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TITLE: Quality Content Reading Instruction

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Abstract

Because reading in the content areas is seen as a viable way to address the literacy crisis, states and teacher education programs traditionally mandate a reading in the content area course to be taken by pre-service teachers. With these mandates in effect, some policy makers, educators, and researchers believe that the reading problems still persist. For example, the Southern Regional Education Board in Atlanta (SREB) thought that the problem was with the number of reading courses required from pre-service teachers to be certified to teach. Their solutions were viewed to be in either increasing the number of reading in the content areas classes required in teacher education programs, or additional internship time for all new teachers to be trained in teaching reading in the content areas.

Four data sources were used in this study. The sources were: Vaughan's (1977) scale for measuring attitudes toward teaching reading in content classrooms, students' daily journals, informal wish lists, and anonymous official university surveys conducted at the end of each class for course evaluation purposes. Data analysis lead to the following findings. 1- It is the quality of teacher education classes, not their quantity, is what matters most. One reading in the content areas course could have positive effects on the attitudes of the pre-service teachers enrolled in it. 2- The attitudes of pre-service teachers enrolled in a course could be largely determined by the course contexts, and subsequently the implementation of such contents in the class. 3- Even though Joyce and Showers (1980) suggested that 5% of the ideas from typical graduate classes and in-service sessions on a topic are ever implemented in the classroom, this research found that these rates become higher when teachers see the practice demonstrated with them, have the opportunity to become part of its implementation, and receive immediate feedback from colleagues and supervisors. 4- The use of actual classroom books and materials to practically demonstrate and apply the topics highly influenced pre-service teachers attitudes toward teaching reading in the content areas. 5- The enthusiasm of the instructor about the subject

taught was also a main factor in improving pre-service teachers' attitudes toward the subject taught.

Seventeen sources, three tables and one figure are included in the paper.

Effective Content Literacy Instruction

Many researchers and practitioners have written about, and documented, the reading problem in American schools. Irving and others (1995) wrote that 40 percent of 13-year-old students and 16 percent of 17-year-old students in high school did not acquire intermediate reading skills. Research has repeatedly shown that the attitude of teachers toward reading in the content areas is an important factor in the reading achievement and practice of secondary students. Bean (1997) found that actual application of content literacy strategies at the pre-service level maybe minimized due to several factors. Among these factors is the pre-service teacher's own personal attitude. Research has also suggested that one's value orientation has strong influence on decisions made related to curriculum and instruction (Ennis, Cothran, and Lofrus,1997).

Because reading in the content areas is seen as a viable way to address the literacy crisis (Chall, 1996; Barton, 1997), states and teacher education programs traditionally mandate a reading in the content area course to be taken by pre-service teachers. With that mandate in effect, some policy makers, educators, and researchers believe that the reading problems still persist. Denton (1998) from the Southern Regional Education Board in Atlanta wrote, "Teachers and administrators often note that preservice programs do not prepare future teachers adequately to teach reading" (p. 1). As a result, several Southern Regional Education Board (SREB) states addressed this problem. In his report, Denton wrote several SREB states have found the problem with the number of reading courses required from pre-service teachers to be certified to teach. The solutions were viewed to be in either increasing the number of reading in the content areas classes required in teacher education programs, or additional internship time for all new teachers to be trained in teaching reading in the content areas.

The present study focuses on whether or not such a course has an effect on pre-service teachers'

attitudes toward reading in the content areas.

Method

Subjects and course

The subjects for this study were three entire groups of students in a teacher education program in a large urban university. The subjects were enrolled in a reading in the content areas course required from all students working on a master of arts in teaching (M.A.T.). Typically, enrollees in this program are returning or graduate students who have already earned undergraduate degrees in fields of study other than education.

