the reading, writing, and math skills need to enroll, let alone succeed at the college level. According to Roueche and Roueche (1977) these students are likely to fail or drop out of college without the benefit of remedial/developmental courses. Bases on a study conducted by the Southern Regional Education Board (SREB), 85 percent of the responding higher education institutions in the 15 state region offer at least one remedial course in reading, writing, or mathematics (Abraham, 1992). The SREB states include Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas,

Virginia, and West Virginia, The study also found that enrollment in remedial/developmental courses at most private and public colleges and universities has increased since 1984, with the two year colleges showing the largest increase (Abraham, 1991). Underpreparedness of students in the TBR institutions of Tennessee has been a major problem. According to a study by Hector (1993) of the TBR institutions in Tennessee including all institutions and the 1986 cohort of first time entering freshmen, 50 percent of entering freshmen required remediation in mathematics, 38 percent in reading, and 37 percent in writing. The fall 1993 TBR profile of recent high school graduates enrolling as first time freshmen students, in Tennessee's TBR institutions, stated that 57.2 percent needed one or more remedial or developmental courses. According to the TBR profile 23.2 percent were in remedial or developmental reading courses. Of the first time freshman for summer and fall semesters 1993 at Roane State Community College, 27.5 percent were enrolled in remedial or developmental reading.

Characteristics of Remedial/Developmental Students

The academically under prepared college student may be defined as one who fails to meet the established entrance criteria for a beginning college level course. Maxwell (1979) characterized these students as those whose skills, knowledge and academic ability are below the typical college student. Rasnake (1991) described developmental students as low-achievers, educationally deprived and/or first generation college students. These students generally are described as having weaknesses in the basic skills which are necessary to succeed in college such as study skills, reading, writing, and

mathematics. These students are often referred to as high-risk students. High-risk is a term that is generally used to designate a student who has a high probability of becoming a college dropout or students who have been underachievers all of their lives and are rarely self starters capable of sustained independent work.

Studies by Cox (1985), Cherne (1986), Kinney (1989), and Rasnake (1991) found similar characteristics of remedial/developmental students. These characteristics were low placement scores, low high school grade point averages, poor communication skills, failure to assume responsibility for learning and success, part-time employment, attendance problems due to job-related reasons, a need for help in basic skills, external locus of control, lower socialization, large percentage minority, and majority undecided liberal arts majors. The characteristics above seem to true of the population for this study with the exception of large percent minority.

Rasnake (1991) concluded that characteristics of the remedial/developmental students are varied and often complex. Although research indicates that characteristics of remedial/developmental students are varied and different, there is indication that there are factors that determine these students success in college.

Success of Remedial/Developmental Students in College

The success of the remedial/developmental students after they have completed programs for the underprepared student and have moved into college level courses will be discussed in this section. Rasnake (1991) reported that a larger percentage of high-risk students enrolled in

remedial/developmental courses are retained in college than are high-risk students not enrolled in remedial/developmental courses. The persistence seemed to be greater for developmental students than for the nondevelopmental students. The study also showed that developmental programs tended to improve the performance of the at-risk students. Burley (1993) did a meta-analysis of 185 studies (1970-1990) and found that, based on those studies, college developmental programs do have a positive impact on achievement, attitude, and persistence of underprepared students. Bonham (1995) found that students' success in developmental courses contributed significantly to success in the first related college level course and to retention in enrollment.

Remedial/Developmental Reading

After World War II community colleges added remedial studies to their services. These were courses and activities designed to compensate for the students' deficient in prior learning (Encyclopedia of Higher Education, 1992). As a result, community colleges all around the country implemented remedial reading courses for at-risk students. Early programs emphasized the teaching of reading in large thought units, and increasing reading rate by using special reading films and tachistoscopic training. By 1965 a reading program was developed at New York City Community College of Applied Arts and Sciences in Brooklyn, New York that emphasized the student as a complete personality. Each student should have assessments in personality, intelligence, aptitude, reading and achievement (Cohen, 1965). In 1975, Ahrendt stated that no two remedial students are alike; what may work for one, may not work for the other.

Ahrendt felt that remedial programs should be individualized to fit the student. In 1983, Gabriel used the mainframe computer in teaching a basic reading course in Cuyahoga Community College. He used a spelling program for the mainframe, cloze exercises, drill and practice, and e-mail as well as, reading magazine articles and summarizing them on e-mail.

Becker (1990) reported that Nassau Community College, State University of New York, emphasized learning strategies, such as, mnemonic devices, planning, mapmaking and organizing before reading, and metacognition. In 1986, at Rock Valley College, Rockford, Illinois, mandated placement in reading and writing courses were implemented (Castleberry, 1990). Reis (1992) reported that Moraine Valley Community College, Palos Hills, IL had three levels of reading which were designed to remediate student deficiencies so that the students could successfully complete college-level coursework. At St. Philip's College, San Antonio, Texas a prescribed program in a skills-mastery format is the developmental reading program. Critical reading is approached by the types of questions asked of the student by the instructor (Otey, 1991). In the spring of 1992, at the Evergreen Community College, San Jose, CA, a program was initiated to assist underprepared students entering reading, writing, and math courses below college English and math (Kangas, 1992).

Attitude

Attitude can be defined as the predisposition to behave in a specific way to a specific stimulus (Crespi, 1965, p.9). It has also been defined by Fishbein and Ajzen (1975) as tripartite including components of belief, feeling, and

behavior. Cothorn and Collins (1992, p.87) have identified five dimensions of attitude:

1. Attitude gives rise to motivated behavior which is directed toward a particular referent (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975; Liska, 1984; Shaw & Wright, 1967);
2. The intensity, quality, and degree of an attitude varies on a continuum from negative to neutral to positive (Krech, Crutchfield & Ballachey, 1962; McGrath, 1964; Newcomb, Turner & Converse, 1965);
3. Attitudes exist within systems, and the attitudes within a system are interrelated (Ajzen & Fishbein, 1980; Fishbein & Ajzen & Fishbein, 1975; Krech, Crutchfield & Ballachey, 1962; Liska, 1984; McGrath, 1964);
4. Attitudes have an enduring, stable nature due to the fact that they are based on beliefs (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975; Liska, 1984; Newcomb, Turner & Converse, 1965); and
5. Attitudes are learned (Ajzen & Fishbein, 1980; Elwood, 1975; Fishbein & Ajzen, 1975; Liska, 1984; Midkiff, Burke, Hunt & Ellison, 1986; Strain, Guralnick & Walker, 1986).

According to Fishbein and Ajzen (1975) attitudes are formed as a result of experiences, direct or indirect that a student might have had in the past.

Research has shown that attitudes can change (Fishbein and Ajzen, 1975), but there has been limited research done with attitude change in reading. Brown, Wallbrown, and Engin (1979) suggest that attitudes are influenced by such things as task variables, situation variables, and subject variables.

Attitudes Toward Reading

Attitude toward reading can be defined as a system of feelings related to reading which causes the learner to approach or avoid a reading situation (Alexander & Filler, 1976). Attitude toward reading has also been defined as multidimensional by Lewis and Teal (1980), meaning that there are three factors involved with attitude toward reading. The first factor is individual development

in which the value is placed on reading for self development. The second factor is utility where the value is placed on reading for the attainment of educational or vocational success. The last factor is enjoyment, this means that one reads for the sheer pleasure of reading. Reading attitude has also been described as situational with attitudes changing according to a given situation (Heathington, 1975). Most studies dealing with attitude toward reading deal with elementary or secondary school students, not community college students. Mikulecky (1978) did give an overview of a survey of adult attitudes and reading habits. Attitudes are learned through influence of family and peers and other cultural beliefs (Fishbein, 1967; Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980). Attitudes give rise to motivated behavior which is directed toward a particular referent which suggests a causal relationship between attitudes and behavior (Fishbein, 1965; Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980). Moore (1980) developed an instrument to determine attitude toward general, academic and vocational reading of young adults because "student purpose setting promotes active reading--reading that is focused on seeking meaning rather than calling words. The meaning the student gets is largely related to his attitude toward the passage under discussion and his purpose for reading the selection".

Athey (1985) explained her theory of affective factors playing a role in reading achievement and reading behavior. She identifies four factors emerging from the process of reading. (1) Social Independence, which consisted of items that seemed to reflect a degree of maturity and a desire to remain dependent on family. (2) Self-Concept, in which students had a very negative view of self in relation to school in general and reading in particular. (3) School Dislikes, these centered around snobbish classmates, being

laughed at while reciting, and teachers who criticized them. (4) Family Orientation and Anxieties, which included wishing parents would spend more time with them. Her theory related primarily to junior high students. Mathewson's affective model (1994, 1985) which explains the influence of affect on reading. He hypothesized that motivation and attitude influences attentional processes, comprehension and acceptance of the content of the test is the widely accepted model for affect in reading. The McKenna model for affect in reading (1994) synthesized the work of Mathewson and others into a more conducive model for long-term development of reading attitudes. His model postulated that an individual's attitude toward reading will develop over time principally as the result of three factors: normative beliefs, beliefs about the outcomes of reading, and specific reading experiences.

Attitudes Toward Reading in the Elementary School

As early as 1948, published research on reading included studies on attitude toward reading when Smith conducted research on "Some Effects of Reading on Children". She was looking to see what attitude changes take place as a result of reading. She found that reading stories about people and animals had this effect. In recent years research has increased on attitude toward reading in elementary schools to developing attitude assessments as well as including many other variables in looking at reading attitude research.

Reading attitudes should be considered part of a total evaluation scheme and one important criterion of a program's success. Measuring a program's effectiveness based on ability alone is limited. A more balanced goal would be achieved by investigating skills improvement together with attitude

improvement. As Rowell (1967) stated, "If improvement in reading skills takes place without a concurrent improvement in attitude toward reading, the progress is only partial and at best, may be of short duration" (p.3).

If we really desire to promote positive reading attitudes or at least reduce negative attitudes, we must be aware of students' present attitudes. By having a clear picture of students' feelings or attitudes toward reading, we can begin to understand and investigate the various factors that may contribute to the development of these attitudes.

Students' attitudes toward reading should be measured by means of formal assessment to provide educators with a more accurate picture of students' expressed feelings. Therefore methods of assessing attitudes had to be developed. Three primary ways of measuring attitudes have been developed: self-reports, observations, and projective techniques.

Self-reports represent the most direct approach for assessing attitudes and tend to be the most popular attitude measurement techniques (Summers, 1970; Edwards & Porter, 1972; Henerson, Morris, & Fitz-Gibbon, 1978). Users of this procedure assume that subjects are aware of their own feelings and are able and willing to express them honestly. Various means have been devised to collect self-report data, the use of attitude scales is the most common. Some of the self-report assessments are: "Attitude Toward Reading: Intermediate Scale (Deck, et al, 1974)"; "70-Item Attitude Instrument (Kennedy & Halinski, 1975)"; "Heathington Primary Scale and Intermediate Scale (Heathington, 1975)"; and "Estes Reading Attitude Scale (Estes, 1971)".

