DOCUMENT RESUME

ED 433 374 SP 038 718

AUTHOR	McCoy, Leah P., Ed.
TITLE	Studies in Teaching. 1998 Research Digest. Research Projects Presented at Annual Research Forum (Winston-Salem, NC, December 1998).
INSTITUTION	Wake Forest Univ., Winston Salem, NC.
PUB DATE	1998-12-00
NOTE	145p.
PUB TYPE	Collected Works - Proceedings (021)
EDRS PRICE	MF01/PC06 Plus Postage.
DESCRIPTORS	Ability Grouping; Adolescent Literature; Biology; Cheating; Chemistry; Classroom Environment; Classroom Techniques; Computer Assisted Instruction; Cooperative Learning; Cultural Awareness; Discipline; Elementary Secondary Education; English Instruction; Group Discussion; Internet; Mass Media; Mathematics Education; Philosophy; Questioning Techniques; Science Education; Second Language Instruction; Sex Bias; Sex Differences; *Social Studies; Student Attitudes; Student Participation; Teacher Role; *Teacher Student Relationship; Teachers; *Teaching Methods; Track System (Education); Underachievement; Writing Assignments; Writing Skills
IDENTIFIERS	Active Teaching; Conversation; Formal Language

ABSTRACT

This collection of papers includes: "Teaching Approaches in Social Studies" (Lisa N. Andries); "Teacher Assigned and Student Generated Writing Topics" (Robert L. Barr, Jr.); "Environmental Knowledge and Concern among High School Students" (Kristin Redington Bennett); "The Use of Primary Sources in the Social Studies Classroom" (Leslie Ann Bilcheck); "Academic Integrity: Cheating and High School" (Kris Britton); "Authoritative Space: The Use of Teacher Proximity in Classroom Management" (James J. Cardo, III); "Using Media in the Secondary English Classroom: A Survey of Teachers" (Donna N. Chandler); "Involvement, Engagement, and the Dynamics of Underachievement in the High School English Classroom" (Rachel C. Childs); "Examination of Classroom Learning Environments in Tracked Biology Classes" (Erin A. Clesen); "To Whom It May Concern: Specific Audience in Student Writing" (Bart Ganzert); "Using Computer Aids to Develop Three Dimensional Visualization Skills in High School Chemistry Students" (Jeffrey S. George); "Creating Authentic Conversation in Literature Discussion: The Role of Teacher Feedback" (Mary K. Graciano); "The English Idiom: Figurative Language in the High School English Classroom" (Jeffrey Hartz); "Cooperative Learning: The Effect of Gender and Ability Grouping" (Tina Lane Heafner); "The Effects of Teacher Facial Expression and Eye Contact on Student Classroom Attitude and Participation" (Katherine M. Humphrey); "Social Studies Teachers and the Internet: Are the Teachers Using It and If So, How?" (Jeremy Kopkas); "Integrating Culture and Language in the Elementary School Foreign Language Program" (Claire W. Maddrey); "Create Active Students through Active Teaching" (Mark Makovec); "The Effects of Teacher Questioning Patterns on Classroom Discourse" (William E. Owen, Jr.); "A Feminist Pedagogy in the Mathematics Classroom" (Beth Payne); "Teacher Politeness in the Secondary English Classroom" (Jamie T. Ravenscraft); "Effective Questioning Techniques: In Theory and Practice" (Sari Rose); "The Importance of Young Adult

+++++ ED433314 Has Multi-page SFR---Level=1 +++++

Literature in the Secondary English Classroom" (Rhonda Faircloth Saweliew); "The Gender Bias in Science: The Missing Links" (Jeff Streeter); "The Use of Formal and Informal Language in the Science Classroom" (Jodi Wheeler); "Improving Foreign Language Instruction at the High School Level Using Early Language Techniques" (Leslie White); "Discipline Style and Teacher Personality" (Jill Wolf); and "Do Current Philosophies in Social Studies Pedagogy Have a Life in the Classroom?" (Lisa L. Yamaoka). (SM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 433 314

Studies in Teaching 1998 Research Digest

Research Projects Presented at Annual Research Forum

WAKE FOREST UNIVERSITY

Wake Forest University
Department of Education
Winston-Salem, NC
December, 1998

Leah P. McCoy, Editor

SP038719

BEST COPY AVAILABLE

1

U.S. DEPARTMENT OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Table of Contents

Teaching Approaches in Social Studies
Lisa N. Andries *1*

Teacher Assigned and Student Generated Writing Topics
Robert L. Barr Jr. 6

Environmental Knowledge and Concern Among High School Students
Kristin Redington Bennett 11

The Use of Primary Sources in the Social Studies Classroom
Leslie Ann Bilcheck 16

Academic Integrity: Cheating and High School
Kris Britton 21

Authoritative Space: The Use of Teacher Proximity in Classroom Management
James J. Cardo, III 26

Using Media in the Secondary English Classroom: A Survey of Teachers
Donna N. Chandler 31

Involvement, Engagement, and the Dynamics of Underachievement in the High School English Classroom
Rachel C. Childs 36

Examination of Classroom Learning Environments in Tracked Biology Classes
Erin A. Clesen 41

To Whom It May Concern: Specific Audience in Student Writing
Bart Ganzert 46

Using Computer Aids to Develop Three Dimensional Visualization Skills in High School Chemistry Students
Jeffrey S. George 51

Creating Authentic Conversation in Literature Discussion: The Role of Teacher Feedback
Mary K. Graciano 56

The English Idiom: Figurative Language in the High School English Classroom
Jeffrey Hartz 61

Cooperative Learning: The Effect of Gender and Ability Grouping
Tina Lane Heafner 66

The Efffects of Teacher Facial Expression and Eye Contact on Student Classroom Attitude and Participation
Katharine M. Humphrey 71

Social Studies Teachers and the Internet: Are The Teachers Using It and If So, How?
Jeremy Kopkas 76

Integrating Culture and Language in the Elementary School Foreign Language Program
Claire W. Maddrey 81

Create Active Students Through Active Teaching
Mark Makovec 86

The Effects of Teacher Questioning Patterns on Classroom Discourse
William E. Owen Jr. 91

A Feminist Pedagogy in the Mathematics Classroom
Beth Payne 96

Teacher Politeness in the Secondary English Classroom
Jamie T. Ravenscraft 101

Effective Questioning Techniques: In Theory and Practice
Sari Rose 106

The Importance of Young Adult Literature In the Secondary English Classroom
Rhonda Faircloth Saweliew 111