The course is required from all pre-service teachers prior to student teaching. The same instructor in three different semesters, Winter 2000, Fall 2000, and Winter 2001 taught the three groups in this study. Enrollments in these three groups were twenty-eight, thirty, and thirty-two respectively. The instructor used the same textbook, Alvermann & Phelps (1998), in the three classes. Actual K-12 lessons in science, math, social studies, art, literature and other content areas were demonstrated and practiced throughout the semester. Examples of activities and strategies demonstrated were before, during, after reading activities. Cooperative, individual, and whole class activities were demonstrated on actual classroom materials. Prediction, problem solving, and critical thinking strategies were among the strategies implemented. Language techniques that enhance active listening, speaking, reading, and writing were also used in course activities.

Data

Four data sources were used in this study. The sources were: Vaughan's (1977) scale for measuring attitudes toward teaching reading in content classrooms, journals, informal wish lists, and anonymous official university surveys conducted at the end of each class for course evaluation purposes.

The journals used as data sources for this study were of two types. Subjects were asked to

keep journals in which they described the teaching process, the learning outcomes, and the reflections on each session of the course. Subjects used these journals to write a reflection paper describing their learning journeys throughout the course.

Student generated wish lists were another data source. On the first day of classes in each semester, each pre-service teacher was asked to generate a wish list of what he/she wanted from the course. In addition to their educational value, these wish lists were used in this study to predict, in an informal way, students' priorities, predispositions, and expectations in the class. Wishes were tallied collated by type as they were mentioned.

Students' anonymous evaluations of the course provided an additional data source for this study. Conducted at the end of every semester, these surveys had two parts. The first part consisted of 24 statements. Subjects responded by answering on a 5-point scale: strongly disagree, disagree, neutral, agree, and strongly agree. The second part consisted of sections in which students were asked to comment on different aspects of the course in a narrative way. This section is introduced as such, "Your handwritten comments are manually separated from the machine readable portion of this form upon receipt by the Testing and Evaluation Office. They are returned directly to the instructor for his/her personal use in assessing the course, or the teaching methods use in the course."

Data analysis

Vaughan's (1977) "A Scale to Measure Attitudes toward Teaching Reading in Content Classrooms" which was used in this study is one of the most reliable data gathering instruments. It has been part of the research base to determine teachers' receptiveness and attitudes toward reading in the content areas. This scale consists of 15 attitude statements about teaching reading in the content area. Subjects responded by answering on a 7-point scale: strongly agree, agree, tend to agree, neutral, tend to disagree, and strongly disagree. Each survey was given a composite score and was interpreted

according to the descriptors developed by Vaughan: 91 or higher = High, 81-90 = Above Average, 71-80 = Average, 61-70 = Below Average, 60 or lower = Low. In each class, Vaughan's scale was administered at the beginning, middle, and end of the semester.

Written data, consisting of journals and anonymous narratives of course evaluations, were analyzed using a principled and methodological systemic approach (Strauss & Corbin, 1990). This was a cyclical procedure of reading the written data, reaching conclusions, and evaluating these conclusions by rereading and reanalyzing the data to develop an understanding of trends as they emerged in the process. To ensure validity and reliability, analyzing written data involved three raters for a period of two months. Raters did the following:

Step 1. To propose a coding system, raters carefully read all journals and narrative course evaluations. A tentative coding system was developed

Step 2. Raters randomly selected and independently read 33% ($n = 30$) of each written data type. Notes were kept and compared. Working together, the three raters analyzed sections of the data. Agreement among the raters was 90%.

Items in pre-service teachers' generated wish lists were tallied by contents. Tallies were graphed to show trends as they appeared.

Pre-service teachers' responses to the statements on the course evaluations were analyzed by the university testing office. The university testing office reported the analysis to concerned instructors one semester after the courses ended. Responses pertaining to this study were reported in the following sections.

Results

Subjects' responses to the statements on Vaughan's scale were scored individually as described by Vaughan (1977). The mean score for each group was calculated each time the scale was

administered. The results were as shown in Table 1.

