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Critical Thinking in a Freshman Introductory Course: A Case Study

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It's hard not to notice the explosion of interest in critical thinking at all levels of education. Numerous national conferences have been organized to address the topic, while books and articles report on the research and practical efforts to promote it. Centers devoted to the study of critical thinking have sprung up around the country, and in July, 1985, the National Council for Excellence in Critical Thinking Instruction was established (Paul, 1985). The recent national reports on education reiterate the importance of fostering critical thinking. In many states, legislators have called for and, in some cases, mandated attention to the development of thinking abilities at all levels of the educational system.

Out of all this furor may come a better understanding of what we intend to accomplish and how best to do it, improved practices, and significant changes in student outcomes. For the present, we can begin by sharing our insights from research and practice, so that we can move ahead together and learn from each other. In this spirit, we offer the experiences and lessons learned by a group of

faculty at the University of Nebraska Teachers College who have been wrestling with facilitating the development of critical thinking in the freshman, introductory, required course of the college.

Foundations of Modern Education, Ed 131, had been in the college curriculum for a number of years. Much of the course emphasized the history and philosophy of education with some attention paid to encouraging an understanding of teaching as a profession. The typical methodological approach was lecture/discussion.

Three years ago, there was a growing feeling that a major reorganization of the course was needed. Course feedback from students had been mixed over the years. Students had trouble seeing the relevance of the course, and the content and expectations for student performance varied considerably from section to section. The faculty, under the leadership of a new dean, wanted to find ways to provide a more positive and stimulating experience that would allow freshmen to become more involved in their own learning. Discussions about the desired framework of a significantly different program for freshmen led to an agreement by the faculty that the new course would:

- 1) be considered a college course rather than being housed in a single department;
- 2) be organized around a study of selected issues in analyzing the role of the school in society;
- 3) facilitate the development of critical thinking abilities in students;
- 4) be taught by the best senior faculty that the college had available; and
- 5) be directed by a faculty member who would coordinate the course revision process.

Assigning the most experienced faculty to the course was extremely significant because it represented a commitment to the importance of teaching freshmen.

The dean and the coordinator identified 14 senior faculty members from across the college to take on the responsibilities of planning and implementing the new

course. It was hoped that these very different individuals could find a common ground upon which to build a uniform course in education for college freshmen. Each faculty member was a specialist in his or her own field, had an identifiable teaching style, and was not usually involved in cooperative planning. The very process of selecting faculty to participate in an innovative teaching-learning situation may well have stimulated them to work together toward a common goal.

THE PLANNING PROCESS

The coordinator prepared a planning guide before the first meeting of the team. In it were some fairly specific goals for the course, some characteristics of an issue-oriented problem-solving approach to learning, a timetable, and a set of issues that needed to be resolved. The planning guide helped establish a common base from which detailed instructional decision-making could begin.

Although the planning guide established some general goals for the course, the specific issues to be studied had not been chosen. Three important decisions were made early.

1. The team would identify five or six educational issues upon which alternative positions might be held. These issue areas would be selected for their relevance and interest to freshman students.
2. The team would not have a standard textbook but would develop a text using materials drawn from a variety of sources.
3. A teaching guide would be written to provide plans for teaching each of the issues.

These decisions were important because they forced the team to think creatively about the kind of course that could be established without relying upon some traditional set of materials which might be taught in a traditional way. Thus, the team was forced to create a new course which would differ fundamentally from the freshman course that

had previously existed in the college.

Each member of the team was asked to submit a list of issues that might be appropriate for inclusion in the course. As might be expected, they tended to suggest broad topics that were generally not issues for which alternative positions could be identified. The coordinator categorized these topics into 16 major areas of study and re-submitted them to the team for discussion. The team developed a priority ranking and narrowed the list of appropriate topics to eight.

The next step was to devise a focusing question for each of the topics around which alternative positions could be developed. The coordinator provided a checklist of criteria for writing focusing questions, but selecting appropriate questions proved to be a difficult task anyway. It was clear that members of the team were primarily concerned with identifying content to be taught; they were not considering how that content could be organized to be consistent with a problem-solving approach to teaching. Yet, it was essential that the staff understand and adopt this orientation, if the proposed course was to be a departure from the previous course.

In an attempt to help the staff move toward more appropriate planning, the coordinator decided to ask all members of the team to focus on one issue and develop a prototypical guide. One session, then, was set aside to brainstorm ideas related to compulsory education, the first issue selected for the course. The session produced a variety of ideas, concepts, goals to be achieved, and suggestions for teaching strategies. It was a useful session. Asking team members to concentrate on one issue resulted in an extremely rich list of ideas about the topics and provided a basis for thinking differently about the course. The coordinator organized these ideas into a detailed plan for teaching "compulsory education," and that served as a general model for developing each of the other topics. This proved to be a significant step in planning additional topics that would lend themselves to teaching critical thinking.

DEVELOPMENT OF CURRICULUM MATERIALS

In order to provide a common approach to the instructional strategies used in each section of the course, it was decided that a fairly detailed teacher's guide needed to be written. The guide included instructions for conducting small group, large group, and individual activities; questions for discussion; assignments for students; and media materials to be used. Each instructor was given a set of transparencies, and the team had access to multiple copies of slides, films and videotapes. Because this course was developed from scratch, it was no small effort to write the teacher's guide, make transparencies, and organize the media. Yet, the effort was well worth it. Probably no other element had as much influence on establishing consistency among sections as the teacher's guide. It was particularly useful because faculty were teaching unfamiliar content, often with unfamiliar teaching strategies.