The Gender Bias in Science: The Missing Links
Jeff Streeter 116

The Use of Formal and Informal Language in the Science Classroom
Jodi Wheeler 121

Improving Foreign Language Instruction at the High School Level Using Early Language Techniques
Leslie White 126

Discipline Style and Teacher Personality
Jill Wolf 131

Do Current Philosophies in Social Studies Pedagogy Have a Life in the Classroom?
Lisa L. Yamaoka 136

Teaching Approaches in Social Studies

by
Lisa N. Andries
with
John Litcher
Wake Forest University
Department of Education
December, 1998

Introduction

Social studies teachers use various styles of instruction in their classes. Some teachers rely heavily upon lecture and textbook assignments where as others use more interactive approaches like role-playing and classroom simulations. Such alternative forms may serve as a means to increase students' interest as well as achievement. The purpose of this research is to determine if various teaching approaches affect students' interest or learning capabilities in the social studies classroom. The results will be used to determine which approaches to teaching are most beneficial and enjoyable to students.

Review of Literature

A significant amount of educational literature focuses on the creative approaches to teaching social studies classes. About thirty years ago, social studies teaching was revolutionized by "new" approaches to teaching which stressed active student engagement combined with factual information to construct meaning (Beyer, 1995). Similar methods were implemented into the realms of science, math, and English. Through this new approach to learning, students "generated and tested hypotheses to develop conclusions, concepts, and generalizations about geographical, economic, anthropological, sociological, historical, and political, phenomena" (Beyer, 1995 p.67). However, only about a third of America's social studies teachers embraced the "new" movement. By the 1980's the movement had declined so rapidly that today few teachers have even heard of it. Ergo, Beyer believes educators are seeing a type of revival of such teaching styles today. The most important aspects of this revival involve the hands-on, collaborative, and higher-order thinking approaches which are constantly gaining more attention.

Similarly, Warren Hope writes about the recurrent theme he hears from his college students on their dislike for social studies throughout their K-12 educational experiences. Much

of their dislike stems from lack of interest in the teaching approach. Hope (1996) states that for decades social studies has been rated as one of the least liked subjects in the curriculum. However, should the blame be placed upon the teachers themselves for their own personal pedogogy? Although Hope claims that some teachers "have made efforts to invigorate their students through experimental learning, add real-world relevance to their teaching, and infuse their course work with stimulating assignments, too many are yoked to the textbook, captive to chalk and talk, unable or unwilling to conduct objectives with the real world" (Hope, 1996 p. 150). Thus, the teacher is the most pivotal factor in the classroom. They are the leaders, monitors, and dictators of all the happenings in the classroom. Hoostein (as cited in Hope, 1996) identified motivational strategies for eighth grade history students. High on his list of strategies were role-playing, projects, review games, videos, and films. These were not used in the traditional setting of social studies classes, which according to Hoostein, focus primarily on lecture, recitation, and textbook learning. However, even more disturbing were Hoostein's findings from Brophy and Merrick (1987) claiming that even when teachers were introduced to new teaching strategies they remained attached to their own ways of teaching. Consequently, Hope remarks, "We must ask if the teacher is at fault for the subject's lack of appeal to students and their criticisms of the subject. Is the teachers' failure to incorporate motivational teaching strategies, to make relevant to students the objectives being taught, and to enliven the social studies by linking students to the community and the world the cause of past and present criticisms" (Beyer, 1996, 150)?

Social studies critics comment on the subject-centered approach to teaching social studies. While the other disciplines are moving toward student-centered, experimental, hands-on learning, critics do not feel social studies instructors are doing the same. The constructivist approach empowers students to ask their own questions and seek their own answers. This method is rarely utilized by social studies teachers (Hope, 1996). Thus, the focus of teaching can be transformed to permit the students to become active, rather than passive, learners. The active student will thrive in an open classroom environment. Research by Ehman identified the connection between adolescent political attitudes and classroom climate. He found that students who rated their classrooms more open on the Classroom Climate Scale: reported higher degrees of controversial issues exposure, had personally taken more social studies classes, and had higher scores of political efficiency than other students (Hahn, 1996).

Methodlogy

A twelve hour observation period was conducted to determine the teaching approaches employed in the perspective survey classes. However, only 63% of the total sample was involved in the observation process. The sample consisted of 124 Forsyth County high school

students enrolled in U.S. History during the fall of 1998. Seventy-eight of the students were honors level and 46 were enrolled in regular placement level U.S. History. All 124 of the students were given the survey on the same day, either at the start of class or following the completion of a quiz. The questionnaire was completely voluntary and anonymous.

The survey gave explicit descriptions of the types of teaching approaches involved in the study. The descriptions read as follows:

1) Lecture: the teacher leads the majority of the class discussions. Primary focus of the discussion is on the material contained in the textbook.
2) Small Groups: the class is divided into small groups to work on a project or assignment.
3) Role-Playing: students are assigned various roles and asked to act out their part as if they were that character (ex: pretending to be a colonial American or British merchant)
4) Simulation: students participate in a total class activity in which they transform the entire classroom into an entirely different atmosphere (ex: the classroom becomes a slave ship)

Results and Conclusions

The results of the survey concerning students' attitudes toward teaching approaches were mainly as the reseacher anticipated. Social Studies has been rated as one of the least liked subjects by high school students (Hope, 1996). However, the teachers' pedagogy may reflect the students' interest level. The descriptive research found in Table A showed that only 16% of the surveyed U.S. History students enjoyed lecture style "very much", where as 55% of students enjoyed classroom simulations "very much". Both the small groups and role-playing approaches received a 40% "average" enjoyment level. Forty-eight percent selected enjoy small groups "very much" and 40% circled enjoy "very much" for role-playing. However, as one teacher mentioned it is difficult to utilize simulation and role-playing activities on a regular basis due to the intensity of the curriculum and the time demands to prepare for the mandated end of course testing.

Although a minimum number (16%) of students enjoy lecture style teaching "very much", 34% feel that they learn "very much" from such teaching and 53% find "average" knowledge acquisition from such teaching. In fact, one student who rated lecture teaching very high stated that, "I like lecture if a teacher can talk well and compare it to something in everyday life...Also class goes a lot quicker if it's lecture. The others are fun but take too much time." Although many teachers might agree, this remains a minority opinion for those students surveyed. As noted in Tables C and D, 52% of students reported that they learn "very much" from role-playing and 53% find the same in simulation exercises. One student responded that, "When a teacher lectures I find it boring and hard to pay attention. I learn more when I experience the way something is or how it works instead of hearing about it".