Table 1

Means of pre-service teachers' scores on the Vaughan scale

	Beginning of the course	Middle of the course	End of the course
Winter 2000	77.36	83.33	86
Fall 2000	78.8	84	86.2
Winter 2001	78.6	83.7	86.3

These mean scores indicated, according to the Vaughan's scoring grid, that at the beginning of each of the courses pre-service teachers receptiveness to teaching reading in the content areas was (high) average. This attitude changed as the course progressed. At the end of each course pre-service teachers' receptiveness to teaching reading in the content areas changed to (high) above average. A closer look at the individual response choices to the statements on the Vaughan's scale showed that while, at the beginning of each course, four pre-service teachers in each class agreed that English teachers alone should be responsible for teaching reading in secondary schools, none of these pre-service teachers agreed with this statement at the end of the courses. Similarly, while six pre-service teachers in each class disagreed that knowing how to teach reading in content areas should be required for secondary teaching certificates, none of these pre-service teachers agreed with this statement at the end of the course.

The positive change in attitude indicated by analyzing data from Vaughan's scale was also supported by analyzing data from the other sources. Students' journals and reflective papers, which, hereafter, I quote without editing, indicated that pre-service teachers had an average receptiveness toward reading in the content area course at the beginning of the course. This attitude became positive at the end of the course. The following excerpts are just a few examples of this positive change.

Describing her knowledge and how she felt about reading in the content areas when the class started, a would-be elementary teacher wrote, “When I signed up for this class, I asked myself, ‘What is Reading in the Content Area?’ To fellow students in the M.A.T. program, I would ask, ‘What is Reading in the Content Area?’ Unfortunately, everyone I asked had either not taken the class or said, ‘It is about reading and writing in your content area.’ Like I should know what that meant.”

When she described how she felt at the end of the course and what she learned from it, the same student wrote, “During the course of this semester, I have gone from someone who had no idea what Reading in the Content Area was to someone who feels comfortable using the Reading in the Content Area strategies...I went from feeling that this subject was of little importance to feeling that it is very important.” This clear positive change in attitude toward reading in the content area has been effected in one course.

In his reflective paper, a would-be middle school teacher described how he felt and what he knew at the beginning of the course by writing, “I had no clue as to the purpose of this class.... The fact that I didn’t understand the major purpose of the Reading in the Content class or the subject matter that was to be taught in the class also made me very speculative...As I mentioned earlier, the only prior knowledge that I had pertaining to this class was that it was geared to reading vast quantities of material and hours of uninteresting homework. I really had no clue that the class dealt with how to introduce and teach reading concepts in all core subject area. I always felt that teaching reading was the assignment of the reading teachers and that I was only responsible for instructing my students in the core content areas that I have been trained in.”

When he described how he felt at the end of the course and what he learned from it, the same would-be middle school teacher described how he changed. He wrote, “What I learned while participating in this class was priceless! I not only learned many methods of teaching reading material,

but I also learned how to motivate my students to realize the enjoyment of the reading and writing processes. I learned how to weave reading material into my own core content area. My concept of reading did a complete about-face during the course of this class.” This is another clear example of how one content literacy course can be enough to effect a positive change in pre-service teachers’ attitudes toward reading in the content area.