Other more recent studies on attitude toward reading include studies on reading ability and attitude toward reading. It has been thought that low achievement correlates positively with low attitude toward reading (Askov &

Fishback, 1973; Roe, Burns, & Ross, 1991; Lipsky, 1983; Martin, 1984; Ransbury, 1973; Richards & Bear, 1986), Although they serve to document a relationship between ability and attitude, they do not give information on the cumulative effect of ability over time.

Opinions are often expressed about effects of instruction (methods and materials) on reading attitudes. Shapiro (1991) investigated the effect of traditional instruction and no formal instruction of children's perceptions of the reading process. Four hundred and sixty-seven elementary school children participated in the study. Reading attitudes were seen to be affected by type of reading instruction. Payne and Manning (1992) conducted a study on metacognitive instructional strategy for use with basal readers in improving reading comprehension, and attitude toward reading with 31 children. After a year students in the treatment group had a more positive attitude toward reading than did the control group.

Attitudes Toward Reading in Secondary Schools

There has not been as much information published on attitudes toward reading on the high school level but as early as 1948, Crossen conducted research on "Effect of Attitudes of the Reader Upon Critical Reading Ability". She was looking to see if there was a relationship between a student's attitude toward a topic and his ability to read critically about that topic. She found that there was no statistical significant difference in students favorable to a topic and those who were indifferent to the topic.

It was as important to have an instrument to assess high school students' attitudes toward reading as it was to have an instrument for assessing

elementary students' attitudes; therefore, instruments similar to instruments for elementary students were developed. Mikulecky (1979) developed "Mikulecky Behavioral Reading Attitude Measure"; Kennedy and Halinski (1975) developed "Seventy Item Attitude Enlistment"; and Tullock-Rhody (1980) developed "Rhody Secondary Reading Attitude Assessment".

Other investigations on the secondary level have looked at the fact that high school students are disgruntled about their lack of reading time and their lack of choice in reading material (Reed, 1988; LeBlanc, 1980; Sanacore, 1992; Sullivan, 1991; Blintz, 1993) as an effect on reading attitudes.

Attitudes Toward Reading in Adults

There is not as much research on adult attitudes toward reading as there is for elementary and secondary students, but most shows that reading performance is independent of reading attitude (Smith, 1992; Gambrell, Heathington, & Boser, 1989). No studies were found that connected critical thinking ability to reading attitude.

Critical Thinking

Chaffee (1992) states that critical thinking skills are the cornerstone of Developmental Education. Learning to think critically is essential for developing literacy abilities since developmental students have not typically had the opportunity to develop the appropriate language and conceptual skills needed for higher education. Ennis, (1990); McPeck, (1990); and Norris, (1989) examine how to test for critical thinking and whether critical thinking is subject-

specific or not. Hoffman, (1992); Burroughs (1993); and Elder & Paul, (1994), state that critical thinking skills are learned, therefore can be taught. Critical thinking takes place when thinking is internalized by the thinker and affectively based traits (intellectual autonomy, intellectual civility, intellectual humility, intellectual integrity, intellectual perseverance, etc.) are also developed. Winocur (1981) found that a program of reading remediation emphasizing critical thinking skills on the Ennis model (1962) was effective in improving reading comprehension and proficiency as well as critical thinking ability.

Critical Thinking and Reading

To think critically about a text, students must know how to take a critical stance. This means that students are able to question the authority of texts and generate and use their own ideas as they construct meaning. According to Spires, Huntley-Johnston & Huffman (1993) in order to move toward taking a critical stance with texts, students must use three levels of thinking: summarizing, applying and evaluating. Once students have mastered these levels of thinking they begin to evolve into readers, writers, and speakers within the academic community. Cioffi (1992) also recommends questioning and comparing texts to promote critical reading.

Lists of critical thinking skills are similar to skills often listed for critical readers such as questioning skills, metacognition, inference and comparing-contrasting. Thistlethwaite (1990) focused on activities to help at-risk secondary and adult students to develop critical reading skills and therefore, critical thinking skills.

Smith (1977, 1981) found that three kinds of instructor-influenced

classroom interactions were consistently and positively related to gains in critical thinking. These were the extent to which faculty members encouraged praised, or used student ideas; the amount and cognitive level of student participation in class; and the amount of interaction among the students in a course.

Teachers should organize their classrooms to facilitate students becoming actively involved in thinking including Socratic-type discussions (student led or teacher led), individual manipulations, and cooperative small - group investigations (Swartz & Perkins, 1988).

Summary

There has been a long history of remedial/developmental education in the United States. It looks as if it is here to stay. There are a wide variety of remedial/developmental programs in community colleges and four year colleges and universities. The most common programs offer courses in reading, writing, and mathematics. There does not seem to be much emphasis on the affective domain of the student, but primarily on cognitive domain.

The definitions of attitude are varied and multidimensional. Attitudes toward reading have been drawn from general definitions of attitudes. The literature reviewed above attempts to explain how these definitions apply to attitudes toward reading. As a result, attitude toward reading is recognized as multidimensional. The working definition for this study is the one given by Alexander and Filler (1974). Critical thinking was stated by Chaffee (1992) to be the cornerstone of Developmental Education, and Hoffman, (1992); Burroughs, (1993); and Elder & Paul, (1994), state that critical thinking skills are

learned, therefore, can be taught. A program for reading remediation emphasizing critical thinking skills was found by Winocur (1981) to be effective in improving reading comprehension and proficiency, as well as critical thinking ability.

CHAPTER III

METHODS AND PROCEDURES

Introduction

This chapter will describe the methods and procedures followed to accomplish this study, the purpose of which was to determine the relationship between critical thinking and reading attitudes of students enrolled in developmental studies critical reading courses. Specifically the study attempted to determine what, if any, relationship existed between scores on a measure of critical thinking and scores on a measure of reading attitudes. Several procedures for conducting the study were identified and followed. In this chapter are descriptions of the teaching methods used in the two courses, the selection of the sample, the selection of the attitude measure and the critical thinking measure, and the development of the interview guide. An explanation of the procedures employed to collect the data and analyze them are also included.

Background

This study was conducted during the spring semester of 1996 at Roane State Community College (RSCC). RSCC has a service area that includes seven rural counties located in East Tennessee. The seven counties served are Anderson, Campbell, Cumberland, Loudon, Morgan, Roane, and Scott counties. The main campus of RSCC is located in Harriman, Tennessee which

in Roane County. RSCC has an open door policy which allows any student with a high school diploma or equivalency to be admitted. In order to insure proper placement of the entering students, RSCC provides the Tennessee Board of Regents' mandated Academic Assessment Placement Program (AAPP) to assess the basic skills of the entering freshmen. All applicants under 21 years of age must provide American College Test (ACT) scores. This includes students who have a Graduate Equivalency Diploma (GED). If a student's composite score is less than 19 on the ACT, the student is required to take the reading portion of the AAPP. All applicants 21 years of age or older are required to undergo placement assessment in reading, mathematics, and writing. Students are placed in remedial, developmental, or college-level classes according to their scores. Developmental reading at RSCC consists of two courses, Developmental Reading (DSR 085) and Critical Reading (DSR 086). This study involved only students enrolled in Critical Reading (DSR 086) which is the last reading course for developmental students at RSCC before taking college level reading based courses.

This study involved students at Roane State Community College (RSCC) on the Cumberland County Higher Education Center Campus and on the Roane County Campus. Permission to do the study was granted by RSCC and the study was found to be exempt from review by the Institutional Review Board Coordinator of Compliances at the University of Tennessee at Knoxville, Tennessee.

Subjects

All subjects were enrolled in Developmental Studies Reading (DSR 086 Critical Reading) at RSCC based on test scores. Two class sections of DSR 086, Critical Reading, were chosen for the study. One section met from 11:00 until 12:15 p. m. on Tuesdays and Thursdays, on the Cumberland County Campus. The second section met from 9:00 until 9:50 a.m. on Monday, Wednesday, and Friday on the Roane County Campus. Another section on each campus had initially been selected also, but both of these sections had low enrollment. Therefore, the decision was made by administration to cut these two sections before the semester began. This left only one section on the Roane County Campus and one section on the Cumberland County Center.

The students who registered for the two class sections were assigned to the two sections in the study via the registration process. All students were asked whether or not they wished to participate in the study. Subjects were asked to sign a consent form (see Appendix B). Only data from students who completed the course were included in the results of the study.

Design

This study examined the relationship of critical thinking skills and attitude toward reading of students enrolled in the two critical reading sections. In one section, the instructional methodology was the traditional lecture and class participation format. This is what is currently utilized in Critical Reading courses at RSCC. In the treatment section, the instructional method was traditional lecture, class participation and specific critical thinking strategies (which was the

treatment). Students in both sections were given the pretests for Rhody Secondary Reading Attitudes Assessment and Cornell Critical Thinking Test, Level X. The Rhody Secondary Reading Attitudes Assessment was selected after searching for an attitude assessment that would be suitable for adults. The majority of attitude assessments were designed to be given to elementary age children. A few have been designed for secondary age students., and none were found suitable for community college students. After reading the statements on the Rhody Secondary Reading Attitude Assessment and consulting with Dr. Estill Alexander who was Ms. Rhody's professor at the University of Tennessee when she developed the instrument, it was decided that this instrument would be suitable for community college students. The Cornell Critical Thinking Test, Level X was chosen because it was a test that was well documented for use with college students.

After the pre- and post attitude assessment and pre- and post critical thinking test were given and analyzed, structured interviews (see Appendix C) were conducted with the students who had the three highest scores and the students with the three lowest scores on the pretreatment assessment in each section. The results of the pre and post attitude assessment and the pre- and post critical thinking test were not calculated until after all students completed the posttests. This was to help insure no instructor bias since the researcher was also the instructor in both sections.

Description of the Teaching Methods of the Two Sections

One section of DSR 086, Critical Reading, was taught by traditional methods, meaning that lecture and group participation were employed in

teaching critical reading skills of finding the main idea and supporting details, drawing conclusions, finding inferences, and using vocabulary in context. No references were made to critical thinking skills in this section of Critical Reading. This section met from 9:00 until 9:50 a.m. on Monday, Wednesday, and Friday on the Roane campus.

The second section of DSR 086, Critical Reading, was also taught by traditional methods, lecture and group participation, but this group was given specific information about critical thinking. This section met from 11:00 until 12:15 a.m. on Tuesdays and Thursdays at the Cumberland County Center. The first day of class students in both sections were asked to complete consent forms for the study and then administered the Rhody Secondary Reading Attitude Assessment. The second day of class students in both sections were administered the Cornell Critical Thinking Test, Level X. At the beginning of the second week of classes, students in the section that was receiving the treatment, being taught specific critical thinking skills, were told that they would be learning about perceiving, classification, concept formation, identification patterns and relationships, and problem solving. These particular skills were chosen based on information obtained through Strategies for Teaching Critical Thinking Across the Curriculum an Educational Testing Workshop (1990) and from John Chaffee (1994, 1992) who is the Director of the Center for Critical Thinking and Language Learning and who writes extensively about critical thinking. Hyde and Bizar (1989) and Marzano, et al (1988) also identified these same skills as being necessary for thinking critically.