The researcher included "work involved" as a component on the questionnaire because students often enjoy activities more when less work is required of them. Consequently, 40% of students indicated a high level of work involved in lecture style teaching while only 6% of students rated simulations "very much" in work involved. Fifty-one percent of students circled "not much" work involved in simulation activities. This could be one indication why students enjoy simulations highest overall. One teacher even stated that she feels simulations are the best way for students to learn because it "allows them the best opportunity for 'experiencing' history-most students regardless of ability will enjoy them because they think they are 'doing' something".

The survey contained an open-ended response question about why the students enjoyed some teaching approaches more than others. One student wrote that he was diagnosed with ADHD and therefore, it is easier for him to learn from the more hands-on, interactive approaches. Many students relayed their concerns about learning in small groups. Some students find the "slacker" to be a problem when sharing a group project or assignment. Other students mentioned that not all the information presented in small groups was going to be as accurate as from the teacher lecturing. However, most students concluded that different student opinions on various subjects are more thought provoking. Overall, simulations received the most positive comments. One student responded, "Simulation allows one to sort of feel or 'live' the experience." Another student personally liked simulation "because it makes the period seem shorter and because I'm a visual learner, watching someone use actions I can remember (more)." However, even among all the positive comments, the students still seem to understand that simulations can not be relied on as the sole method of teaching no matter how much the students think they learn from the approach. Simulations require large amounts of class time and usually only focus on one event. As one student replied, "I love simulation - it is a lot of fun and encourages class participation, however, it is not an aspect of learning for every day. The best way is to teach from all four points."

References

Beyer, B.K. (1994). Is the old "new social studies" back? Education Digest, 60(8), 67-71.

Hahn, C.L. (1996). Investigating controversial issues at election time. Social Education, 60(6), 348-350.

Hope, W.C. (1996). It's time to transform social studies teaching. The Social Studies, 87(4), 149-151.

LECTURE

TABLE A	VERY MUCH	AVERAGE	NOT MUCH
ENJOYMENT	16%	42%	41%
KNOWLEDGE	34%	53%	13%
WORKLOAD	40%	45%	14%

SMALL GROUPS

TABLE B	VERY MUCH	AVERAGE	NOT MUCH
ENJOYMENT	48%	40%	11%
KNOWLEDGE	33%	48%	18%
WORKLOAD	18%	57%	24%

ROLE-PLAYING

TABLE C	VERY MUCH	AVERAGE	NOT MUCH
ENJOYMENT	40%	40%	19%
KNOWLEDGE	52%	29%	18%
WORKLOAD	18%	40%	41%

SIMULATION

TABLE D	VERY MUCH	AVERAGE	NOT MUCH
ENJOYMENT	55%	28%	16%
KNOWLEDGE	53%	33%	14%
WORKLOAD	6%	42%	51%

Teacher Assigned and Student Generated Writing Topics

by
Robert L. Barr Jr.
with
Joseph Milner
Wake Forest University
Department of Education
December, 1998

Introduction

There are two schools of thought that have emerged about writing. The traditional school believes that teachers should assign writing topics by that emphasize different modes of discourse by working through an assigned sequence of these modes - narrative to exposition - with extensive pre- post-writing activities. The second school of thought is centered around a writers' workshop approach where students are encouraged to generate writing topics and select modes of writing that are based on their own insights and interests. Many teachers of the traditional school of thought have disagreed with this approach to writing. They believe that most of their students are too intimidated to express themselves on paper, thus would not write their best without a prompt. Furthermore, most of these teachers feel that their ideas are more credible and important than those of their students.

Purpose

The purpose of this study is to investigate which approach to writing assignments students respond to more readily and which produces the best writing. The results of this study will help teachers choose the best methodology to teach writing in their classes.

Review of Literature

Recent educational research encourages teachers to allow their students to choose their writing topics, because as Graves (1982) states: choice "breaks the welfare cycle" of writing. When students are given topic choice over a period of time, they develop voice, control over information, more "off-stage" thinking about writing, revision skills, plus independent and critical thinking. The traditional school, however, argues that when students choose their topics and experiment with the concept of freewriting, students forget basic conventional and

composing skills. Research has found the opposite true. When students select writing topics, their writing pieces are held together with traditional punctuation, syntax, and temporal, spatial, or causal structures (Fontaine 1991).

Studies show that students who choose their topics make an investment in their writing, and they seem to care more about both content and correctness. Students who are encouraged to select their topics tend to write on a range of topics and in a variety of modes wider than their teachers had expected (Graves, 1983; Caulkins, 1986; Sowers, 1982; Atwell, 1987; Boone 1996; Zemelman 1993). Overall, studies show that giving students a choice about their writing topic is a positive teaching strategy (Belanoff, 1991; Del Giorno, 1997).

According to Goodland (1984), "teachers need to design their curriculum, which includes writing around the topics and interests of their students. Yet in most American classrooms, the teacher's focus is not on the child, but on a unit of study, the textbook, the prepackaged curriculum" (p. 80). Goodland continues by stating that "data...suggest a picture of rather well-intentioned teachers going about their business somewhat detached from and not quite connecting with the 'other lives' of their students. What their students see as primary concerns in their daily lives, teachers view as dissonance in conducting school and classroom business" (p. 80). Zemelman (1993) states that "when the topic matters to them, children work hard to express themselves well, and are willing to invest time and effort in crafting and revising their work" (p. 50). "Reading and writing must be real; that is, they must have authentic purposes and authentic audiences" in order for young writers to develop. (Cruden, 1990, p.10).

Methodology

I selected a 7th grade standard English classroom in a North Carolina middle school. The class contained approximately twenty-five students. In alternating times students were assigned teacher writing topics and then were allowed to generate their writing topics. Each student completed six papers: three were teacher assigned topics and three were topics students chose. The criteria used in evaluating each paper were composing skills and conventions. Composing skills had four divisions for evaluation: having main ideas, providing supporting details, showing organization, and using coherence techniques, which include clarity and fluency. Conventions had four divisions: use of complete sentences, standard usage, standard mechanics, and correct spelling. A blind reader was given the papers to assess using a Lickert Scale. Each division was evaluated by using the following rubric: 1= No Control, 2= Somewhat Control, 3= Control, and 4= Strong Control. Data from the papers were used to compute percentages from each writing division, and comparisons were made between the composing skills and conventions of teacher assigned topics and student topics.

