# The Impact of Modeling Upon Preservice Teachers in a Content Area Reading Course

By

Dr. Sharon E. Andrews

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Associate Professor of Education

Augustana College

Sioux Falls, SD 57197

sharon.andrews@augie.edu

ABSTRACT:

The impact of modeling content area reading strategies for preservice teachers was explored. The results of the study indicated that modeling does make an impact upon preservice teachers. When selecting strategies for lesson plan development, preservice teachers selected strategies that had been modeled for them 69% of the time. Teacher educators can and do make a difference. It is important to continue to explore the relationship between teacher educators' instruction and its impact upon preservice teachers.

# The Impact of Modeling Upon Preservice Teachers in a Content Area Reading Course

The No Child Left Behind (2002) legislation has proclaimed teacher quality as one of its primary provisions and defines a “highly qualified teacher” as one who possesses strong content knowledge in the subject matter to be taught. Although it is important for teachers to possess content knowledge, Kaplan and Owings (2003) remind us that knowing content isn’t enough, that teachers must know how to craft subject matter lessons that will impact student learning.

In a recent study conducted by the Educational Testing Service (ETS), 42% of people surveyed indicated that it was important for teachers to possess the skills needed to create motivating learning experiences while only 19% believed that it was important for teachers to have comprehensive subject matter knowledge (Hart & Teeter, 2002). This 2002 ETS study concluded that “…knowing ***how*** to teach is more important than knowing ***what*** to teach. Teaching quality is not about formal academic degrees, but rather about the degree to which a teacher can engage his or her class. When it comes to quality teaching, it is not about what you know, but how well you convey what you know to students.” (p. 9). Darling-Hammond and Baratz-Snowden (2005) concur and contend that teaching is much more than

knowing your subject matter and describe effective teachers as ones who can “carefully organize activities, materials, and instruction…” (pp. 2-3). Evidence exists to support the idea that it is just as, if not more, important that teachers possess a strong pedagogical knowledge or that they know ***how*** to teach, not just ***what*** to teach.

What to teach and how to teach it are two primary topics addressed in teacher education programs throughout the United States. In teacher preparation programs, preservice teachers learn how to teach by enrolling in methodology courses taught by education professors. How preservice teachers are taught by education professors in these courses is as important as the content that is being taught (Wilson, 1987; Stover, 1990; Wilson, 1990).

Teaching by education professors in methodology courses is sometimes done through demonstration or by example; this teaching by demonstration or example is often referred to as modeling (Jay, 2002). Modeling, when an expert demonstrates a particular task or skill so that it can be emulated or replicated by the learner (Collins, Brown, & Holum, 1991), is the first step of the scaffolding process (Jonassen, 1998; Hogan & Pressley, 1997). Scaffolding, a concept gleaned from the research regarding how individuals learn (Collins, Brown, & Newman, 1989;

Vygotsky, 1978), maintains that students need more support in the beginning phase of learning (Collins, Brown, & Holum, 1991). This support tapers off or fades through what Pearson (1985) called the “gradual release of responsibility” until the learner has mastered the skill and can work independently (Bransford, Brown, & Cocking, 2000).

Content area reading courses typically include a strong component stressing the importance of classroom teachers modeling cognitive processes for their students and content reading textbooks advocate that classroom teachers “think-aloud” for their students so that they can more clearly understand how to use the strategies (Vacca & Vacca, 2008; Lenski, Wham, & Johns, 1999). Duffy (2002) contends that classroom teachers must model strategies for their students if their instruction is to be effective while Moore, Bean, Birdyshaw, and Rycik (1999) believe that students are deserving of classroom teachers skilled in modeling.