Method of Teaching for the Treatment Section

The treatment section was taught by the researcher who employed lecture and group discussion of the reading selections from the text, Jacobus (1993), that was used by all instructors of Critical Reading at RSCC. In addition to the usual discussions of the text material, this group of students was taught critical thinking skills of (1) perceiving - actively selecting, organizing, and interpreting what is experienced by our senses; (2) identifying concepts - general ideas that we use to identify and organize our experience; (3) problem solving - using an organized approach to problem solving; (4) classifying - grouping things based on similarities; and (5) identifying patterns and relationships - relating and organizing, using thinking patterns to make sense of the world. These skills were identified in an Educational Testing Service workshop (1995) based on research by the National Assessment of Educational Progress (NAEP) and John Chaffee (director of creative and critical thinking studies at LaGuardia Community College, Long Island City, NY), as being skills students needed for thinking critically. These five skills were taught one per week for five weeks. They were taught by giving several examples representing or demonstrating each of the skills, discussing these examples, and then doing activities using the reading textbook. Perceiving for instance, was illustrated by discussing slides of optical illusions and pictures.

A department syllabus (Appendix E) was used for all sections, as was the general information about DSR 086, Critical Reading (Appendix F); however a separate course outline was used for each section in the study. This was a weekly description of the requirements in each section (Appendix G).

Method of Teaching for the Control Group

The section that was the control group was taught by the researcher, also. This section was taught using traditional methods. Lecture format and large and small group discussions were employed. It was taught using the same text, Jacobus (1993), that the treatment group used. In the control group, however, the five critical thinking skills that were taught in the treatment group were not discussed directly. Since the two groups in the study were taught on campuses that were 30 miles apart and in different counties, it was believed by this researcher that students in the treatment group and students in the control group had no opportunity for contact with each other. Therefore, it was assumed that students in the groups did not discuss what they were doing in each class. An outline of study for the control group is presented in Appendix G.

Interview Questions

The purpose of the interview was to provide additional data about students' attitudes toward reading and their perception of critical thinking. Initially the researcher developed ten open ended questions about attitude toward reading and perception of critical thinking. These were then revised several times in accordance with suggestions made by the researcher's major professor and other committee members who reviewed the instrument as recommended by Henerson, Morris, and Fitz-Gibbon (1978). After revision six open ended questions (see Appendix C) were used in the interviews.

Six students from each section were asked to participate in the

interviews. These students were three students who had the highest scores and three students who had the lowest scores on the attitude preassessments in each section. The researcher felt that the students would feel more comfortable and talk more freely if one-to-one interviews with the researcher were conducted. The interviews were conducted in the twelfth week of the semester after all attitude assessments and critical thinking tests were administered and scored. The interviews were held in the privacy of the researcher's office and were not tape recorded but notes were taken.

Instruments of the Study

Rhody Secondary Reading Attitude Assessment

The instrument used to measure attitude toward reading in this study was the Rhody Secondary Reading Attitude Assessment; Dr. J. Estill Alexander, Ms. Rhody's former professor concluded that this instrument would be appropriate for adult students.. This instrument was developed as part of doctoral work by Regina Tullock-Rhody at the University of Tennessee, Knoxville in 1978. The revised instrument was given to 349 students in four schools in eastern Tennessee to provide data for validity and reliability. Validity was found by looking at three factors. First, the statements from which the instrument was constructed came from comments made by secondary students themselves. Second, 12 teachers were asked to choose five students they thought had the most positive attitudes toward reading and five who had the most negative attitudes toward reading. A t - test was run on the means of these students scores. Results indicated that the scale did not discriminate between students

the teachers perceived as having positive attitudes and those who were perceived as having negative attitudes $p < .001$. Third, the items retained on the final scale correlated at an acceptable level with the total scale.

Reliability was established by using the test-retest method since it measures temporal stability. The results of the data showed that the r was 0.84 which was an acceptable level for reliability (Tullock-Rhody & Alexander, 1980).

Cornell Critical Thinking Tests, Level X

The Cornell Critical Thinking Tests, Level X was chosen for this study because it had been tested on community college students and judged to be a valid test for measuring critical thinking by Beyer (1987). There is no established criterion for critical thinking ability, therefore, criterion validity is not appropriate for this test. Content validity was judged by having members of the Illinois Critical Thinking Project discuss individual items for agreement. Construct Validity was determined by running correlational studies between this test and other variables such as aptitude tests, gender, subject matter, and attitudinal variables. Correlations with aptitude tests or subject matter are .5 for each, but correlations with gender or attitudinal variables are low (.16 to -.11) (Ennis, et al, 1985).

Treatment of the Data

The attitude assessments and critical thinking tests were scored manually by the researcher according to instructions accompanying the assessments and tests. This was then entered into the statistical software

package, StatWorks (Rafferty, 1985) on the Macintosh computer. A two-tailed t - test was run on the means of the gain scores of the attitude assessments in each section to see if there were any statistical significant differences. A two-tailed t - test was also run on the means of the gain scores for critical thinking for each section to see if there were any statistical significant differences there. Pearson correlations were run on gain scores of attitude assessments and critical thinking tests in each section to see if there were any correlations. The interview responses were analyzed for types of responses. The responses were then looked at to see if any patterns or themes emerged.

CHAPTER IV

FINDINGS/ANALYSIS OF THE DATA

Introduction

The data collected for this study were used to determine the relationship, if any, of critical thinking skills to attitude toward reading of students enrolled in the two critical reading sections. Specifically, the study was intended to determine if attitudes toward reading of developmental students in a Critical Reading course, where specific critical thinking skills were taught, would differ from those students in the same course who were not taught critical thinking skills. The gain scores of the attitude assessment and critical thinking tests for the treatment group were subjected to a Pearson correlation coefficient to determine if there was a statistically significant correlation.

Pearson correlation coefficient was also run on the gain scores of the attitude assessment and critical thinking tests for the control group. The means of the gain scores on the attitude assessment of the treatment group and the control group were subjected to a two-tailed t - test to determine if there were any statistical significant differences. The means of the gain scores of the critical thinking tests for the treatment group and for the control group were also subjected to a two-tailed t - test to determine if there was a statistically significant difference in the two groups.

The subjects of this study were 15 students in one section of Critical Reading (DSR 086) at RSCC, Cumberland County Center, and 16 students in section of Critical Reading (DSR 086) at RSCC, Roane County Campus.

Students' attitudes were measured with the Rhody Secondary Reading Attitude Assessment, and critical thinking was assessed with the Cornell Critical Thinking Test, Level X. Pretests for both the attitude assessment and critical thinking were given to each section the first week of classes. Posttests for both attitude assessment and critical thinking were given in the eleventh week of classes. Structured interviews, utilizing six open ended questions were conducted with twelve students (six from each section) during the twelfth week of classes by the researcher to see if any patterns or themes emerged.

The data from the Rhody Secondary Reading Attitude Assessment and Cornell Critical Thinking Test, Level X, were analyzed using parametric tests since the data were interval data which approximated a normal distribution. Pearson's product-moment correlation coefficient, which shows the linear relationship between two variables that have been measured on interval scales, (Vogt, 1993) and *t* - test, which is a test of the statistical significance of the results of a comparison between two group averages or means (Vogt, 1993), were used. A nondirectional test or two-tailed *t* - test was used to show the two sides or tails because it was appropriate when looking for the absolute magnitude of difference, regardless of sign. Raw scores and gain or loss scores were arranged in a table (A.1-A.4).

Findings and the analysis of the statistical tests are presented in this chapter.

Analysis of Research Questions Data

Research Question 1

Is there a significant relationship between attitude toward reading and critical thinking skills?

In order to answer this question, the gain scores from the data, gathered with the Rhody Secondary Reading Attitude Assessment and the Cornell Critical Thinking Test, Level X, were subjected to a Pearson correlation coefficient test. To be specific, Pearson correlations were run on the gain scores from the attitude assessment and critical thinking tests, for the treatment section. The p value, or probability or critical value below which the null hypothesis is rejected, was set at 0.05. The calculated r value was 0.191, which was less than the table r value of 0.497; therefore, there was no statistically significant correlation or relationship between critical thinking and attitude toward reading in the treatment group.

Likewise, a Pearson correlation was run on the gain scores from the attitude assessment and critical thinking tests for the control section. The calculated r value was 0.409, which was less than the tabled r value of 0.482; therefore, there was no statistically significant correlation or relationship between critical thinking and attitude toward reading in the control group, either (Table 4.1). There was no basis to reject the null hypothesis: there is no statistically significant correlation of the measures of attitude and critical thinking tests for the treatment or control groups ($H_0: r_T = 0$ and $H_0: r_C = 0$). In

other words, there was no significant relationship found to exist between attitude toward reading and critical thinking skills in these two groups. This result was not expected by this researcher for the treatment group. No significant relationship between attitude toward reading and critical thinking in the treatment group might have been a result of a small sample size (N=14). Also, one semester might not be enough time for being able to think critically to have an effect on attitudes toward reading.

Table 4.1 Summary of Pearson Correlation Coefficients on the Gain Scores of Attitude Assessments and Critical Thinking Tests

	Control Group	Treatment Group
calculated r	0.409	0.191
table* r	0.482	0.497
degrees of freedom	15	14
p < .05	* from <u>Statistical Analysis in Psychology and Education</u> (Table D, p.554), by Ferguson, G. and Takane, Y. 1989, New York: McGraw-Hill Publishing Company.	

Research Question 2

Is there a difference in the means of the gain scores between pretest and posttest measures for attitude toward reading of community college, developmental reading students enrolled in a Critical Reading course?

In order to answer this question, the data gathered from the Rhody Secondary Reading Attitude Assessment were subjected to a two-tail t -test on the means of the gain scores for both the treatment group and the control group. The calculated p value was 0.421 which was greater than the .05 risk level which was the level of probability of occurrence by chance alone. The calculated t value was 0.817 (Table 4.2). It was determined not to reject the null hypothesis, $H_0: X_{GsTA} = X_{GsCA}$, or $t < -2.045$ or $t > 2.045$. No statistically significant difference existed between the two groups. Therefore, there was no significant difference between the two groups in the gain scores in attitudes toward reading. This was contrary to what the researcher expected. The researcher had envisioned a gain in scores for the treatment group, which did not happen. This could have been the result of a small sample size ($N=14$). In addition, one semester might not be enough time for learning to think critically having an effect on attitudes toward reading.

Table 4.2 Means, Standard Deviation, and t -test Results for a Comparison of Group Gain Scores of the Treatment Section and the Control Section for the Rhody Secondary Reading Attitude Assessment

Variable (n)	Mean	Standard Deviation	calculated t	table* t	2-tail significance
Treat A** (15)	1.800	15.186	0.817	2.045	0.421
Contr A *** (16)	-1.688	7.578			
Degrees of Freedom: 29					

**Treat A = attitude treatment section

*** Contr A = attitude control section

* from Statistical Analysis in Psychology and Education (Table B, p.552), by Ferguson, G. and Takane, Y. 1989, New York: McGraw-Hill Publishing Company.