Results

When students chose their topics composing skills were higher. 70% of the students were rated "control" in the area of maintaining focus on the subject in comparison to 40% when they were assigned a topic. 20% of the students were rated "strong control" when topics were not assigned in comparison to 40% when the topics were assigned. 10% of the students were rated "somewhat control" when topics were not assigned in comparison to 20% when topics were assigned.

80 % of the students' papers were rated "control" in the area of using supporting details when students chose topics. 78% were rated "control" in the same area when teacher assigned topics. 20% of the students scored "somewhat control" when topics were not assigned and 22% when topics were assigned.

Under the heading of "organization" 80% of the students' papers were rated "control" while those who were assigned topics scored 63%. 20% of the students who chose their topics were rated "somewhat control" in comparison to approximately 40% of the students' papers were scored "somewhat control' when they were assigned topics by their teacher.

80% of the students' writings were rated "control" for clarity. 87% were rated "control" when topics were assigned by the instructor. 20% of the students' writings were rated "somewhat control" for clarity when topics were chosen. 13% of the students' writings were rated "somewhat control" for clarity when topics were not chosen.

87% of the papers were rated "control" in the area fluency when students chose their topics. 83% were rated "control" when teacher assigned topics. 13% of the papers were rated "somewhat control" when students chose papers. 17% of the papers were rated "somewhat control" when students were assigned topics.

Conventions were rated lower when student chose their topics. 57% of the papers were rated "control" in the area of sentence formation when students chose their topics while 73% were rate "control" when teacher assigned topics. 36% of the papers were rated "somewhat control" when students chose their topics while 10% were rated "somewhat control" when students chose their topics. 7% of the papers were rated "strong control" when students chose topics while 17% were rated "strong control" when teacher assigned topics.

83% of the papers were rated "control" in the area of grammar usage when students chose the topics. 87% of the papers were rate "control" in this area when students were assigned topics. 17% of the papers were rated "somewhat control" when students chose their topics. 13% were rated "somewhat control" when students were assigned topics.

67% of the papers were rated "control" in the area of mechanics when students chose the topics. 90% of the papers were rated "control" in this area when students were assigned the

topics. 33% were rated "somewhat control" when topics were chosen by students. 10% were rated "somewhat control" when teachers chose topics.

83% of students' papers were rated "control" in the area of spelling when topics were not assigned. 90% of the papers were rated "control" in the spelling category when teacher assigned topics. 17% of the papers were rated "somewhat control" in spelling when topics were not assigned. 10% were rated "somewhat control" when teacher assigned topics.

Composing skills were better for students who chose their topics than students who were assigned topics by the teacher. The overall percentage of students who chose their topics under the rating of "control" is 79% in contrast to 70% when students were assigned their topics. The data suggest that students who chose their topics tend to stay focus on the topic, provide more details on the subject matter while maintaining organization and fluency. In other words, students seem to communicate more effectively through writing when the subject is important to them. When topics are assigned by the teacher the commitment to communicate subject matter tend to be less effective.

Convention skills were stronger for students who were assigned their topics by the teacher. The overall percentage of students who chose their topics under the rating of "control" is 73% in contrast to 85% when students were assigned topics. The information relays that students who choose their topics tend give less adherence to sentence formation, mechanics, word usage, and spelling. Perhaps, convention skills fall short because students are attempting strategies and styles that real authors use in contrast with pattern writing done for state test such as: descriptive and expository writing. When students choose their topic they attempt to write more complex sentences, using larger vocabulary, and implement conversational pieces in their writing. Pattern writing does not use conversation or allow students a chance to use their voice.

References

Atwell, N. (1987). In the middle: writing, reading, and learning with adolescents. Portsmouth, New Hampshire: Heinemann.

Boone, K; Farney, T; & Zulanf, K. (1996). Improving writing strategies through the use of writer's workshop. (ERIC Document Reproduction Service No. ED 409559).

Caulkins, L. (1986). The art of teaching writing. New Hampshire: Heinemann Educational Book.

Fointaine, S.I. (1991). Recording and transforming: the mystery of the ten-minute freewrite. In P. Belanoff, P. Elbow, S. Fontaine (Eds.), Nothing begins with "n": New investigations of freewriting (p10). Southern Illinois University Press.

Goodland, J. (1984). A place called school. New York: McGraw-Hill.

Graves, D.H. (1978). A case study observing the development of children's composing, spellling, and motor behaviors during the writing process. (ERIC Document Reproduction Service No. ED 218653).

Graves, D.H. (1983). Writing: Teachers and children at work. Portsmouth, New Hampshire: Heinemann Educational Books.

Harvey, D. & Zemelman, S. (1985). A writing project: Training teachers of composition from kindergarten to college. New Hampshire: Heinemann Educational Books.

Sowers, S. (1979). Young writers' preference for non-narrative modes of composition. The Fourth Annual Boston University Conference on Language Development.

Zemelman, S; Daniels, H.S. Hyde, A. (1993). Best practices: New standards for teaching and learning in american schools. Portsmouth, New Hampshire: Heinemann.

Environmental Knowledge and Concern Among High School Students

by

Kristin Redington Bennett

with

John H. Litcher

Wake Forest University

Department of Education

December, 1998

Introduction

Concern with the environment is no longer reserved for environmentalists; environmental consciousness is interwoven into the fabric of American popular culture. In a 1990 *New York Times* poll, 71% of the people surveyed agreed that we must protect the environment even if it means higher taxes, and 84% of them indicated that they believed that pollution in the United States is serious and getting worse (Berke, 1990). Recent research suggests, however, that despite their concern, Americans are not well educated about their environment. Gigliotti's (1990) conclusion that, "... we have seemed to produce a citizenry that is emotionally charged, but woefully lacking in basic ecological knowledge." best summarizes the dichotomy between public concern and knowledge (p.9).

North Carolina, like many other states, has a limited number of environmental education (EE) requirements in the secondary school curriculum. In fact, only the state of Pennsylvania requires that high school students pass an environmental course (Hausbeck et al, 1992). North Carolina does offer an elective course, *Earth and Environmental Science,* however, it functions primarily as an alternative to other required courses for students who opt out of standard, honors, or North Carolina scholar courses. Furthermore, the North Carolina Standard Course of Study for this course has only one competency goal of eleven that deals with environmental issues (NC DPI, 1994). This lack of demanding environmental curriculum standards sends a clear message: EE is not as important or as rigorous as traditional courses of study.