The student text, created by the team, was a collection of articles, court cases, federal and state laws, data from national surveys, and historical essays that reflected or supported alternative points of view on the six controversial issues chosen as topics. In essence, the task of doing library research was done for the student. The student guide included expected outcomes for each topic and the reading and writing assignments. In some cases, particularly for more difficult articles, study questions were also provided.

Since the focus of the course was intended to be the development of critical thinking skills, students were expected to consider alternative positions on given topics and to support their positions with relevant evidence. A heavy emphasis was placed on writing as documentation of this effort. Some faculty were skeptical about the emphasis on writing and felt the course was becoming a writing course. However, it became increasingly clear as the course got underway that the heavy emphasis on writing was well placed. Writing papers as a culminating activity for each topic, writing in class on occasion, and writing in journals for some instructors, helped students clarify their thinking

and gave invaluable feedback to faculty about student progress in critical thinking. While classroom interaction was essential as a strategy to allow students to express their views, the writing assignments helped hold students accountable for their thinking.

STAFF DEVELOPMENT

Staff meetings were held with all members of the faculty team every week of the first semester and every two weeks in subsequent semesters. While much of the time was spent in managing the logistics of the course, it was also a time for faculty to share ideas and classroom experiences. Faculty reported that they valued these meetings. Because this was an innovative program, the shared experiences did much to develop faculty confidence in working in a new classroom environment. Faculty also realized that their discussions with others facing similar problems and experiences increased their own competence in the classroom.

Staff development activities were designed to increase each instructor's use of effective teaching strategies that would promote student use of problem solving skills. Three of the staff development strategies seemed to have had a significant impact.

First, it was decided that all instructors should administer the TABS (*Teaching Analysis by Students*) midterm student feedback questionnaire. The University's Teaching and Learning Center provided individual as well as group results. Each instructor was able to identify strengths and areas in which some improvement was needed. Some instructors shared the data with colleagues, leading to discussions of ways to improve their teaching effectiveness. The team also discussed the group results and considered what might be done to increase the impact of the course. Taking a reflective stance toward a course is sometimes difficult to do, but the use of the TABS certainly helped focus the team's discussion on effective teaching strategies.

Instructors were also encouraged to audiotape a class discussion, listen to the tape, and tally the interaction,

using an inquiry form specifically developed for the course. Not all staff members elected to do so, but those who did found it to be a reinforcing and positive experience.

Workshops were a third activity that contributed to developing the course and the staff. These were held for one or two days before the first two semesters and at the end of the year. Discussions centered around ideas that worked, positive and negative experiences, topics that were well received and those that were not, and the logistics of procedures, organization, and requirements. The development of an open, sharing climate in the workshops made them especially successful staff development activities.

CRITICAL THINKING SKILLS

As a group, faculty on the team have become more sophisticated in the identification and the development of critical thinking skills and writing skills. With each semester's involvement in the course, the faculty refine and clarify what they are doing and how they are trying to do it.

During the second year, we developed two methods for assessing students. Based on the work of Perry (1970), King and Kitchener (1983), and Alverno College (Mentkowski, Moeser & Strit, 1983), three open-ended questionnaires for assessing developmental levels were designed. The questionnaires included six short-answer questions about an educational issue presented in an introductory paragraph. The questionnaires were administered at the beginning, middle, and end of the fall semester; each time, a different issue was posed. Students from all sections of the course participated ($N = 328$). One hundred three questionnaire sets were randomly selected for coding, using a system developed at Alverno College (Mentkowski, Moeser & Strit, 1983).

Results suggested that freshmen entering the course were likely to be "multiplistic" in their thinking, but that some progression toward "relativism" was possible in a semester. While the data do not suggest a causal relationship between experience in this course and change in developmental level, they are nonetheless useful in course

planning and implementing decisions.

During the spring semester, we collected a second copy of each of the six writing assignments from every student in Ed 131. Criteria and procedures for analyzing student writing assignments for evidence of critical thinking skills will be developed, based in part on the work of Kurfiss (1983) and Hays (1983). Results should be available by the fall of 1985.

We have designed a three-year plan for continuing to gather data, from a variety of perspectives, on student learning of critical thinking skills. From those data, we hope to learn more about freshman student characteristics, so that we can provide a better match between curriculum materials, teaching strategies, and development of critical thinking skills.

WHAT WE'VE LEARNED

Our definition of critical thinking includes skills in analyzing and evaluating evidence in order to make informed rational decisions, the kind of thinking required in Bloom's (1956) evaluation level. In his discussion of thinking at the evaluation level, Bloom concluded:

The types of evaluation discussed here are not frequently used in secondary or collegiate education . . . Perhaps the greatest value of the taxonomy at this point is in pointing to the need for further study and development of testing techniques for measuring competence in evaluating documents, material, and works. (Bloom, 1956, p. 195.)

Whether we have progressed much further today is unclear. What is clear is that increased attention is being given at all levels of education to the development of critical thinking abilities.

After two successful years of implementation of the new freshman introductory course in Teachers College, several insights have been gained into developing critical thinking skills, organizing for curriculum change, and facilitating staff development. Rather than discovering completely new ideas, much of what we have learned simply

confirms what research and practice have already shown. The important thing for us and, perhaps, for others is that it is possible to make the kinds of changes and have the kinds of impact that we want to have. We are not necessarily stuck within constraints that prohibit change. We can effect change, if we can manage to do the things that contribute in a positive way to planned change.

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