
Comparison of a Skills-Based and Natural Text-Based College Developmental Reading Program

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College developmental reading programs have typically focused on the development of knowledge, strategy, or skills such as vocabulary, main idea identification, inferential comprehension, and the use of text structures (Heinrichs & LaBranche, 1986; Maring & Shea, 1982; McGlenn, 1988; Stahl, Simpson, & Hayes, 1992; Swafford, 1990). Textbooks that reflect this focus, such as *College Reading* (Lenier & Maker, 1991), *Reading Enhancement and Development* (Atkinson & Longman, 1992), *Reading Skills Handbook* (Weiner & Bazerman, 1991) and *Efficient Reading* (Brown & Fishco, 1992), are frequently used in these programs. Often these texts contain reading passages to be used for the teaching and practice of selected reading skills. The Weiner and Bazerman text, for example, contains 24 reading selections used in teaching vocabulary, comprehension, interpretation and evaluation, and study skills.

At the same time, college developmental reading programs have been influenced recently by the whole language emphasis on using natural text and integrating the language arts, especially reading and writing. Bartholomae and Petrosky (Bartholomae, 1979; Bartholomae & Petrosky, 1986; Petrosky & Bartholomae, 1986) expressed concern that a skills-based approach to college reading gives students the wrong idea about reading. They state, "When reading is defined as something other than the activity of working one's way through a long, complex text and imposing order and meaning on the information

acquired from the text, it is easy to see literacy as the sum of constituent skills" (Bartholomae & Petrosky, 1986, p. 12). As one way to avoid the workbook format and short, fragmented readings, McGlinn (1988) suggested using the reading-for-writer's texts published for college composition courses in developmental reading classes. These texts usually provide sets of readings that revolve around a theme so that the readings, even though they may still be excerpts from longer works, are related. Bartholomae and Petrosky (1986) used natural text, trade books read in their entirety, and interrelated reading and writing activities as the foundation for basic reading and basic writing courses. They focused on the learner as the constructor of meaning and structure much as Moffett (1968/1983) suggests in *Teaching the Universe of Discourse*. Stahl, Simpson, and Hayes (1992) also suggest using writing as one part of the curriculum for high-risk college students. They suggest "teaching reading and learning as holistic, complex processes, not as discrete, simplistic skills" (p. 8).

Other indications of a move in this direction are found in dissertation titles such as *Whole Language: A Promising Approach to Teaching Reading to Underprepared Community College Students* (Solon, 1991). Solon developed a basic reading course that incorporated reading, vocabulary, writing, speaking, and listening activities that often formed the basis for collaborative group work. Textbook titles such as *College Reading: A Themed, Natural-Text Approach* (Clery & Smith, 1992) also suggest a holistic approach. This text is a companion text used with trade books in a college developmental reading program. Strategies for effective reading are introduced within the context of whole reading. Valeri-Gold and Olson (1991) described research-based whole language instructional strategies for use in college developmental reading courses, and Morrison (1990) wrote about a whole language approach using novels, essays, and short stories. Morrison described the enthusiastic student support of this holistic approach as students indicated that they enjoyed reading for the first time. It is interesting to note that the use of a whole language label, however, does not necessarily mean that a program incorporates the use of whole books.

Although the research base for the effectiveness of teaching various reading comprehension skills and strategies for college developmental reading students is somewhat sparse (Swafford, 1990; Swafford & Alvermann, 1989), it does seem to exist. Yet even a sparse research base for using whole language principles, especially that of using natural text, in college developmental reading programs does not seem to be available. Gender differences in response to these different teaching emphases are also of interest, but, again, little information is found in the literature. Gender differences in general reading abilities at the high

school and beyond levels do not seem to be supported by research (Hogrebe, Nist, & Newman, 1985) although gender differences in learning styles do receive some support (Dunn & Reddix, 1990; Magolda, 1989). A change from using a skills-based approach to a natural text-based approach in a college reading program might well require students to learn differently.

Ideally, changes in focus in college developmental reading programs should result in improved programs that provide the most reading improvement for the greatest number of students. The purpose of this study is to assess the results of such a change in focus.

Method

This study was designed to investigate reading achievement of underprepared college freshmen who completed either a skills-based or a natural text-based reading program. The study was conducted over a two year period in a comprehensive, midwestern university. Students in the first year, identified as cohort 1, participated in a skills-based program and students in the second year, identified as cohort 2, participated in a natural-text based approach.