The purpose of this study was to measure the environmental knowledge in high school students, to assess their levels of environmental concern, and to indirectly appraise the need for a statewide environmental education program. Further, this study sought to identify any significant relationships between environmental knowledge, concern, and the independent

variables (gender, grade point average, political affiliation, and environmental education experience). The results of this study will hopefully provide an impetus for further research, as well as be an indication that North Carolina is in need of quality statewide environmental education policy.

Review of Literature

Recent appraisals of the environmental knowledge of young adults universally conclude that students' levels of factual and conceptual knowledge are low (Gigliotti, 1990; Hausbeck et al, 1992; Green Teens, 1993; Rockland, 1995; Gambro & Switzky, 1996;). These studies reveal that high schools are not focused on educating students on key environmental facts, and that their levels of environmental knowledge seem at best insufficient.

Research on young people's environmental concerns indicates that despite a deficit in environmental knowledge, young people are far from lacking concern about the environment (Hausbeck et al. 1992; Hillcoat & Forge, 1996; Rockland, 1995). In fact, Rockland (1995) found that among 10 critical issues affecting youth today, solving environmental problems is second, behind only AIDS. Other findings indicate that among students surveyed in New York, 74% of them reported that there was an 'environmental crisis' (Hausbeck et al. 1992).

Methodology

The sample for this study was selected from the total population of 374 eleventh-grade students at a middle-class public high school in Winston-Salem, North Carolina. One hundred fifty students were selected from ten American History classes, five were honors level classes, and five were general level classes.

The instrument development was based on similar studies by Hsu and Roth (1996), Leeming et al. (1995), and Hausbeck et al (1992). To assess environmental knowledge, I used Leeming, Dwyer, and Bracken's (1995) *Children's' Environmental Attitude and Knowledge Scale (CHEAKS*).The portion of the instrument assessing environmental concern included items selected from these previous studies, as well as other items I developed to address the specific issues of personal efficacy and quality/quantity of environmental education.

The data from the questionnaire was analyzed and interpreted using a series of coded variables to use in stepwise regression analyses, a correlation matrix, and in obtaining descriptive statistics.

Results and Conclusions

Despite the fact that 59% of the respondents have taken or are taking an environmental science course, the assessment revealed disappointing levels of knowledge. Knowledge scores ranged from 3% to 100%, with the mean score for the entire sample being 55.1%. The Winston-Salem/Forsyth County School System set 70% as the minimum passing score. Using this standard, the average student in this study had a failing grade.

At first glance, the results may not appear to be notably negative considering that 41% of those students surveyed have not taken a course with emphasis on environmental science. However, it is striking that the mean knowledge score of those taking an Environmental Science course was 53.7%; significantly lower than the mean of those students who have not taken an environmental course, 57.0%. One reason for this may be poor preparation - a result of the minimal environmentally related competency requirements of the elective course these students are offered. Another explanation for this anomaly may be that college bound students are channeled into the hard sciences (Physics, Chemistry, Physical Science) as well as Advanced Placement Environmental Science, while non-college bound students were channeled into the elective Earth/Environmental Science course.

Independent t-tests reveal significant differences between the knowledge scores of boys and girls. Unlike typical results that show males as more capable in the sciences than females, the females who participated in this study were more environmentally knowledgeable than the males.

Levels of concern among the 11th grade students were significantly higher than their knowledge levels. The mean score for the entire sample was 26.9 (could range from 7 to 35). As with knowledge scores, there were significant differences between the concern levels of boys (M = 25.6) and girls (M = 28.1), with girls demonstrating higher levels of environmental concern. An analysis of the items on the environmental concern sub-scale serves to further illustrate the high degree of concern among the 11th grade students in this study. A remarkable 89% of the students agreed that "The way we think and act has a large impact on the environment," while only 7% disagreed with that statement. Only 10% disagreed that there is an environmental crisis;

68% say that a crisis does exist. On "Efforts by humans to dominate nature have gone too far"; 65% agreed, 13% disagreed, and 22% expressed no opinion. Though woefully lacking in substantive knowledge, responses to the concern sub-scale indicate that these students possess an awareness of the current state of the environment and recognize the harmful effects humans can have on their surroundings.

Results reveal a positive correlation coefficient of .46 ($p < .001$) between students' environmental knowledge and concern. The significant association between knowledge and concern suggests that the development of both cognitive and affective domains is an essential goal for effective EE program.

An analysis of the relationship between environmental knowledge, concern and the independent variables using stepwise multiple regression indicates that grade point average is the only variable that predicted the level of environmental knowledge. This predictor variable (GPA) explained 15.6% of the variance in environmental knowledge as measured by the knowledge score (KS). Regression analysis also revealed that only the gender of the student predicted his/her level of concern. With only 6.1% of the variance explained by the predictor variable (SEX), it is important to note that the variance may be a result of other outside factors.

If students are lacking adequate factual knowledge about the environment, what then is the basis for their high level of concern? The answer lies in the most frequently recorded response to the question, "Where do you get the majority of your information about the environment?" - Electronic media. Students are exposed to the ever-increasing coverage of environmental problems by the media - laden with sound bytes, the media is not likely to delve into environmental concepts or give lengthy explanations of the issues. The result is that when electronic media is the primary source of information about the environment, students are likely to become aware and concerned without gaining much factual knowledge (Hausbeck et al, 1992).

In the school setting, the traditional source of environmental information has been through the science curriculum. The 11th grade students in this study followed traditional patterns with 84% of them receiving their environmental information in a science course. While it is vitally important that students understand the scientific aspects, it is also necessary that they be capable of analyzing environmental issues from a wider perspective than their scientific

components, as well as be able to interpret the information provided through the media in order to make wise choices as consumers, producers, and voters.

Conclusion

Data reveals that the sample of 11th grade students in Winston-Salem/Forsyth County are highly concerned about environmental problems, but have weak substantive knowledge about the environment. Although recognizing and being concerned about the environment is the first step toward raising the level of environmental knowledge, it is insufficient for comprehending the impacts of environmental problems or proposing appropriate solutions. Teachers have the opportunity to use students' concerns as a source of motivation to embrace the interdisciplinary nature of environmental studies - an ideal opportunity for meaningful, integrated, and problem-oriented instruction.

Teachers, however, are only a small part of the broad picture of environmental education. It is imperative to further evaluate students' environmental knowledge and concern as one method for both charting progress and providing a driving force for stronger environmental education policy in North Carolina.

REFERENCES

Berke, R.L. (1990). Oratory of environmentalism becomes the sound of politics. *The New York Times*, 139, C18-C19.