Research Question 3

Is there a significant difference in the means of the gain scores between pretest and posttest measures for critical thinking skills of community college, developmental reading students enrolled in a Critical Reading course?

In order to answer this question, the data gathered from the Cornell Critical Thinking Test, Level X were subjected to a two-tail t - test on the mean gain scores for both the treatment group and the control group. The calculated p value was 0.020 which was greater than the .05 risk level which was the level of probability of occurrence by chance alone. The calculated t value was -2.464 (Table 4.3). It was determined to reject the null hypothesis, $H_0: X_{G_{STC}} = X_{G_{SCC}}$ or $t < -2.045$ or $t > 2.045$.

Table 4.3 Means, Standard Deviation, and t -test Results for a Comparison of the Group Gain Scores of the Treatment Section and the Control Section for the Cornell Critical Thinking Test, Level X

Variable (n)	Mean	Standard Deviation	calculated t	table* t	2-tail significance
Treat C T** (15)	3.533	9.380	-2.464	2.045	0.020
Contr C T*** (16)	12.625	11.033			

Degrees of Freedom: 29

**Treat C T = critical thinking treatment section
***Contr C T = critical thinking control

* from Statistical Analysis in Psychology and Education (Table B, p.552), by Ferguson, G. and Takane, Y. 1989, New York: McGraw-Hill Publishing Company.

A statistically significant difference existed in the gain scores of the two groups. There was a difference in the critical thinking ability of the two groups. In fact, the control group had a significantly higher gain. This is probably due to something other than chance. This might be due to the small samples (N=14; N=15) or the difference in student population on the two campuses. It certainly does indicate that learning is occurring outside the classroom environment. The fact that the same instructor taught both groups may have been a factor, especially since the instructor was not monitored.

Analysis of Interview Data

Six students in the treatment section and six students in the control section were asked the following six questions during the twelfth week of the semester in the privacy of the researcher's office. The results are following.

Interview Question 1

How have you felt toward reading throughout your years in school?

The majority of the students in both sections apparently did not like to read. The following is how the twelve students answered the question.

One student in the treatment group felt that reading had always been boring, while two in the control group felt that reading had always been boring. One student in the treatment group did not like to read, while two in the control group did not like reading. In fact two in the control section went so far as to say that they hated reading and would rather be doing something else.

One person in the treatment group and one person in the control group liked to read; the person in the control group liked to read Hamlet. One person in the treatment group felt that reading took too long, and two people in the control group just were not interested in the kinds of material they had always had to read.

Interview Question 2

How has your attitude toward reading changed this semester?

The majority of the students in both groups felt that their attitude toward reading had not changed. The following is how each felt about whether or not their attitude toward reading had changed.

One person's attitude toward reading in the treatment group had not changed much, but he was able to remember more when reading outside class now, than before he took Critical Reading. Two people in the control group felt that their attitudes toward reading had not changed much, but they were now reading more. One person's attitude toward reading, in the control group, had not changed. Two people in the control group felt that their attitudes toward reading had stayed about the same as before this semester. One person in the treatment group likes to read to go to sleep and read when there is free time. One person in the control group makes time to read, while one person in the treatment group wants to read more than he has time to read. One person in the control group felt that he could comprehend better and understand words better. One person in the treatment group felt that he could read faster and was able to pick out the main points.

Interview Question 3

In what ways have you become a more critical reader?

The majority of the students in both groups felt that better comprehension was how they had become more critical readers. The following is how each student felt he or she had become a more critical reader.

Students in the treatment group felt that comprehension was better; was able to pick out important points such as the topic, main ideas, details, dates, and places; read more in depth; did not rush through reading group felt that they could now relate what they read to what they already knew; vocabulary usage had improved; were able to concentrate more; and were able to find the main points in reading. Two people in the control group did not think they had become more critical readers.

Interview Question 4

Do you think that becoming a critical reader has any affect on your attitude toward reading?

The students in the treatment group felt that becoming a critical reader had helped their attitude toward reading; however, half of the students interviewed from the control group felt that becoming a critical reader had not affected their attitude toward reading.

Students in the treatment group they felt that becoming critical readers had affected their attitude with one exception. One student felt that it had not

really affected his attitude toward reading at all. The people who answered "yes" said that being able to read more critically made reading more interesting; that being a critical reader helped in choosing books to read; that reading was not as boring now; that they were enjoying reading more and comprehending more; and that when reading was boring, they learned how to keep interested in what they were reading.

Three of the students in the control group did not think that becoming a critical reader had any effect on their attitudes toward reading. One felt that his attitude was the same as before. Two felt that becoming a critical reader had affected their attitudes toward reading. One remarked that now she does not look at the ending, but looks more into what she is reading and tries to figure out what is going to happen next. The other student felt that reading was not as boring now as it was before taking Critical Reading.

Interview Question 5

Tell me what kinds of reading materials you like to read now that you did not like to read previously.

There seemed to be a wide variety of materials that students were now reading. The following is a listing of different materials students mentioned liking to read now.

Students in the treatment group felt that they now liked to read about current events, short stories, newspapers, about personal experiences, government news, biographies and about states and countries. Whereas, students in the control group liked to read health related articles; biographies, such as Malcolm X; novels such as Roots, and books by Stephen King and

R.L.Stein. One person in the control group said that he did not like to read.

Interview Question 6

Describe someone you know who has the qualities of a good reader.

One of the characteristics of a good reader that showed up more than others in both groups was a good reader has a good vocabulary. The other characteristic that was repeated in both groups was a good reader can remember details about what he has read. The following is a list of characteristics or qualities that the students thought described good readers.

Students in the treatment group described good readers with these characteristics: well informed about books and authors; pronounce words correctly, has a good vocabulary; are able to comprehend; have the ability to learn; like to read all the time; reads newspaper every morning; does research on reading; reads until the book is finished; and can tell specific details about characters or events.

Students in the control group described good readers with these characteristics: always reading - lots of different materials; remembers major details; knows what the story is about; has a good vocabulary; is quiet; an introvert; and does not keep reading when tired - knows limits.

Findings of the Study

1. Results of the Pearson Correlation Coefficient indicated there was no significant statistical relationship between the control group gain scores on the

Rhody Secondary Reading Attitude Assessment and the Cornell Critical Thinking Test, Level X. This is what the researcher expected from a group that had not been given any specific instruction in critical thinking.

2. Results of the Pearson Correlation Coefficient indicated there was no statistically significant relationship between the treatment group gain scores on the Rhody Secondary Reading Attitude Assessment and the Cornell Critical Thinking Test, Level X. This indicates that no relationship existed between attitude toward reading and critical thinking in the treatment group. This is contrary to what was expected by this researcher. An indication of no relationship between attitude toward reading and critical thinking in this group might be due to the small sample size ($N=14$).

3. Results of the t - test indicated there was no statistically significant difference in the gain scores for the treatment group and the control group for attitude toward reading as measured by the Rhody Secondary Reading Attitudes Assessment. This is counter to what this researcher expected with the treatment group. It was expected that there would be a difference in the gain scores and that the treatment group would have the higher gain scores. No statistical difference in the means of the two groups' attitude toward reading could be the result of having a small sample size ($N=14$; $N=15$). However, the interview data showed that the majority of the 12 students interviewed had a positive attitude toward reading at the end of the study.

4. Results of the t - test indicated there was a statistical significant difference in the gain scores for the treatment group and the control group for critical thinking as measured by the Cornell Critical Thinking Test, Level X. A significant difference in gain scores for critical thinking was expected. However, the gain was expected in the treatment group, not the control group.

Factors causing this could have been the small sample size (N=14; N=15) or the difference in the student population on the two campuses which were in different counties. However, the students interviewed from the treatment group indicated that taking the Critical Reading course and learning critical thinking skills had a positive effect on their attitudes toward reading.

5. The six questions asked of twelve students (six from each section) brought forth some interesting information, but did not answer either of the three research questions. It did show that the majority of those interviewed did not like to read throughout their school career and that taking the Critical Reading course did not affect their attitudes toward reading. However, the majority of those interviewed in the treatment group felt that becoming a critical reader had positively affected their attitude toward reading. The majority of those interviewed in the control group did not feel that becoming a critical reader had affected their attitude toward reading. This was also affirmed in the results of research question 1, when the Pearson correlation coefficient indicated there was no statistical relationship between attitude toward reading and critical thinking in the control group. Students in the treatment group seemed to like to read a wider variety of materials than they had previously read. Those in the control group seemed to read primarily novels and biographies.

CHAPTER V

SUMMARY, CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS FOR FURTHER STUDY

Introduction

The purpose of this study was to determine the relationship, if any of critical thinking skills on attitude toward reading, of students enrolled in two Critical Reading sections, as measured by the Rhody Secondary Reading Attitude Assessment and the Cornell Critical Thinking Test, Level X. Specifically, the study attempted to determine whether reading attitudes were affected by teaching students critical thinking skills. This chapter presents a summary, conclusions, discussion, and ends with recommendations for further study.

Summary

The study was conducted at Roane State Community College, Roane County Campus and Roane State Community College, Cumberland County Center during Spring Semester 1996. The study was designed to teach one section (the treatment group) of Critical Reading, critical thinking skills after giving a pretest for critical thinking. Then after teaching the treatment group five critical thinking skills, they were given a posttest for critical thinking. The other section of Critical Reading, the control group, was not taught specific critical thinking skills but was given pre and posttests for critical thinking. Attitudes

toward reading were assessed by giving pre and posttests in both groups.

Students in the treatment group were given lectures and assignments on the critical thinking skills of perceiving, concept formation, problem solving, classifying, and identifying patterns and relationships in addition to the regular curriculum for the Critical Reading Course. The control group was not taught any specific critical thinking skills, but was taught the regular curriculum for the Critical Reading course..

During the first week of classes all students in the study completed their consent forms, and were given the Rhody Secondary Reading Attitude Assessment and the Cornell Critical Thinking Test, Level X. During the second week of classes, explanations of the critical thinking skills to be taught were given in the treatment section. During weeks three through ten, critical thinking skills were taught to students in the treatment section along with reading passages that were normally read by students in the Critical Reading course. In week eleven post attitudes assessments and critical thinking posttests were given in both the treatment and control sections. During week twelve the tests were scored and interviews with twelve students were conducted.

Pearson correlation coefficient was calculated on the gain scores from the Rhody Secondary Reading Attitudes Assessment and the Cornell Critical Thinking Test, Level X to determine if there was a statistically significant relationship between attitude and critical thinking. A 2-tail t - test was calculated on the means of the gain scores from the Rhody Secondary Reading Attitudes Assessment for both the treatment group and the control group to determine if there was a statistically significant difference in the means of attitude toward reading. Also a 2-tail t - test was calculated on the means of the gain scores from the Cornell Critical Thinking Test, Level X for both the

treatment group and the control group to determine if there was a statistically significant difference in critical thinking in the two groups. Interview data were analyzed to see if there were patterns in student responses. These were compiled and reported in narrative form.