The Students

The students in both cohort groups were special admission freshmen in the university. The following parameters were used to identify the students for both groups: *American College Test* (ACT) scores below 19, low class standing in high school (bottom half), and low scores on special admission tests in reading (below the 50th percentile). Cohort 1 included 96 students, 41 males and 55 females, and cohort 2 included 122 students, 43 males and 79 females, for a total of 218 students. Since there is some modest evidence that males and females might learn differently and under different conditions (Dunn & Reddix, 1990; Magolda, 1989), data were also examined with gender in mind.

The Programs

In both groups students were scheduled for a two-semester sequence of reading and study skills course work. The present study was conducted during the first semester for each cohort group.

The first year program (cohort 1) was skills-based and used the text *College Reading and Study Skills* (McWhorter, 1986). This text has 23 chapters each reflecting a group of skills or strategies, and it is presented in a workbook format. Short reading passages, composed primarily of quotes from various college textbooks, are included for practice throughout the text and a sample of a complete textbook chapter

appears in the appendix. The text was used for the whole year with selected chapters used during the first semester. These chapters and the order in which they were presented included: chapter 1, "How to Succeed;" chapter 2, "Managing Your Time;" chapter 19, "Expanding Your Vocabulary;" chapter 20, "Using Context and Word Parts;" chapter 4, "Improving Your Concentration;" chapter 5, "Prereading;" chapter 6, "Strategies for Active Reading;" chapter 7, "Understanding Sentences;" chapter 8, "Understanding Paragraphs;" and chapter 9, "Following thought Patterns." A weekly news magazine, *Time*, was also used to provide additional text material for practice and discussion.

The program for cohort 2, in the second year of the study, was based on the use of natural-text with reading strategies and skills introduced within the context of reading whole books for meaning. Reading, writing, and discussion activities for the course revolved around the theme of "Personal Courage." The books used were read in the following order: *Kaffir Boy* (Mathabane, 1986), *Brothers* (Monroe & Goldman, 1988), and *One Flew Over the Cuckoo's Nest* (Kesey, 1962). Students were also asked to choose a fourth book that related to the theme, and they wrote a text composed of their essays about the theme. This student-authored text of 110 typed pages was used as one of the texts for the course and was treated in the same manner as the other required books. A different weekly news magazine, *Newsweek*, was used to provide additional reading related to the theme and to expand background knowledge. Regularly scheduled course activities included developing vocabulary study cards from self-selected vocabulary, writing in reader-response journals, and writing about and discussing books, especially in relation to the course theme. Vocabulary and comprehension strategies were presented within the reading context and students were expected to use these strategies in meaningful situations, such as participating in group discussions, writing assignments, and taking essay exams. The course design reflected the philosophy presented by Bartholomae and Petrosky (1986). That is, students in this cohort group were asked to construct meaning from the text, interact with the text by activating prior knowledge while relating that knowledge to the text, and use writing as a way to interact with and learn from the text.

Research Design

The two cohort groups were compared using a basic non-equivalent control group format. This design allowed for a comparison of the skills-based and natural text-based programs for two similar groups of students. Data collected for each group included the ACT composite

test scores, final course grades, and pre- and post-testing for reading comprehension using the *Degrees of Reading Power (DRP)*, Forms PA-2 and PB-2 (1985). The *DRP* is an untimed test of reading comprehension designed with a modified cloze format. Students read passages of 5 or 6 paragraphs each and fill in a blank by choosing the correct word from 5 choices. The *DRP* is widely used to place students in college developmental reading programs.

A two-way analysis of covariance (ANCOVA) was performed using *ACT* scores, final course grades, and the *DRP* pre-test as covariates. Type of program (skills versus natural) and gender (male versus female) served as the independent variables. The *DRP* (Form PB-2) post-test score was the dependent variable.

Results

The results of the ANCOVA indicated no significant main effects ($p > .05$); however, a significant two-way interaction occurred between program type and gender, $F(6, 311) = 6.311, p = .013$. The cell means adjusted for multiple covariation (Figure 1) were compared for differences using the Newman-Keuls post-hoc test. Harmonic means were used in this computation to account for differences in cell sizes.