Gambro, J.S. & Switzky, H.N. (1996). A national survey of high school students' environmental knowledge. *The Journal of Environmental Education*, *27*(3), 28-34.

Gigliotti, L.M. (1990). Environmental education: What went wrong? What can be done? *The Journal of Environmental Education*, 22(1), 9-12.

Green Teens (1993, Summer). *Environmental Action*, *25*(2), 8.

Hausbeck, K.W., Milbrath, L.W., & Enright, S.W. (1992), Environmental knowledge, awareness, and concern among 11th grade students: NewYork State. *The Journal of Environmental Education*, *24*(1), 27-34.

Hillcoat, J. & Forge, K. (1995). 'I think it's great someone is listening to us...': Young people and the environment. *Environmental Education Research*, *1*(2), 159-172.

Hsu, S. & Roth, R.E. (1996). An assessment of environmental knowledge and attitudes held by community leaders in the Hualien area of Taiwan. *The Journal of Environmental Education*, *28*(1), 25-33.

Leeming, F.C., Dwyer, W.O., & Bracken, B.A. (1995). Children's Environmental Attitude and Knowledge Scale: Construction and Validation. *Journal of Environmental Education*, 26(3), 22-32.

North Carolina Department of Public Instruction. (1994). Science curriculum: Earth and Environmental Science. *DPI Publications*.
Available: http://www.dpi.state.nc.us/Curriculum/Science/earthsci.htm

Rocchio, R..& Lee, E. (1974). On being a master planner: A step by step guide. Columbus, Ohio: ERIC SMEAC Information Reference Center: (ED108866).

Rockland, D.B. (1995). Where are the gaps in environmental education? *EPA Journal*, *21*(2). 12-14.

The Use of Primary Sources in the Social Studies Classroom

by

Leslie Ann Bilcheck

with

John Litcher

Wake Forest University

Department of Education

December, 1998

Introduction

The use of primary sources facilitates the process of becoming historians, rather than simply making observations about historical events. I became very interested in the use of primary sources as a teaching tool in the high school after reflecting on the prominence placed upon primary sources in the university. This study examines the use of primary sources in the Winston-Salem/ Forsyth County social studies classrooms and attempts to answer several questions. How often are primary sources incorporated into the secondary classroom? Why (or why not) do teachers use these resources? What are the attitudes of students towards the use of primary sources?

Review of Literature

A prevalent belief in the social studies classroom is that the subject is taught to help teach critical thinking skills. The Amherst project focused on teaching critical thinking through historical study (Brown 1996). Specifically, one goal of the project was to enable "students to learn and question evidence, to doubt, to interpret" (269). The project did not gain momentum because teachers felt it was difficult to enact the new curriculum as more than a guide of supplementary information. But the movement away from lecture and rote memorization that began with the Amherst project continues today.

The Bradley Commission on History in the Schools (1988) advocates lessons which "focus upon broad trends and questions and... encourage students to think critically" (10a). Vocke (1992) expounds upon this assertion stating that studying primary sources allows, "Rather than 'receiving history, students can investigate it and try and find what it says to them" (213).

Vocke also cites Holt (1990) who states that the engagement of students into the work of historians alleviates the negative views many students hold about history.

In an attempt in "bringing history alive", La Rocca (1993) created a Civil War Study Group which participated in several activities such as donning the dress of the era, conducting research using local newspapers and diary entries, examining photographs, and taking part in preservation efforts in their local town. He mailed a questionnaire to past participants to assess the program.. Briefly summarized, he found eighty-three percent agreed strongly that the program had a positive effect on their attitude toward the field. Seventy-two percent agreed strongly that the program enhanced their achievement. Forty-five percent agreed and fifty percent agreed strongly that the program resulted in them receiving better grades.

Methodology

A questionnaire was distributed to students to assess their attitude towards and knowledge of primary sources. A second questionnaire was passed out to the participating teachers. The final part of the project involved observing the use of primary sources during class time.

Three United States History teachers were used in the study. Each teacher is held accountable by the North Carolina end-of-course test in United States History. The three teachers each teach at different high schools, but are all a part of the Winston-Salem/Forsyth County School System.

Each of the classes are labeled honors students. The majority of students surveyed were in their junior year of high school and are on a track leading to post-secondary education. A total of 155 students answered the survey.

The student questionnaire consisted of a total of five questions. The following definition was given to every student:

> a primary source is a source of information taken from a first hand knowledge of an event. Examples include a speech, a diary entry, a timely newspaper article or a photograph or a document. Primary sources do not include text books or retrospective articles.

Question one asked whether or not the students knew the term primary source prior to reading the above definition. Question two asked the student if he/she had recalled using a primary source in one of their social studies classrooms. Students were then asked to provide some examples. The third question asked if the students felt that the use of primary sources helped

them understand the topic better. The students then had an opportunity to express the ways primary sources had helped. Fourthly, students were asked whether using primary sources helped peak their interest in history. Finally, students were asked to rate their overall experience of using primary sources on a scale of one to five. One signified strongly disliked the use of primary sources, three equalled neutral, and five equalled strongly having liked their experience.

The teacher questionnaire gave the same sample definition of primary source and asked the teachers if they agreed with the above definition. Secondly, in a free response format, teachers were asked how and how often did they use incorporate primary sources. Thirdly, the teachers were given five statements they were asked to agree or disagree with. The teachers had five options: strongly disagree, disagree, neutral, agree, strongly agree. The statements read: I think primary sources are an effective teaching tool; The use of primary sources encourages critical thinking; A primary source helps students better comprehend a topic; I can easily find primary sources to use in my classroom; I often incorporate primary sources into my lesson plan. A space for additional comments was provided on the survey.

Finally, I observed the use of primary sources on several occasions. I observed students evaluating the Federalist papers, George Washington's Farewell Address, two speeches by Stephen Douglass and General Robert E. Lee and the presentation of a Union Army sword.

Results and Conclusions

Ninety-nine students responded yes, they did know the definition prior to reading the given definition. Fifty-six students responded that they did not know the definition. 127 students did recall having used a primary source in their social studies classes. Only twenty-seven responded no to that question. When asked for examples of primary sources used in their classrooms, the students responded with ten generic examples. They include: projects, documents, newspaper articles, speeches, diary entries, television clips, photographs, debates, letters, and interviews. The two most common examples listed were newspaper articles and speeches.