Conclusions

There has not been much research on the community college level dealing with attitudes toward reading, and there is a need to understand why some students say they do not like to read. There is a push for more critical thinking in all schools, from elementary through college. Critical thinking ability is necessary for critical reading in college, and students in remedial/developmental courses do not exhibit these skills according to a study by Robbins (1981).

It is impossible to conclude anything definitive from this study. However, there is indication that a great deal of learning of critical thinking occurs without direct instruction. There were a limited number of students involved in the study (Initially four sections were to be included in the study. However, two sections were canceled due to low enrollment, therefore, N=14; N=15). One semester is probably too brief a period of time to produce any measurable results from the teaching of critical thinking skills.

It must be noted that the findings of no significant change in means of gain scores in attitude toward reading may be explained in other ways. One possible explanation might be that the attitude scale was not sensitive enough to detect subtle attitude changes which occurred during the course of the semester, in spite of the high reliability ascribed to the test.

There is also an indication that the relationship between critical thinking ability and reading attitudes are not as strong as the researcher had thought. This study showed that the treatment group had no statistically significant correlation between attitude toward reading and critical thinking from their gain scores; therefore, it can be assumed that critical thinking did not have a relationship with reading attitudes in that group . The control group did not have a statistically significant correlation between attitude toward reading and critical thinking from their gain scores; therefore it can be assumed that there was no relationship between critical thinking and reading attitudes in that group. However, there was a statistically significant difference in gain scores, of the two groups, in critical thinking as measured by the Cornell Critical Thinking Tests, Level X. Since the control group showed the higher gain, this might be attributed to the fact that the control group was on RSCC's main campus, and there were more chances of having more social experiences with peers outside of class.

Pascarella (1989) alluded to students' social and academic experiences out of the classroom (living with other students on campus or in apartments, interactions with faculty and peers, time spent studying) being a significant predictor of gains in critical thinking. These outside involvements may have cumulative and interrelated effects on critical thinking. Gains in critical thinking appear to be a consequence of a variety of student experiences, not just those that are part of the formal instructional program. The students in the treatment group were more mature students with other responsibilities than just school and self. These students usually attended class and then left campus for jobs and family and did not have much social life with other students. This might also be attributed to the small sample size (N=14; N=15).

Discussion

The first research question dealt with relationship between attitude toward reading and critical thinking skills. The correlation between the attitude assessment, and critical thinking, treatment section showed no statistically significant relationship. This could mean that one semester was not enough time to change the critical thinking ability of the treatment section, and therefore, had no effect on the attitude toward reading. In addition there was no statistically significant correlation between attitude assessment and critical thinking, in the control section. This could mean that by not learning how to think more critically, they did not read more critically and therefore, did not have a more positive attitude toward reading.

The second research question dealt with the difference in gain scores between the two groups for attitude toward reading. There was no statistically significant difference in attitude toward reading in the two groups. It must be noted that the findings of no significant change in means of gain scores in attitude toward reading may be explained in other ways. One possible explanation might be that the attitude scale was not sensitive enough to detect subtle attitude changes which occurred during the course of the semester, in spite of the high reliability ascribed to the test.

The third question dealt with the difference in gain scores between the two groups for critical thinking. There was statistically significant difference in the two groups. This study did not determine what caused the difference, but it could have been that the control group learned critical thinking by having more social and academic interactions outside the classroom by attending classes on the main campus.

The small sample size (N=14; N=15) could be a factor in the results of the study. The difference in student population of the two groups on different campuses, 30 miles apart and in different counties, may have had an effect on the study also.

The results from the six interview questions were mixed. However, the majority of those interviewed in the treatment group felt that becoming a critical reader had positively affected their attitude toward reading, whereas, the majority of those interviewed in the control section did not feel that becoming a critical reader had affected their attitude toward reading. This could be due to the critical thinking skills taught in the treatment group and not in the control group.

Threats to Internal Validity

The internal validity of the study was threatened because of the maturation of the students, most of the students in the control group were 18 year old students, straight from high school, whereas, fewer students in the treatment group were straight from high school.

Threats to External Validity

The external validity of the study was threatened by the fact that the sample for the study was chosen through the registration process which may not have provided a true representation of the student population. It was not possible to place students randomly into the two sections since only one section

met on each campus. Students choose their own schedules; therefore, they were able to register for any section they chose on any campus. Due to the threats to external validity listed above, the results of the research are not generalizable to any population other than the one used in this study.

Recommendations for Further Study

The following recommendations seem reasonable in the light of the findings of this investigation:

1. Further research should be conducted using multiple instructors and monitoring instruction, and using significantly larger populations so that subgroups of varying levels, varying reading abilities, and selected group characteristics (e.g. gender, age, GED, or high school diploma) could be examined.
2. Further investigations could be conducted at large and small four year colleges, both public and private, rural, and urban to determine if there are any differences in results for the different populations.
3. A study which included a follow-up component monitoring the students' performance in a college course which requires a lot of reading such as biology or history could provide additional information concerning critical thinking and attitude toward reading.
4. An instrument could be developed specifically for community college remedial/developmental reading students to assess their attitude toward reading and to identify what specifically affects that attitude. This would be of great benefit to those teaching these students.
5. Research needs to be conducted which will relate various dimensions of

reading attitude to a wide range of cognitive, perceptual, behavioral, and personal history variables.

6. This study should be replicated with more than one section on the same campus, as well as sections on different campuses to see if there is a difference in the college life of students attending on different campuses and how that might affect their critical thinking.
7. A test could be developed in which attitudes toward reading and critical thinking skills are assessed before and after instruction in critical thinking.
8. A factor analytic study of successful critical readers could be conducted to determine other correlates which are causal factors that are determinates (such as overall GPA, successful in mathematics, read to in the home as children) in adult critical readers.
9. A questionnaire could be developed in which respondents are asked to determine what had effects on their reading.
10. A survey of teachers could be conducted to determine which critical thinking skills helped them become successful reading teachers.
11. A survey could be conducted of teachers of reading, in elementary, junior high, and college, to find out what problems they experienced in teaching critical reading.
12. A survey could be conducted of teachers in several disciplines (such as mathematics, sciences, social science) to find out what they perceive as being important critical thinking skills to be successful in their courses.
13. A survey high schools and colleges could be conducted to find out how critical thinking skills are taught in their schools, and how they determined which skills to teach.

BIBLIOGRAPHY

BIBLIOGRAPHY

- Abraham, A. (1991). They Came to College? A Remedial Profile of the First-time Freshman in SREB States. Issues in Higher Education, No. 25. Atlanta, GA: Southern Regional Education Board. (ERIC Document Reproduction Service No. ED 333 783).
- Abraham, A. (1992). College Remedial Studies: Institutional Practices in the SREB States. Atlanta, GA: Southern Regional Education Board. (ERIC Document Reproduction Service No. ED 345 617).
- Ahrendt, K. (1975). Community College Reading Programs. Neward, DE: International Reading Association.
- Ajzen, I. & Fishbein, M. (1980). Understanding Attitudes and Predicting Social Behavior. New York: Prentice Hall.
- Alexander, J. E. & Cobb, E. (1992). Assessing attitudes in middle and secondary schools and community colleges. Journal of Reading, 36(2), 146-148.
- Alexander, J. E. & Filler, R.C. (1976). Attitudes and Reading. Newark, DE: International Reading Association, Inc.
- Askov, E. & Fishback, T. (1973). An investigation of primary pupils' attitudes toward reading. Journal of Experimental Education, 41 1-7.
- Athey, I. (1985). Reading research in the affective domain. In H. Singer, & R. Ruddell, (Eds.), 3rd. Theoretical Models and Processes of Reading. Newark; International Reading Association. pp 527-557.
- Becker, S. (1990). Guidelines for community college faculty and support staff. Conference Proceedings, Presented to City University of New York, NY Institute for Research and Development in Occupational Education. (ERIC Document Reproduction Service No. ED 331 278).
- Beyer, B. (1987). Practical Strategies for the Teaching of Thinking. Boston: Allyn and Bacon, Inc.
- Blintz, W. (1993). Resistant readers in secondary education: Some insights and implications. Journal of Reading, 36(8), 604-615.

- Bonham, B. (1995, March). Highlights of findings from the National Study of Developmental Education. A paper presented at the National Association for Developmental Education, Little Rock, AR
- Boylan, H., Bonham, B., & Bliss, L. (1994). Who are the developmental students? Research in Developmental Education. 11(2).
- Burley, H. (1993). A meta-analysis of college developmental studies programs. (From Dissertation Abstracts International. 1993, 54, 1650A)
- Burroughs, R. (1993, November). Research says literature CAN teach critical thinking. The Education Digest. 51-53.
- Brown, D., Wallbrown, F., & Engin, A. (1979). Developmental changes in reading attitudes during the intermediate grades. Journal of Experimental Education, 47 (Spring), 259-262.
- Castleberry, K. (1990). Assessment: Stopping the revolving door at Rock Valley College. Reading Horizons. 271-278.
- Chaffee, J. (1992, Spring). Critical thinking skills: The cornerstone of developmental education. Journal of Developmental Education, 15(3). 2-4,8,39.
- Chaffee, J. (1994). Teaching for Critical Thinking. Vision, 2(1), 24,25.
- Cherne, F. (1986). The Student Tracking System at San Antonio College. (ERIC Document Reproduction Service No. ED 256 406).
- Cioffi, G. (1992). Perspective and experience: Developing critical reading abilities. Journal of Reading. 36(1), 48-52.
- Cohen, S. (1965). A recommended reading improvement program for a community college. Journal of Reading (Vol. 9), 163-169.
- Colthern, N.B. & Collins, M. D. (1992, Winter). An exploration: Attitude acquisition and reading instruction. Reading Research and Instruction, 31(2), 84-97.
- Cox, M. & Others (1985). Evaluation of the San Joaquin Delta College Basic Skills Program. (ERIC Document Reproduction Service No. ED 265 894).
- Crespi, I. (1965). Attitude Research. American Marketing Association.

- Crossen, H. (1948). Effect of the attitudes of the reader upon critical reading ability. Journal of Educational Research, 48, 289-298.
- Dattilo, R. (1974, November). Once you've enjoyed a good kiss, you'll want to kiss some more: Reading and measurement in secondary schools. English Journal, 63, 54-58.
- Deck, D. & Barnette, J. (1976). Measuring Attitudes Toward Reading in Large Scale Assessment. University Park: Pennsylvania State University, Center for Cooperative Research With Schools. (ERIC Document Reproduction Service No. ED 128 407).
- Edwards, A. & Porter, B. (1972). Attitude measurement. In The Affective Domain, pp. 107-125. Washington, D. C.: National Special Media Institutes, Gryphon House.
- Elder, L. & Paul, R. (1994, Fall). Critical thinking: Why we must transform our teaching. Journal of Developmental Education, 18 (1), 34-35.
- Encyclopedia of Higher Education, The (Vol. 2). Clark, B. & Neave, G. (Eds.) New York: Pergamon.
- Ennis, R. H. (1990, May). The extent to which critical thinking is subject-specific: Further clarification. Educational Researcher, 13-16.
- Ennis, R.H. (1987). A taxonomy of critical thinking dispositions and abilities, In J. Baron & R. Sternberg (Eds.) Teaching for Thinking. New York: D.H. Freeman.
- Ennis, R., Millman, J., & Tomko, T.N. (1985). Cornell Critical Thinking Tests Level X & Level Z Manual. Pacific Grove, CA: Midwest Publications.
- Ennis, R. H. (1962). A concept of critical thinking. Harvard Educational Review, 37(1), 81-111.
- Estes, T. (1971). A scale to measure attitudes toward reading. Journal of Reading, 14, 135-138.
- Ferguson, G. & Takane, Y. (1989). Statistical Analysis in Psychology and Education, 6th ed. New York: McGraw-Hill Publishing Co.
- Fishbein, M. (1967). Attitude and prediction of behavior. Readings in Attitude Theory and Measurement. M. Fishbein (Ed). New York: John Wiley & Sons, Inc. 477-492.