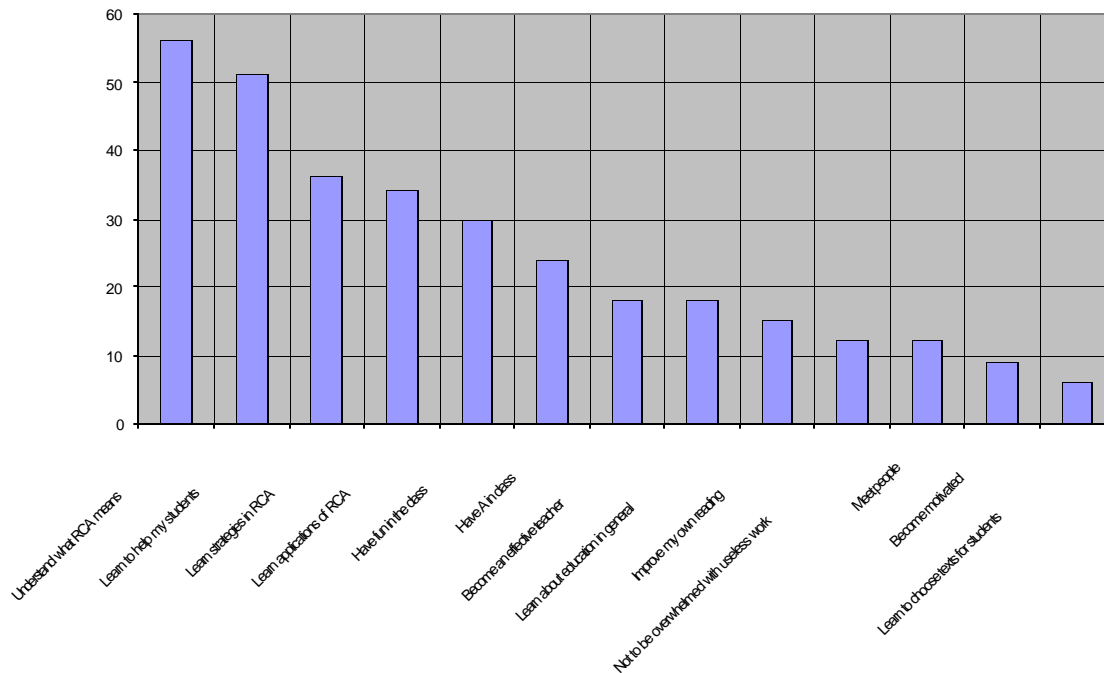
According to what she wrote in her journal, a would-be secondary math teacher had negative feelings about the course at the beginning of the class. She described those negative feelings in her journal when she wrote, “The question of why this class was necessary for me, as an aspiring math teacher, made me question the validity of this class. Why did I need reading in math? On the first day of class, the top of my wish list consisted of what reading in the content area meant. Even the title of the book, Content Reading and Literacy, did not give me a clear concept of why this class was necessary for a math teacher. This made me investigate the book and look at the table of contents to see how each chapter might help me in math. With chapter titles as content literacy and the reading process, and increasing vocabulary and conceptual growth, I still was not satisfied this was the class I needed for my future teaching career. With these two steps completed, I decided to grin and bear it and attend the class as required by my plan of work.”

These negative feelings of this would-be secondary math teacher changed by the end of the course. This change was reflected in her reflective paper when she wrote, “To say this class made a major impression on me would be an understatement. It will be hard not to sound like a ‘teacher’s pet’ in my expression of how this class has already impacted me in my current teaching position. I have tried so many of the techniques we have discussed in class, and also those you and I have discussed before class. The techniques I have utilized have all been a huge success and left me with that really great feeling after each class session.”

When the items on the wish lists generated by pre-service teachers were tallied, the top most frequently mentioned wishes were as shown in Figure 1.

Figure 1.

Frequencies of what pre-service teachers wished for in a reading in the content areas class.



Frequencies in the above figure showed that more than half the pre-service teachers in this study wanted to learn what reading in the content areas was about. Also, one third of the pre-service teachers in this study valued teaching reading in the content areas, wanted to learn its strategies, and wanted to implement these strategies in their teaching. From these frequencies one could conclude that pre-service teachers had average receptiveness toward reading in the content areas. If pre-service teachers felt the way these data indicated, the question would be, “How well do education programs prepare future teachers to teach reading in the content areas effectively?”

Pre-service teachers’ responses to questions on course surveys at the end of each semester also

showed the same trends. For example, the course evaluations included two statements which reflect attitudes toward the course prior to taking it. The two statements were:

1- Before enrolling I had an interest in the subject matter of this course.

2- I wanted to take this course.