129 students, or eighty-three percent, answered yes, they felt using primary sources helped them to better understand the subject material. Twenty-three answered no. Several trends emerged from the explanations students gave to that question. The most common responses include: it [primary sources] was different from the text, it made it more in depth, it revealed more specific and more information in general, they like having a first-hand, timely view

presented, they understood better, it was not boring, they liked evaluating evidence for themselves, and it was more believable.

When asked whether primary sources helped peak their interest in history, 106 students, sixty-eight percent, answered yes. Forty-five answered no. Several students who did not recall using a primary source felt it would have increased their interest. The last question asked students to rate their experience on a scale of one to five, with five being the highest and three representing neutrality. One student chose one, seven chose two, and fifty-eight (thirty-seven percent) chose three. Fifty-nine students chose number four. Fourteen chose five, they strongly liked their experience. A total of forty-seven percent rated their experience as positive.

Several implications can be drawn from the data. Although each of the teachers observed used primary sources, fifty-six students did not know the term primary source and twenty-seven did not recall having used a primary source. This infers that students are unaware of the sources being used in class or the primary sources have not been presented in the most effective manner.

At the center of any curriculum decision should be the basis for which the material helps students understand the subject. With eighty-three percent agreeing that primary sources helped them understand the material better, the effectiveness of primary sources has been affirmed. Similarly, with a large percentage of students, sixty-eight percent, stating that primary sources helped peak their interest in history, the information given by the students illustrates that primary sources are an effective way to teach and engage students in history.

Each of the three teachers (each teacher will be referred to with the pronoun she) agreed with the definition given for primary sources. Teacher A stated that she used excerpts from speeches, art and documents, often found in the text, to enhance the existing material. She stated that time was a major factor in why she does not use primary sources often. Teacher B said she tried to use primary sources weekly to help give her students a first-hand account of the event to try and re-inforce the point a text has made. She hopes to show them what an event was like. She gave examples of studying a photograph of John Glenn in Friendship 7 as well as reading a portion of the Declaration of Sentiments at the Seneca Falls Convention. Teacher C stated she also tried to use primary sources once or twice weekly (including current events) and used photographs and speeches for every unit. Each teacher responded agree or strongly agree to the five statements except teacher A circled neutral for the statement about often she incorporated primary sources into her lesson plan. Teacher A expounded upon her answers by explaining how

she felt the course was test-driven and thus it is difficult to incorporate additional material and activities.

While observing students examining Washington's Farewell Address, teacher B did a good job in asking the students to think critically and comprehensively about the document. She asked the students to come up with the examples of the issues Washington was addressing, as well as modern examples of the same issue. Thus the students had to have a strong basis of knowledge to complete the activity. Also, in comparing the issues of Washington's time to modern American issues, students were asked to think critically and to compare and contrast. Students were eager to offer examples and asked many questions about the parallels. The discussion and explication lasted about half of the class period.

Contrastingly, when teacher C read a speech rebuttal by Stephen Douglass, the discussion lasted only a few minutes. Although students immediately had questions to ask, the teacher only discussed the speech for a few minutes and cut the discussion short, even though students still had their hands raised. On a separate occasion, teacher C read a speech by General Lee and gave no time towards discussion at all. She merely used the speech as an introduction to the rest of the lecture.

To conclude, students have an overall, positive reaction to the use of primary sources. They expressed how they enjoyed evaluating material for themselves, felt it helped them understand the material better, and encouraged their interest in the subject of history. These examples show how effective primary sources can be in eliciting student discussion and critical thinking. Often, perhaps due to time constraints, primary sources are not fully explored by the class. They may simply be shown or read, but not presented for thorough discussion. Although teachers may be using primary sources often, they may not be using them to their fullest educational potential.

References

Bradley Commission on History in the Schools. (1988). Building a history curriculum: Guidelines for teaching history in the schools. The history teacher, 23(1), 4-25.

Brown, R.H. (1996, November/December). Learning how to learn: The Amherst Project and history education in the schools. The Social Studies, 87. 53-61.

LaRocca, C. (April 93). Civil War reenactments-"A real and complete image". Educational Leadership 50(7). 42-45.

Vocke, D. (September 92). American history and cooperative learning. Social Studies, 83(5). 212-216.

Academic Integrity: Cheating and High School

By

Kris Britton

with

John Litcher

Wake Forest University

Department of Education

December, 1998

INTRODUCTION

A goal of social studies education in American high schools is citizenship education. Creating responsible citizens involves not only educating students for democracy, but also addressing moral and ethical issues. Academic integrity is an aspect of education that has received attention for many years. It is important to understand student's perceptions about the definition of cheating, in addition to the various techniques that are being utilized by students who cheat at the secondary level.

LITERATURE REVIEW

A national study involving just over 6,000 students at 31 different schools indicated that two-thirds of the participants admitted to cheating; and over two thirds reported that they had witnessed instances of cheating by other students (McCabe, 1994). Researchers who are concerned by the reported increase in cheating regard it as "endemic" in secondary schools and the college level (Schab, 1991).

With such compelling evidence to support the notion that cheating is widespread in American secondary education, additional research has been completed to determine the factors that contribute to this apparently rising trend among high school students. The proliferation of rapidly accessible electronic journals on the Internet, and the ease with which material can be downloaded and appropriated for one's own use creates clear opportunities for cheating (Ashworth, 1997). Technology provides new and innovative techniques for academic dishonesty that requires research that address it specifically. Gehring et. al. suggested that students are unclear about what constitutes cheating (1986).

Cheating is such a complex psychological and situational phenomenon that the individual's definition of the situation must be involved in any attempt to understand it. (Buckley and Weise, 1998). It is reasonable that students may not necessarily know what constitutes cheating, especially when the rules may vary from course to course, if specified at all. In order to capture the student's precise perceptions of what actually constitutes a breach in academic integrity, some researchers have abandoned the usual self-reporting surveys for more intimate methods of data collection. In 1997 Ashworth conducted a study which examined the use of a quantitative approach in assessing students' perceptions of cheating and plagiarism in academics. What curbs the usefulness of studies that simply investigate self-reports of the frequency and causes of cheating is the presupposition that the meaning of cheating is relatively unequivocal and comparable for the researchers and their subjects who are all assumed to know what cheating "looks like" (Ashworth, 1997). He argued that the use of attitude scales and other measurement tools to investigate cheating are premature, adding that prior work is necessary to discover the various meanings of cheating within the student's experience before any attempt at surveys can be made.