- Fishbein, M. & Ajzen, J. (1975). Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research. MA: Addison-Wesley.
- Freire, P. (1982). Education for Critical Consciousness. New York: Continuum Publishing Corporation.
- Gabriel, D. (1983). The mainframe computer in a basic reading and writing class. (ERIC Document Reproduction Service No. ED 239 710).
- Gambrell, L., Heathington, B., & Boser, J. (1989). Adult beginning readers: Their views on their reading environment. Research in Education for Adult Learners, 1(2), 5-15.
- Giroux, H. A. (1988). Teachers as intellectuals: Toward a Critical Pedagogy of Learning. Granby, MA: Bergin & Garvey.
- Harris, T. & Hodges, R. (Eds.). (1981). A Dictionary of Reading and Related Terms. Newark, DE: International Reading Association.
- Heathington, B. (1975). The development of scales to measure attitudes toward reading. Unpublished doctoral dissertation, The University of Tennessee.
- Hector, J. (1992). Impact of State -Mandated Developmental Studies on College Student Retention. A paper presented at the annual meeting of the American Educational Research Association, Morristown, TN. (ERIC Document Reproduction Service No. ED 45600).
- Henerson, M., Morris, L. & Fitz-Gibbon, C. (1978). How to Measure Attitudes. Beverly Hills CA: Sage Publications.
- Hyde, A. & Bizar, M. (1989). Thinking in Context. New York: Longman.
- Hoffman, J. V. (1992, Spring). Critical reading/ thinking across the curriculum: Using I-charts to support learning. Language Arts, 69, 121-127.
- Jacobus, L. (1993). Improving College Reading, 6th ed. Fort Worth, TX: Harcourt Brace Jovanovich College Publishers.
- Kangas, J. (1992). Success and retention rates for Gateway U Classes. Spring, 1992. (ERIC Document Reproduction Service No. 349 049)
- Kennedy, L. & Hallinski, R. (1975). Measuring attitudes: An extra dimension. Journal of Reading, 18, 518-522.

- Kinney, P., & Miller, M. (1989). The relationship between self-esteem and academic achievement. College Student Journal, 22, 358-361.
- Krech, D., Krutchfield, R., & Ballachey, B. (1962). Individual in Society. New York: McGraw-Hill.
- Langer, J. A., & Applebee, A. N. (1987). How writing Shapes Thinking: A Study of Teaching and Learning. Urbana, IL: National Council of Teachers of English.
- LeBlanc, R. (1980). An English's teacher's fantasy. English Journal, 169(6), 35-36.
- Lewis, J. (1991). Redefining critical reading for college critical thinking courses. Journal of Reading, 34(6), 420-423.
- Lewis, R. & Teale, W. (1980). Another look at secondary school students' attitudes toward reading. Journal of Reading, 12 (Fall), 187-201.
- Lipsky, J. (1983). A picture-story technique to uncover covert attitudes associated with reading failure. Reading Psychology, 4, 151-155.
- Liska, A. (1976). A critical examination of the casual structure of the Fishbein/Ajzen attitude behavior model. Social Psychology Quarterly, 47, 61-74.
- Martin, C. (1984). Why some gifted children do not like to read. Roeper Review, 7, 72-75.
- Marzano, R. (1991). Language, the Language Arts, and Thinking. In J. Flood, J. Jensen, D. Lapp, & J. Squire (Eds.), Handbook of Research on Teaching the English Language Arts, (pp 559-586). New York: Macmillan.
- Marzano, R. J. et. al. (1988). Dimensions of Thinking: A Framework for Curriculum and Instruction. Alexandria, VA: ASCD.
- Mathewson, G. (1994). Model of attitude influence upon reading and learning to read. In H. Singer & Rudell (Eds.), Theoretical models and processes of reading, 4th ed. (pp. 841-856). Newark, DE: International Reading Association.
- Mathewson, G. (1985). Toward a comprehensive model of affect in the reading process. In H. Singer and Rudell (Eds.), Theoretical models and processes of reading, 3rd ed. (pp 841-856).

- Maxwell, M. (1979). Improving Student Learning Skills. San Francisco: Jossey-Bass, Inc.
- McGrath, J. (1964). Systems of information in small group research studies. Human Relations, 16, 263-77.
- McKenna, M., Kear, D., & Ellsworth (1994). Children's attitudes toward reading: A national survey. Reading Research Quarterly, 30(4), 934-955.
- McPeck, J. E. (1990, May). Critical thinking and subject specificity: A reply to Ennis. Educational Researcher, 19(4), 10-12.
- Midkiff, R., Burke, J., Hunt, J., & Ellison, G. (1986). Role of self-concept of academic attainment in achievement related behaviors. Psychological Reports, 58, 151-159.
- Mikulecky, L. (1979). Adult reading habits, attitudes, and motivations: A cross-sectional study. Monographs in Teaching and Learning, 2. School of Education, Indiana University.
- Mikulecky, L. (1978). Overview of a survey of adult reading habits, attitudes, and motivations. ADSIG Journal, 1(2), 24-31.
- Moore, S. C. & Lemons, R. (1982, October). Measuring reading attitudes: Three Dimensions. Reading World, 48-57.
- Newcome, T., Turner, R., & Converse, P., (1965). Social Psychology: The Study of Human Interaction. New York: Holt.
- Newmann, F. M. (1988, Fall). Higher-order thinking in high schools. Education Digest, 23-27.
- Nieratka, E. & Epstein, I. (1981, May). College Students' Self-Perceptions on Factors Which Have Influenced Their Reading Ability. Paper presented at the Annual Meeting of the International Reading Association (26th, New Orleans, La, April 27-May 1, 1981. (ERIC Document Reproduction Service No. 213 003)
- Norris, S. P. (1989, December). Can we test validly for critical thinking? Educational Researcher, 21-26.
- Norris, S. P. & Ennis, R. H. (1989). Evaluating Critical Thinking. Pacific Grove, CA: Midwest Publications.

- Otey, J. (1991). Beyond the literal level. Paper presented at the Annual Conference of the National Association of Developmental Education (15th). (ERIC Document Reproduction Service No. ED 331 572).
- Payne, B. & Manning, B. (1992). Basal reader instruction: Effects of comprehension monitoring training on reading comprehension, strategy use and attitude. Reading Research and Instruction, 32(1), 29-38.
- Pascarella, E. (1989). The development of critical thinking: Does college make a difference? Journal of College Student Development, 30, 19-26.
- Rafferty, J. et al (1985). StatWorks, version 1.2. Philadelphia, PA: Cricket Software, Inc.
- Ransbury, M. (1973). An assessment of reading attitudes. Journal of Reading 17, 25-28.
- Rasnake, C. (1991). The Assessment of the Developmental Program at a Private Junior College in Tennessee. Unpublished doctoral dissertation. The University of Tennessee, Knoxville, TN.
- Reed, A. (1988). Comics to Classics: A Parents Guide. Newark, DE: International Reading Association.
- Reis, E. (1992). Remedial reading students at Moraine Valley Community College. (ERIC Document Reproduction Service No. ED 356 005).
- Richards, H. & Bear, G. (1986). Attitudes toward school subjects of academically unpredictable elementary school children. Paper presented at the meeting of the American Educational Research association, San Francisco, CA.
- Robbins, L. (1981). Critical reading skills of nonproficient readers in college. Journal of Reading, 25, 300-303.
- Roe, B., Stoodt, B., & Burns, P. (1991) Secondary school reading instruction: The content areas (4th ed.). Boston: Houghton Mifflin.
- Roueche, J., & Roueche, S. (1977). Developmental Education a Primer for Program Development and Evaluation. Atlanta, Georgia: Southern Regional Board.
- Roueche, J., & Roueche, S. (1994). Responding to the challenge of the at-risk student. Community College Journal of Research and Practice, 18, 1-11.

- Rowell, C. G. (1972). An investigation of factors related to change in attitude toward reading. Journal of Reading Behavior, 5, 266-272.
- Sanacore, J. (1992). Encouraging the lifetime reading habit. Journal of Reading, 35(6), 474-477.
- Shapiro, J. (1991). Reading attitudes and perceptions in traditional and nontraditional reading programs. Reading Research and Instruction 30(4), 52-66.
- Shaw, M., & Wright, J. (1967). Scales for the Measurement of Attitude. New York: McGraw-Hill.
- Smith, D. (1981). Instruction and outcomes in an undergraduate setting. Paper presented at the meeting of the American Educational Research Association. Los Angeles.
- Smith, D. (1977). College classroom interactions and critical thinking. Journal of Educational Psychology, 69, 180-190.
- Smith, M. C. (1992, Spring). A comparison of good and poor readers on a measure of adults' reading attitudes. Research and Teaching in Developmental Education, 8, 51-55.
- Smith, N. (1948). Some effects of reading on children. Elementary English 25, 271-278.
- Spann, M. & McCrimmon, S. (1994). Remedial/developmental education: Past, present, and future. In G. Baker III (ed.) A Handbook on the Community College in America. Westport, Connecticut: Greenwood Press.
- Spann, M., & Thompson, C. (1986). The National Directory of Exemplary Programs in Developmental Education. Boone, NC: The National Center for Developmental Education.
- Spires, H., Huntley-Johnston, L., & Huffman, L. (1993). Developing a critical stance toward text through reading, writing, and speaking. Journal of Reading, 37(2), 114-122.
- Strain, P., Guralnick, M., & Walker, H. (Eds.), (1986). Children's Social Behavior: Development, Assessment and Modification. New York: Academic Press.

- Sullivan, A. (191). The natural reading life: A high-school anomaly. English Journal, 80(6), 40-46.
- Summers, E., ed. (1970). Attitude Measurement. Chicago: Rand McNally.
- Swartz, R. & Perkins, D. (1989). Teaching Thinking: Issues and Approaches. Pacific Grove, CA: Midwest Publications.
- Strategies for Teaching Critical Thinking Across the Curriculum (1990). Princeton, NJ: ETS.
- Thistlethwaite, L. (1990). Critical reading for at-risk students. Journal of Reading, 33(8), 586-593.
- Tullock-Rhody, R. & Alexander, J. E. (1980, April). A scale for assessing attitudes toward reading in secondary schools. Journal of Reading, 23(7), 609-614.
- Vogt, W. (1993). Dictionary of Statistics and Methodology. Newbury Park, CA: Sage Publications.
- Willis, S. (1993, February). You CAN teach thinking skills. Instructor, 44-45.
- Winocur, S. L. M. (1981). The impact of a program of critical thinking on reading comprehension remediation and critical thinking of middle and high school students. Dissertation Abstracts International, 42, 96A.