Students responded to these statements on a 5-point scale: Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree. In this research, responses were as shown in Tables 2 and 3.

Table 2

Pre-service teachers' responses to the first statement (Number of students responding 27, 22, 30 out of 28, 30, and 32 respectively)

	S. Disagree	Disagree	Neutral	Agree	S. Agree	Mean
Winter 2000	2	4	6	7	8	3.6
Fall 2000	0	1	4	9	8	4.1
Winter 2001	1	2	6	10	11	3.9

Table 3

Pre-service teachers' responses to the second statement (Number of students responding 27, 22, 30 out of 28, 30, and 32 respectively)

	S. Disagree	Disagree	Neutral	Agree	S. Agree	Mean
Winter 2000	2	3	6	10	6	3.6
Fall 2000	0	1	4	10	4	3.7
Winter 2001	1	2	6	10	11	3.9

Similar to what the wish lists and the initial responses to the Vaughn survey, the above two tables indicate that pre-service teachers have above average receptiveness to reading in the content areas as shown by class means.

Data analysis of the narrative part of the anonymous course evaluations indicated that, at the end of the semester, pre-service teachers had a positive attitude toward reading in the content areas. The

first section asked students to write their “Overall comments on the course and your [their] learning.” The following were examples of what students had written. I chose to include them here unedited. One student wrote, “I enjoyed this course. I am leaving with a lot of valuable information...I have learned more in this class than many others throughout my career.” Another student wrote, “I have learned a great deal in Reading in the Content Area and can now successfully instruct my reading instructions correctly.” A third student wrote, “The course was necessary for preparing teachers for the classroom. This course should be considered a methods course because it was enriched in strategies and techniques.” One more student wrote, “I absolutely loved this course. This is one of the few courses I’ve taken that I can actually extract practical strategies from and use the majority of material in my professional career.”

Discussion and conclusions

Unlike subjects in other studies, the attitudes of pre-service teachers in this research became more positive after the completion of one course of reading in the content areas. In a similar study that used Vaughan’s scale to measure the effectiveness of a reading in the content areas literacy course on the attitudes of pre-service teachers in Illinois State University, Lenski and Nourie (1998) reported that the mean score of their subjects at the beginning of the course was 79.65. This indicated that, similar to the present study, pre-service teachers started the course with a (high) average attitude of receptiveness.

Unlike Lenski and Nourie who reported that, at the end of a reading in the content areas course, the mean score of their subjects on Vaughan’s scale went down from 79.65 to 79.58, the mean scores of the subjects in this study went up as shown in Table 1. The results of this research indicated that a reading in the content areas course could have positive effects on the attitudes of the pre-service teachers enrolled in it. Even though Lenski and Nourie did not report on how the course in their study was conducted, one would be justified to conclude that the attitudes of those enrolled in a course could

be largely determined by the course contexts, and subsequently the implementation of such contents (Loranger, 1999; Salhi, 1997; 2001). This conclusion is in line with Joyce and Showers' (1980) suggestion that 5% of the ideas from typical graduate classes and in-service sessions on a topic are ever implemented in the classroom. These rates become higher when teachers see the practice demonstrated in their classrooms, have the opportunity to become part of its implementation, and receive immediate feedback from colleagues and supervisor (Gersten, Woodward, and Morvant 1992; Johnson and Wilder, 1992; Joyce and Showers, 1980). In their reflective papers and anonymous narrative evaluations, the pre-service teachers in this study overwhelmingly emphasized two aspects they believed had a greater impact on them. The use of actual classroom books and materials to practically demonstrate and apply the topics, and the enthusiasm of the instructor about reading in the content areas. This leads one to believe that one course in content literacy instruction could be enough to change pre-service teachers' predispositions and receptiveness to teaching literacy in their content areas. This effectiveness of a content literacy course, and probably any other education course, depends on how the class is taught, what is included in it, its practicality, and the involvement of the students in it.

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