The analysis of the data revealed that male students in cohort 1 (65.15) obtained a significantly higher mean score ($p < .01$) than males in cohort 2 (62.42) and females in cohort 1 (62.31). There were no significant differences between cohort 1 males and cohort 2 females ($p > .05$), and the three lowest means, cohort 1 females, cohort 2 males and cohort 2 females (63.65), were not significantly different from one another ($p > .05$).

Although there appeared to be no real differences in post-test scores after either program for most students, males in the skills-based program seemed to perform better than males in the natural text program.

Discussion

Males in this study did statistically better in a skills-based developmental reading program, although, there is little existing evidence in the literature to support differences in male and female general reading achievement. An analysis of the High School and Beyond national survey data by Hogrebe, Nist, and Newman (1985) revealed that the variance in reading achievement accounted for by gender was less than 1%. The authors caution, however, that the findings apply to vocabulary and short passage comprehension and do not answer questions about processing complex text. This may account for the difference supported by the current study; the males who were asked to practice

reading in a holistic approach using complex text experienced some difficulty. Perhaps male students deal better with skills-based reading instruction and shorter, expository passages, like those used with cohort 1, because of their high school reading experiences. Male students might be exposed more often to expository texts while female students might prefer narrative texts because of the courses they choose to take. More males than females are often scheduled for remedial programs in high schools, as well, and these programs often use a skills approach to reading and writing. Hence, the question that might be asked is: Based on experience and familiarity are males more likely to be comfortable with a skills-based approach and females with a natural text-based approach that depends a great deal on narrative text?

On the other hand, there is some evidence that there are specific differences in cognitive structures and on the concrete-abstract dimension of learning orientation for males and females (Magolda, 1989). Magolda reports that one difference was reflected in the female pattern of listening and collaborating with others and placing importance on relationships, such as reflected in the narratives used with cohort 2. Perhaps the males who experienced difficulty in the current study were not as adept at using holistic strategies, such as collaborative group discussion and peer responses to writing, that were an important part of the natural text-based program.

A study in which differences in cognitive style were measured using electroencephalographic activity also indicated that there may be real gender differences in cognitive processes (Dunn & Reddix, 1990). The authors suggested that the most important conclusion to draw from their study, however, was that a universal instructional approach applied to all students may not be appropriate. It seems that the same conclusion might apply to the present study. Yet, Hogebe, Nist, and Newman (1985) concluded their study of gender differences in the High School and Beyond data by saying, "it seems appropriate for reading research to continue its focus on successful reading processes and strategies that can be found and taught to either gender" (p. 723).

Indeed, the current study was limited to a specific population and used a small number of subjects making the results tentative. Current college reading models that appear to be working should probably not be scrapped, as the importance of "looking before leaping" is obvious. The results point the way to collecting more data relating to the effects of skills-based and natural-text based reading programs for college developmental reading students and examining possible gender differences more closely. One necessary step is collecting more data about the effects of natural text-based developmental reading programs on the achievement of college freshman. Although there is some indica-

tion that interest in this approach is building, little research support is available. In investigating natural text-based college developmental reading programs it will be necessary to differentiate the programs that profess to use a whole language approach but might not be using whole books as reading material. Another question that needs to be asked is what approach works best with college freshmen, of either gender, who often admit to not having ever read a whole book? It would also be important to know which approach transfers best to other university courses taken by underprepared college freshmen.

A final concern raised by the current study relates to assessment. Perhaps it is not appropriate to assess students in a natural text-based program using many of the current standardized reading comprehension tests. These tests most often ask students to read a short passage and answer a few multiple-choice questions about the text which is not at all like the reading material and written responses used in a holistic, contextual approach to reading. Would a more process-based assessment provide different results because it meshes better with the curriculum? The *DRP* used in the present study falls somewhere between the two ends of the continuum. An important direction for future research with similar programs, however, concerns appropriate assessment.

As stated earlier, it is important that the results of programming decisions in college reading programs be studied before moving too quickly in any new direction. Pilot programs using various methods and orientations might provide some answers before making large-scale changes. This study is just one small step in that direction. As the interest in whole language grows it is important to evaluate its effectiveness at the college level. It should at least be as effective as a skills approach on some type of standardized measure. A reasonable expectation might be that students in a holistic program that emphasizes the reading-writing connection might outperform students in a skills-based program on measures of writing, attitude, and interest. Ideally, any program changes made should provide the most reading improvement for the greatest number of students.

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