These same principles can apply to teacher educators charged with preparing preservice teachers with the skills necessary to be effective teachers in today’s classrooms. If the same strategies being studied are modeled by the course instructor, one would imagine that preservice

teachers would be more likely to incorporate them in their own teaching. While some has been written about the idea of modeling as an essential component of preservice teacher education (TBR Task Force on Teaching Quality, 2006; Gould, 2004; Sands & Barker, 2004; Kluth & Straut, 2003; Strategies for Teacher Excellence Promoting Student Success, 2001; O'Neill, 2000; Darling-Hammond, L. & McLaughlin, M.W., 1995; Good & Brophy, 1994; Gorrell & Capron, 1990), modeling has not been found to be a typical component of teacher education programs (Anderson & Armbruster, 1990; Wilson, 1987). The narrow body of research that does exist seems to suggest that modeling is an effective approach (Bass & Chambless, 1994; Payne & Manning, 1991; Gorrell & Capron, 1990; Stover, 1990; Stroble & Lenz, 1990). As Gould (2004) puts it, teacher educators must "talk the talk" and "walk the walk."

In the spring semester of 2004, this issue was explored by examining how modeling of content area reading strategies by the course instructor impacted the 24 students enrolled in a required "Reading in the Content Area: Secondary" course. Selected strategies being studied throughout the course were employed by the course instructor to teach the course material. The course instructor selected strategies that had the best fit for

the topic being studied, the instructional goal, and/or personal preference and shared the selection rationale with the students as well. The same strategies students were reading, writing, studying, and talking about were modeled by the course instructor thus providing students with hands-on experience using the strategies.

For example, new material was introduced with the KWL strategy (Ogle, 1986), an Anticipation Guide (Bean, Readence, & Baldwin, 2008), Brainstorming (Vacca & Vacca, 2008), or an Admit Slip (Gere, 1985). Consideration of topics being discussed was facilitated with Discussion Webs (Alvermann, 1991), creation of Graphic Organizers (Vacca & Vacca, 2008) and the implementation of Learning Logs or Reflection Journals (Vacca & Vacca, 2008). Questioning strategies such as Question-Answer-Relationship (QAR) (Raphael, 1984), Ask the Author (Lenski, Wham, & Johns, 1999), or ReQuest (Manzo, 1969), and Three-Level Reading Guides (Vacca & Vacca, 2008) were used to dig into material, make inferences, think critically, and read between and beyond the literal level of the text. Students evidenced their personal understanding of course content through creating patterned poems such as Cinquains or Biopoems (Gere, 1985), completing Exit Slips (Vacca & Vacca, 2008), or responding to Reaction Guides (Stephens &

Brown, 2005). Vocabulary was introduced, studied, and reviewed using Knowledge Rating Scales (Blachowicz, 1986), Semantic Features Analyses (Vacca & Vacca, 2008), Four-Square Cards (Lenski, Wham, & Johns, 1999), and Magnet Words (Lenski, Wham, & Johns, 1999). Coding systems such as X-Marks-the-Spot (Stephens & Brown, 1999) and Post-It Notes (Tovani, 2000) and note taking approaches such as the Cornell Two-Column Note Taking Guide (Lenski, Wham, & Johns, 1999) were used to support active reading of text. In addition to instructor modeling of strategies and students being assigned a particular strategy to use while reading their textbook, a variety of course assignments were designed in order to immerse students in the strategies in as many ways as possible. A brief overview of these course assignments follows.

First, students maintained a hand-written Strategy Card File throughout the semester. On 5X7” note cards held together with rings, students created a flip file of the over 100 content area reading strategies the textbook presented. Having students write these out by hand ensured that they had connected with all of the strategies in a way that helped them to internalize the information in a meaningful way (Emig, 1977). Each card was to have the name of the strategy, its instructional purpose, a step-by-

step outline of the procedure, and an idea for how the strategy might be used in their content area classroom.

In addition, students were randomly assigned to chapter sections to complete the Strategy Share assignment. This course requirement expected them to select a strategy from their assigned section, apply it to their own content area, and share it with the class through a microteaching mini lesson. After each Strategy Share, a whole class debriefing was held to foster a thoughtful discussion about the pros and cons of using the strategy, what worked well, what needed changing, and to brainstorm ideas for how the strategy could be adapted to other content areas. This debriefing, an important aspect of the modeling process, provided an opportunity for explicit feedback regarding the use of various strategies as well as the support necessary in the scaffolding process.