APPENDICES

APPENDIX A
PERMISSION LETTER



ROANE STATE COMMUNITY COLLEGE

Harriman, Tennessee 37748

(615) 882-4591
Fax (615) 354-3000 ext. 4462

Division of Academic Development
November 8, 1995

Dr. Estill Alexander
College of Education
University of Tennessee
Knoxville, TN 37916

Dear Dr. Alexander:

I have given permission for Mrs. Wanda H. Manning to survey four sections of Critical Reading (DSR 086) during the 1996 spring semester. Ms. Manning will teach two of the sections at the Cumberland County campus, and the remaining two at the Roane County campus.

Two components of the study will involve pre and post testing with regard to an attitude survey and a critical reading test. Mrs. Manning also plans to teach critical thinking skills to the students in two sections.

Sincerely,

Myra K. Peavyhouse
Associate Dean

Roane County • Oak Ridge • Scott • Loudon • Cumberland • Campbell • Knox (Center for Health Science)

APPENDIX B
STUDENT CONSENT FORM

Student Consent Form and Information About Teaching Study
Critical Reading, DSR 086
Spring 1996

During Spring Semester, 1996, a teaching study will be conducted in two sections of DSR 086, Critical Reading. This study will examine the effects of critical thinking on reading attitudes. Results of this research study will be used for partial fulfillment of a doctoral degree from the University of Tennessee at Knoxville. You are enrolled in one of the following sections.

1. Lecture Format Group- Lecture and group work is the usual method of instruction utilized at RSCC in the Critical Reading courses. Reading assignments will be presented by lectures and class discussion of the readings assigned.
2. Critical Thinking Group- During the semester, you will learn specific critical thinking skills along with the assigned readings and discussions.

At the beginning and at the end of the semester, you will be asked to take the Cornell Critical Thinking Test, Level X, and the Rhody Secondary Reading Attitude Assessment. A random selection of students will also be asked to participate in an interview with the instructor; you may be asked to participate in this interview, which will not be tape recorded. Statistics will be compiled at the end of the semester. Information gathered will be reported as group data, and you will not be identified, by name or in any other way, in the study.

If you decide not to participate, you may transfer to another class section not involved in this study without penalty. Counselor assistance is available for this purpose. This decision will not affect your grade in this course.

If you have any questions regarding this study, please contact me, Wanda Manning (882-4591, ext. 4300, Academic Development Division).

You are making a decision whether or not to participate in the study described above. Your signature indicates that you have read the information provided and decided to participate. You may withdraw at any time without prejudice should you choose to discontinue participation in this study. Consent forms will be maintained in a locked file cabinet in Wanda Manning's office at Roane State Community College, Harriman, TN for three years beyond completion of the study.

Name: (Please print)

Last First Middle

Social Security Number _____

Signature _____ Date _____

APPENDIX C
STUDENT INTERVIEW QUESTIONS

Interview Questions Asked of Students in Critical Reading Classes, Spring 1996

1. How have you felt toward reading throughout your years in school?
2. How has your attitude toward reading changed this semester?
3. In what ways have you become a more critical reader?
4. Do you think that becoming a critical reader has any affect on your attitude toward reading?
5. Tell me what kinds of reading materials you like to read now that you did not like to read previously.
6. Describe someone you know who has the qualities of a good reader.

APPENDIX D
RHODY SECONDARY READING ATTITUDE ASSESSMENT

Name _____

Section _____

Date _____

Rhody Secondary Reading Attitude Assessment

Directions: This is a test to tell how you feel about reading. The score will not affect your grade in any way. You read the statements silently as I read them aloud. Then put an X on the line under the letter or letters that represent how you feel about the statement.

SD - Strongly Disagree

D - Disagree

U - Undecided

A - Agree

SA - Strongly Agree

		SD	D	U	A	SA
1.	You feel you have better things to do than read.	___	___	___	___	___
2.	You seldom buy a book.	___	___	___	___	___
3.	You are willing to tell people that you do not like to read.	___	___	___	___	___
4.	You have a lot of books of your own at home.	___	___	___	___	___
5.	You like to read a book whenever you have free time.	___	___	___	___	___
6.	You get really excited about books you have read.	___	___	___	___	___
7.	You love to read.	___	___	___	___	___
8.	You like to read books by well-known authors.	___	___	___	___	___
9.	You never check out a book from the library.	___	___	___	___	___
10.	You like to stay at home and read.	___	___	___	___	___
11.	You seldom read except when you have to do a book report.	___	___	___	___	___
12.	You think reading is a waste of time.	___	___	___	___	___
13.	You think reading is boring.	___	___	___	___	___
14.	You think people are strange when they read a lot.	___	___	___	___	___
15.	You like to read to escape from problems.	___	___	___	___	___
16.	You make fun of people who read a lot.	___	___	___	___	___
17.	You like to share books with your friends.	___	___	___	___	___

		SD	D	U	A	SA
18.	You would rather someone just tell you information so that you won't have to read to get it.	—	—	—	—	—
19.	You hate reading.	—	—	—	—	—
20.	You generally check out a book when you go to the library.	—	—	—	—	—
21.	It takes you a long time to read a book.	—	—	—	—	—
22.	You like to broaden your interests through reading.	—	—	—	—	—
23.	You read a lot.	—	—	—	—	—
24.	You like to improve your vocabulary so you can use more words.	—	—	—	—	—
25.	You like to get books for gifts.	—	—	—	—	—

RHODY SECONDARY READING ATTITUDE ASSESSMENT

Scoring: To score the *Rhody Secondary Reading Attitude Assessment*, a very positive response receives a score of 5, and a very negative response receives a score of 1. On items 4, 5, 6, 7, 8, 10, 15, 17, 20, 22, 23, 24, and 25, a response of "strongly agree" indicates a very positive attitude and should receive a score of 5. On the remaining items, a "strongly disagree" response indicates a very positive attitude and should receive the 5 score. Therefore, on the positive item, "strongly agree" receives a 5, "agree" receives a 4, "undecided" receives a 3, "disagree" receives a 2, and "strongly disagree" receives a 1. The pattern is reversed on the negative items. The positive range of scores is 5 X 25 (125) to 1 X 25 (25).

Clusters:

School related reading: items 11, 18

Reading in the library: items 9, 20

Reading in the home: items 4, 10

Other recreational reading: items 5, 17, 22, 24, 25

General reading: items 1, 2, 3, 6, 7, 8, 12, 13, 14, 15, 16, 19, 21, 23

APPENDIX E
CRITICAL READING SYLLABUS

SYLLABUS: ACADEMIC DEVELOPMENT (DSR) 086, THREE (3) CREDIT HOURS
_____ SEMESTER, 19____, CRITICAL READING, SECTION_____

I. INSTRUCTOR_____ OFFICE LOCATION_____

II. OFFICE HOURS_____ TELEPHONE_____

III. COURSE DESCRIPTION:

DSR 086 is designed to develop college-level reading competence through an immersion in content. Class time is devoted to whole- and small-group discussion of selected nonfiction and fiction readings, with evaluation based on students' ability to respond to the meaning and significance of whole passages. Higher -order critical and creative thinking--the ability to interpret, analyze, synthesize, evaluate--is consistently emphasized. Textbook reading is a special focus of the course; students are provided ample practice in applying SQ3R and related systems for the organized study of textbook chapters. Writing is another focus.

IV. COMPETENCIES:

To successfully complete DSR 086 Critical Reading, a student must demonstrate consistent mastery of the following competencies:

- a. The ability to identify and comprehend the main and subordinate ideas in a written work and to summarize the ideas in one's own words.
- b. The ability to recognize different purposes and methods of writing, to identify a writer's point of view and tone, and to interpret a writer's meaning inferentially as well as literally.
- c. The ability to separate one's personal opinions and assumptions from a writer's.
- d. The ability to vary one's reading speed and method (survey, skim, review, question, and master) according to the type of material and one's purpose for reading.
- e. The ability to use the features of books and other reference materials, such as table of contents, preface, introduction, titles and subtitles, index, glossary, appendix, and bibliography.
- f. The ability to define unfamiliar words by decoding, using contextual clues, or by using a dictionary.

V. MATERIALS:

TEXT: Improving College Reading, 6th Edition, by Lee A. Jacobus.
A dictionary is also recommended.

VI. GRADING:

Tests and quizzes = 60%
Homework, class participation = 25%
Final exam = 15%

A = 90 - 100
B = 80 - 89
C = 70 - 79
F = 0 - 69

VII. COURSE CONTINUATION:

The primary purpose of the Academic Development program is to assist students in acquiring the academic competencies needed for success in college. For reading, a sequence of courses exists. DSR 086 is the terminal (final) course in the sequence and is designed to be taken in the same semester as the middle course: DSR 085 - - Developmental Reading. However, students may elect to take 085 before 086 if they wish.

VIII. LEARNING AIDS AND COUNSELING:

Counseling is an important element in this course and is available - - and strongly encouraged - - for all students. At least one mid - term conference with the instructor will be asked of all students, and other conferences will be held more informally. Professional counselors also are available to students.

Please inform your instructor early in the course if there is anything he/she can do to aid in your efforts to learn. Preferential seating, cassette-taped materials, etc., are available for learners who have physical or other conditions which interfere with learning.

APPENDIX F

General Information about DSR 086-Critical Reading

General Information About DSR 086-Critical Reading

This 3 - hour course is designed to develop college-level reading competence through an immersion in content. Class time is devoted to whole- and small-group discussion of selected nonfiction and fiction readings, with evaluation based on students' ability to respond to the meaning and significance of whole passages. Higher-order critical and creative thinking - -the ability to interpret, analyze, synthesize, evaluate - -is consistently emphasized.

Textbook reading is a special focus of the course; students should be provided ample practice in applying SQ3R and related systems for the organized study of textbook chapters. Writing is another focus, particularly the writing of journals designed to record a student's responses to reading assignments.

The course text, Improving College Reading, 6th Edition by Lee A. Jacobus is a collection of readings drawn from many sources.

The final exam for 086 is the Nelson-Denny Reading Test, Form F, available in the files at all reading classrooms. Convert the Nelson-Denny score (the TOTAL grade-equivalent score) to a percentage grade using the following scale (this is for passing grades; for failing grades, simply extend the scale):

10.9 - 11.0 = 70%	12.6 = 86%
.1 = 71%	.7 = 87%
.2 = 72%	.8 = 88%
.3 = 73%	.9 = 89%
.4 = 74%	13.0 = 90%
.5 = 75%	.1 = 91%
.6 = 76%	.2 = 92%
.7 = 77%	.3 = 93%
.8 = 78%	.4 = 94%
.9 = 79%	.5 = 95%
12.0 = 80%	.6 = 96%
.1 = 81%	.7 = 97%
.2 = 82%	.8 = 98%
.3 = 83%	.9 = 99%
.4 = 84%	14.0 = 100%
.5 = 85%	

Although students are allowed to register for Developmental and Critical Reading concurrently, Critical is the terminal course in the reading sequence and should be the most challenging.