Finally, students were required to develop a series of lesson plans throughout the semester. For each chapter of the textbook, students selected one of the strategies and developed a detailed lesson plan where they applied the strategy to content area material from a content area textbook they had reviewed early on in the course.

The goal throughout the semester was to immerse the students in as many content area literacy strategies as

possible in meaningful ways by having them read about the strategies, write about the strategies, talk about the strategies, listen to the strategies and think about the strategies.

Data were collected via several approaches. Throughout the semester, a running record of which strategies the course instructor had modeled, which strategies students had presented through the Strategy Shares, and which strategies students had selected for their lesson plans was kept. Students were not told that the course instructor was keeping this running record. In addition, students were asked to rate on a scale of 1 to 10 with 10 being the highest, how much they felt the Strategy Shares had influenced the strategy they selected for lesson plan development. Finally, at the conclusion of the course, students were asked to respond in writing to the following question: "What influenced the strategy you selected for the basis of your lesson plan?"

Table 1 presents the data on the percentage of time individual students selected strategies for lesson plan development that had been modeled for them by the course instructor or through their classmates' Strategy Shares.

TABLE 1: Percentage of Time Individual Students Selected Modeled Strategies for Lesson Plan Development (N=24)

| Student | Percentage |
|---|---|

| | |
|---|---|
| 1 | 67% |
| 2 | 83% |
| 3 | 50% |
| 4 | 33% |
| 5 | 33% |
| 6 | 80% |
| 7 | 67% |
| 8 | 83% |
| 9 | 67% |
| 10 | 33% |
| 11 | 100% |
| 12 | 67% |
| 13 | 40% |
| 14 | 83% |
| 15 | 67% |
| 16 | 83% |
| 17 | 83% |
| 18 | 67% |
| 19 | 100% |
| 20 | 33% |
| 21 | 83% |
| 22 | 67% |
| 23 | 100% |
| 24 | 67% |
| OVERALL AVERAGE | 69% |

Overall, students selected modeled strategies 69% of the time. The range and median were both 67%. Table 2 summarizes this data by the overall percentage of students selecting modeled strategies.

TABLE 2: Percentage of Students Selecting Modeled Strategies

| Percentage of Students Selecting Modeled Strategies |
|---|
| 17% of students selected modeled strategies 33% of the time |
| 4% of students selected modeled strategies 40% of the time |
| 4% of students selected modeled strategies 50% of the time |
| 33% of students selected modeled strategies 67% of the time |
| 4% of students selected modeled strategies 80% of the time |
| 25% of students selected modeled strategies 83% of the time |
| 13% of students selected modeled strategies 100% of the time |

The lowest percentage was 4 students or 17% of students who selected modeled strategies 33% of the time. The highest percentage was 3 students or 13% of students who selected modeled strategies 100% of the time. Again, the range and median were both 67% and the average 69%.

Table 3 presents the data regarding the percentage of students who selected strategies for lesson plan development that had been modeled for them by the course instructor or through classmates' Strategy Shares by chapter topic area. The chapter topic areas in the table appear in the chronological order that they were taught throughout the semester.

TABLE 3: Percentage of Students Selecting Modeled Strategies for Lesson Plan Development by Chapter Topic Area (N=24)

| CHAPTER TOPIC AREAS | Percentage |
|---|---|
| Reading Engagement | 78% |
| Vocabulary | 78% |
| Struggling Readers | 58% |
| Writing to Learn | 65% |
| Text Comprehension | 72% |
| Reading Critically | 67% |
| Studying | 53% |
| Test Preparation | 82% |
| Overall Average | 69% |