Source: RSCC Instructor's Guide to Teaching RSR/DSR Reading, 1995

APPENDIX G
WEEKLY COURSE OUTLINES

Textbook: Improving College Reading by Lee A. Jacobus

Be prepared to discuss all reading assignments the day after being assigned;
therefore, read and answer all questions for each selection

- Week 1 Introduction to course
Rhody Secondary Reading Attitudes Assessment
Cornell Critical Thinking Test, Level X
Explanation of study and student consent forms
Read and answer questions: What True Education Should Do
Handouts not in text: and
 Old Deadeye Bean
- Week 2 Read and Discuss: Section 1 in text
Read and answer questions: The Winter Buffalo Hunt
Explanation of critical thinking skills to be learned
- Week 3 Critical thinking skill: Perceiving
Definition: actively selecting, organizing and interpreting what is
 experienced by our senses
Examples: Illustrations - 1) old woman/ young woman
 2) vase/ two faces
 3) boy at computer - what happens
 next?
Explanation and discussion on how we perceive things differently
Read and answer questions: The Most Important Day
Exercise: Students form pairs, take turns leading the
 other student (who closes eyes) down short
 hall and back. Students can not speak to give
 directions, but must rely on touch. Students
 then write their perceptions of what they
 experienced.
- Students, after writing and discussing their
 experiences of walking while not seeing,
 write about how Helen Keller perceived
 everyday life in comparison to how her
 teacher, Anne Sullivan perceived life using
 The Most Important Day as a reference.
- Week 4 Read and answer questions: Iron Bars Turn a Victim Into a
 Prisoner

- Week 4 (continued) Read and answer questions: Requiem for a Heavyweight
 Critical thinking skill: Patterns and relationships
 Definition: Using thinking patterns to make sense of the world
 Explanation of how we patterns to show relationships
 Examples: 1) Supply the missing number in a number sequence
 2) Show several geometric figures (one with no pattern) for 30 seconds, then have students draw them from memory. See which is harder to remember.
 3) Discuss patterns of organization of paragraphs; identify patterns of several paragraphs.
 Assignment: 1) Using Requiem for a Heavyweight, find and describe social patterns of elephants in the wild.
- Week 5 Test 1 over stories read and discussed and the 2 critical thinking skills discussed
 Read and answer questions: On Friendship
 critical thinking skill: Classifying
 Definition: Grouping things based n similarities.
 Examples: 1) Given a group of words, which go together and why?
 2) Use Venn diagrams to illustrate relationship between or among classes
 Assignment: Using the story, On Friendship, classify characteristics of friendships in the U.S., England, France and Germany using charts or Venn diagrams.
 Read and answer questions: No Name Woman
- Week 6 Read and answer questions: On the Fear of Death
 Critical thinking skill: Forming and Applying Concepts
 Definition: General ideas that we use to identify and organize our experiences.
 Examples: 1) Use concept map to diagram a concept in a given paragraph.
 2) Using examples and nonexamples identify a particular concept.
 Assignment: 1) Using examples and nonexamples develop a concept for other students to identify
 2) Using On the Fear of Death create a concept map.

Week 7	Read and answer questions: Facing Up to Change Critical thinking skill: Problem solving Definition: Using an organized approach to solving problems 1) What is the problem? 2) What are the alternatives? 3) What are the advantages and/or disadvantages of each alternative? 4) What is the solution? 5) How well is my solution working? Examples: 1) Solving the mystery: Given a group of sentences, create a coherent paragraph. You may use any technique, such as deleting/adding words, or using various forms of punctuation and connecting words. 2) Given a diagram of a pipe that has a hole in it, and being told that some children dropped a wooden ball down the pipe, solve the problem using the steps to problem solving. Assignment: Using Facing Up to Change, decide what is the problem and how to solve it using the steps to problem solving.
Week 8	Test 2 over last 4 stories and last 3 critical thinking skills Read and answer questions: Creative Options: Unusual Approaches to Usual Situations Read and answer questions: Gone Up North, Gone Out West, Gone!
Week 9	Read and answer questions: How Did They Discover Radium? Read and answer questions: Why Chimpanzees Do Not Talk
Week 10	Read and answer questions: The Brown Wasps Test 3 over last 5 stories
Week 11	Take posttest Rhody Secondary Reading Attitude Assessments and Cornell Critical Thinking Test, Level X
Week 12	Read and answer questions: My Friend, Albert Einstein Read and answer questions: A New Theory About Early Humans
Week 13	Read and answer questions: Arapaho Religion Read and answer questions: Death in the Open

Week 14 Read and answer questions: The Brain

Week 15 Test 4 over last 5 stories
Final Test: Nelson/Denny Form F Reading Test

DSR 086
Critical Reading

WEEKLY COURSE OUTLINE (Control Section)
MWF classes

Textbook: Improving College Reading by Lee A. Jacobus

Be prepared to discuss all reading assignments the day after being assigned;
therefore, read and answer all questions for each selection

- | | |
|--------|--|
| Week 1 | Introduction to course
Rhody Secondary Reading Attitudes Assessment
Cornell Critical Thinking Test, Level X
Explanation of study and student consent forms
Read and answer questions: What True Education Should Do
Handouts not in text: and
Old Deadeye Bean |
| Week 2 | Read and Discuss: Section 1 in text
Read and answer questions: The Winter Buffalo Hunt |
| Week 3 | Read and answer questions: The Most Important Day |
| Week 4 | Read and answer questions: Iron Bars Turn a Victim Into a Prisoner |
| Week 4 | Read and answer questions: Requiem for a Heavyweight
Test 1 over stories read and discussed |
| Week 5 | Read and answer questions: On Friendship
Read and answer questions: No Name Woman |
| Week 6 | Read and answer questions: On the Fear of Death |
| Week 7 | Read and answer questions: Facing Up to Change
Test 2 over last 4 stories |
| Week 8 | Read and answer questions: Creative Options: Unusual Approaches to Usual Situations
Read and answer questions: Gone Up North, Gone Out West, Gone! |
| Week 9 | Read and answer questions: How Did They Discover Radium?
Read and answer questions: Why Chimpanzees Do Not Talk |

Week 10	Read and answer questions: Test 3 over last 5 stories	The Brown Wasps
Week 11	Take posttest Rhody Secondary Reading Attitude Assessments and Cornell Critical Thinking Test, Level X	
Week 12	Read and answer questions: Read and answer questions:	My Friend, Albert Einstein A New Theory About Early Humans
Week 13	Read and answer questions: Read and answer questions:	Arapaho Religion Death in the Open
Week 14	Read and answer questions:	The Brain
Week 15	Test 4 over last 5 stories Final Test: Nelson/Denny Form F Reading Test	

APPENDIX H

Raw Scores and Gain/Loss scores

Table A.1 Raw Scores and Gain/Loss Scores for Rhody Secondary Reading Attitude Assessment for Treatment Section

Student No.	Pretest	Posttest	Gain/Loss
1	121	107	-14
2	103	109	+6
3	100	089	-11
4	97	110	+13
5	92	075	-17
6	91	123	+32
7	88	080	-8
8	85	109	+24
9	80	079	-1
10	77	064	-13
11	73	066	-7
12	72	077	+5
13	67	058	-9
14	52	058	+6
15	51	072	+21
Total Gain = 107		Highest Possible Score = 125	
Total Loss = 80		Lowest Possible Score = 25	

Table A.2 Raw Scores and Gain/ Loss Scores for Rhody Secondary Reading Attitude Assessment for Control Section

Student No.	Pretest	Posttest	Gain/Loss
1	112	108	- 4
2	111	93	- 8
3	95	89	- 6
4	95	101	+6
5	91	96	+ 6
6	91	87	- 4
7	89	81	- 8
8	84	66	-18
9	81	78	- 3
10	81	79	- 2
11	79	83	+ 4
12	71	81	+10
13	68	60	- 8
14	65	60	- 5
15	61	70	+ 9
16	59	63	+ 4

Total Gain = 38
Total Loss = 80

Highest Possible Score = 125
Lowest Possible Score = 25

Table A.3 Raw Scores and Gain/Loss of Cornell Critical Thinking Test,
Level X Pretest and Posttest for Treatment Section

Student No.	Pretest	Posttest	Gain/Loss
1	43	34	- 9
2	41	47	+ 6
3	41	46	+ 5
4	40	31	-11
5	40	46	+ 6
6	38	20	-18
7	38	40	+ 2
8	37	55	+18
9	34	47	+13
10	34	38	+ 4
11	23	30	+ 7
12	22	31	+ 9
13	17	25	+ 8
14	17	25	+ 8
15	- 8	46	+ 5
Total Gain = 151		Highest Possible Score = 76	
Total Loss = 38		Lowest Possible Score = -38	

Table A.4 Raw Scores and Gain/Loss of Cornell Critical Thinking Test,
Level X Pretest and Posttest for Control Section

Student No.	Pretest	Posttest	Gain/Loss
1	46	46	000
2	32	38	+06
3	29	43	+14
4	25	37	+12
5	25	37	+12
6	20	11	-09
7	16	25	+07
8	16	27	+11
9	13	22	+09
10	13	14	+01
11	11	44	+33
12	10	29	+19
13	08	26	+18
14	-1	22	+23
15	-7	25	+32
16	-16	-2	+14
Total Gain = 211		Highest Possible Score = 76	
Total Loss = 9		Lowest Possible Score = -38	

VITA

Wanda June Hembree Manning was born in Petros, Tennessee on May 20, 1941. She attended schools in the public school system of Roane County, Tennessee, where she graduated from South Harriman High School in May, 1959. After marrying and being mother to three children, she attended and earned an Associate of Science degree in education from Roane State Community College in 1977. In 1979, after attending Tennessee Technological University in Cookeville, Tennessee, she received the Master of Arts degree in secondary education, biology. The summer of 1979 she entered Tennessee Technological University as a graduate student. In 1980 she was hired at Roane State Community College to teach Developmental Studies. In 1983 she earned a Master of Arts degree in secondary education. While continuing to teach developmental students at Roane State Community College, she entered the doctoral program at the University of Tennessee, Knoxville and received the doctoral degree in education in August, 1997.

She is presently an associate professor of reading and education at Roane State Community College, Harriman, Tennessee where she is an active member of the Faculty Senate, serving as president 1990-1991. She is a member of the National Association for Developmental Education (NADE), Tennessee Associate for Developmental Education (TNADE), The Honor Society of Phi Kappa Phi, International Reading Association (IRA), and Association for Supervision for Curriculum Development (ASCD).

She was married on June 1, 1961 to George A. Manning. They have three children, Tammy, Scott, and Karen (all college graduates) and five grandchildren, Luke, Jennifer, LeAnn, Reggie, and Tony. She currently resides in Rockwood, Tennessee with her husband, George.