Again, on average, students selected strategies that had been modeled for them 69% of the time. When this is broken down categorically by the various chapter topics, it raises some interesting questions or areas for further inquiry. After the first two course topics, the percentage

of modeled strategies selected appears to decrease or is at least less than the percentage for the first two topics. However, for the final course topic on Test Preparation the percentage is the highest of any chapter. One might possibly assume that as students became more knowledgeable about content area reading strategies throughout the semester, they felt more confident to select strategies that had not been modeled for them. This might explain the trend of decrease in percentage over the course of the semester. This is, of course, only speculation, but it does present an area for further exploration. The data do cause one to wonder about the sudden increase in percentage at the end of the course. At a time when one might assume students would be the most confident to venture out on their own and select a strategy they hadn't seen modeled, why is it at this time that the tendency to select a strategy modeled was the highest of all? Could it be since the chapter on Test Preparation was the last chapter studied in the course, students were simply too weary to consider strategies other than those that had been modeled? Or, perhaps it was due to the fact that these preservice teachers shared that their classroom teachers had not taken time to teach them how to prepare for a test. Their

natural tendency was to gravitate towards strategies modeled by the course instructor.

Table 4 presents the data with regard to student response to the question: "On a scale of 1 to 10 (10 being highest) how much did the Strategy Shares presented in class by your peers influence the strategy you selected for the basis of your lesson plan?"

TABLE 4: Students' Self-Reported Rating of Modeling's Influence on Strategy Selection (N=24)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| 34% | 0% | 3% | 0% | 6% | 10% | 21% | 15% | 11% | 0% |

Only 47% of the students rated the modeling of strategies influence on their strategy selection at least a 7 or above. It would appear that students' impressions of the impact of modeling don't align with the previous data presented where 69% of the time they selected modeled strategies for lesson plan development. One would expect that students would have rated the influence of modeling on their strategy selection to be higher than they self reported it to be.

The results of the students' self-reported rating of modeling's influence can be further explored through an examination of responses to the following question posed to students at the conclusion of the course: "What factors

typically influenced the strategy you selected for the basis of your lesson plan?”

Much of the time students cited that strategy selection for lesson plan development was dependent upon how well the strategy fit their content area. Seventy-six percent of students responded to the question by saying they selected a strategy because it “worked best with my content area”, because of its “connectedness to my content area”, or “if I could relate it to my content area.” This aspect of this study reflects Moje’s 1996 research findings. In a two-year observational study, Moje explored whether or not a high school chemistry teacher’s use of literacy strategies in her instruction caused her students to use the strategies in their learning. The classroom teacher selected strategies such as SQ3R, notetaking, graphic organizers, and summary writing because of her belief that chemistry was “organized knowledge.” Thus, she selected literacy strategies which emphasized ways to organize information or ones that best fit the content, much the same as the preservice teachers in this student reported. Moje found that the students did make an effort to use the modeled strategies, in large part due to their positive rapport with their teacher.

Nineteen percent of the students referenced modeling as a reason for strategy selection with comments such as “If I saw it worked well when someone presented it” or “I sometimes chose the same strategy because I saw it done already.” Other reasons cited included if the strategy “would be fun for the class” or if it “fit my style of teaching.”

The results of this study are encouraging and indicate that modeling does make an impact upon preservice teachers whether they realize it or not. Even though students didn’t self report that modeling impacted their choices, 69% of the time, students did indeed make a choice to use a strategy they had seen modeled for them. It is important to note that preservice teachers are also considering how well a strategy fits with their content area. It would appear that the preservice teachers in this course were making thoughtful and informed decisions about their pedagogy. It would be interesting to follow preservice teachers into their student teaching experience and then into their first year of teaching to see if modeling continues to impact pedagogical decision making. This would be where it would be most interesting to determine the power of modeling, in the real classroom setting with real students. The results of this study are encouraging

and validating; teacher educators can and do make a difference. It is important that we “walk our talk” teach by example, and continue to explore the relationship between our instruction and its impact upon preservice teachers.

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