Utilizing the long interview method has enabled researchers to pursue more deeply the social realities that students construct, by seeking expansion and clarification of their interpretations that would otherwise remain overlooked in quantitative inquiry. Understanding the student perspective on cheating and plagiarism can significantly assist academic facilitators in their effort to communicate appropriate norms (Ashworth, 1997). Further, a qualitative examination of the metaphorical imagery and rationalizations that students use when they are faced with opportunities to cheat might suggest prevention and control strategies (Payne and Nantz, 1994).

METHODOLOGY

Problem

What specifically constitutes cheating from the students' perspectives? What techniques do students use to cheat in secondary education?

Subjects

Participants of the research were eighty-one students attending a public high school, located in Winston-Salem, NC. The school's population is 1004, where white students represent 44% and non-white students represent 56% of the student population. The subjects were

enrolled in World History (three classes), Psychology (one class), or In-School Suspension. Subjects in this research represented white (48 %) and non-white (52%), regular (64%) and honors (38%), male (49%) and female (51%), and 12th grade (7%), 11th grade (43%) and 10th grade (60%) students.

Instrument

Based on a field test, the researcher devised two short vignettes and a short list of response-topics to stimulate subject communication on cheating issues. The vignettes depicted fictional students in cheating situations that called for the subjects' definitions of what constitutes cheating and the acceptable justifications for cheating.

Design and Procedure

Based on the field test, it was determined that students were comfortable in the whole-class settings while their teacher was not present in the classroom. The subjects in the research were interviewed in whole class settings, during their normal class period, for approximately twenty to thirty minutes in the teacher's absence. They were assured subject anonymity, and the absence of any hidden recording devices to encourage truthful responses. The researcher recalled the vignettes and response- topics from memory, then recorded their responses by hand on a clipboard. The interviews were semi-structured, with the researcher using response-topics and vignettes to maintain structure during the discussion. The researcher sat in the front of the classroom and encouraged responses, while recording data. Subject responses were handwritten, using the researcher's own shorthand to capture exactly what the subjects said. The researcher used a different notebook for each class.

Analysis

The data from the first three classes were re-written in longhand after the third class. The data for the remaining three classes were re-written shortly after the final class was interviewed. The responses were then organized and compiled into one a single notebook and organized into one of five broad categories: justifications and explanations for cheating, perceptions of teachers and cheating, methods of cheating, levels of cheating, and plagiarism. Trends in subject responses to vignettes and response-topics were noted.

RESULTS AND CONCLUSION

Most students who agreed that the student's behavior in the first vignette would constitute cheating tended to approve of it, responding with, "it's all good" on four different occasions.

When asked to explain their approval of this situation, they cited the fact that he was a good student and therefore needed a good test score to maintain a college-level grade point average. Other students completely rejected the idea that this situation would be considered cheating. While admitting that situations like John's were "never right, just necessary," these students believed that students are simply responding to the demands of high school.

Similarly, most students did not consider the students in the second vignette to be guilty of cheating. In fact, when three classes (57 total students) were asked to indicate whether they considered the described behavior in the second vignette to be cheating, 33 students indicated that the situation was acceptable and not cheating. These subjects classified the acts described in the second vignette as borrowing answers, sharing, comparing, confirming, a little help, and guidance. It appears that those subjects who believed this behavior constituted cheating utilized a system of classifying certain acts based on their perception of it's severity. Further, these subjects tended to classify cheating on homework and worksheets as less severe than cheating during exams.

When asked to discuss plagiarism, the majority of subjects believed that copying paragraphs verbatim from a source was acceptable when the order of the paragraphs were changed. A student who maintained that he was well aware of what constituted plagiarism explained that he changed the order of a "few words" from a source and "it's mine." The honors level World History class (18 students) all agreed that there was definite confusion about exactly what constitutes plagiarism.

When asked to describe different methods of cheating that they had observed in high school, subjects described three main techniques: technology, fashion, and physical movements. Technology techniques include scanning worksheets and e-mailing them to classmates, storing answers in electronic organizers or calculators or watches, and plagiarism from computer-based encyclopedias. Fashion techniques include writing answers on the forearm underneath a long-sleeve shirt, pasting answers inside make-up cases on the mirror, and taping answers on the thigh underneath baggy pants. Physical movement techniques include: looking at another student's test while going to the trash can or pencil sharpener, dropping a test on the floor and allowing another student to look at the answers, dropping a pencil on the floor and looking at another student's test while retrieving it, baseball signs and "taps." The latter two were the most frequently cited methods of cheating.

Subjects in this study indicated that cheating exists as a resource for students when they feel justified by their circumstances. Further, subjects determine what constitutes cheating based on their perceptions of acceptable motivations for certain behaviors. When students accept the justification for cheating behavior, they don't classify it as such. Technology has assisted students to create innovative techniques for cheating.

While the research provided insight into high school students' perceptions of cheating, it did not go without areas of weakness. The researcher found it difficult to write the responses quickly during the discussions. At some points, the researcher slowed the discussions in an attempt to follow its pace. Further, the researcher may have recalled the vignettes with bias, emphasizing certain points inconsistently during the interviews. Additionally the researcher noted that several students believed the school was under investigation for an abundance of students who failed to pass regulated tests, although this was not confirmed by the school's administration. Findings in this study are most appropriately generalized to other high schools of similar size and student composition.

REFERENCES

Ashworth, P. and Bannister, P. (1997). Guilty in whose eyes? University students' perception of cheating and plagiarism in academic work and assessment. Studies in Higher Education, 22, 187-204.

Buckley, M. R. and Weise, D. S., (1998). An investigation into the dimensions of unethical behavior. Journal of Education for Business, 73, 284-290.

Gehring, D., E. Nuss, and G. Pavela. (1986). Issues and perspectives on academic integrity. Columbus Ohio: NASPA Monograph Series.

McCabe, D. L. (1994). National survey results and Appalachian State University norms. Communication from the author to participating colleges and universities, Appalachian State University, Boone, NC.

Payne, S. L. and Nantz, K. S. (1994). Social accounts and metaphors about cheating. College Teaching, 94, 90-96.

Schab, F. (1991). Schooling without learning: Thirty years of cheating in high school. Adolescence, 26, 839-847.

Authoritative Space: The Use of Teacher Proximity in Classroom Management

by

James J. Cardo, III

with

Joseph O. Milner

Wake Forest University

Department of Education

December, 1998

Introduction

Human society imbues the individual with a strong sense of personal space. The distances allowed for different social situations and relationships are entrenched firmly in the cultural values. Though the distances, the proximity of people, vary from culture to culture, they are also dependent on various perceptions of authority, dominance, age, and gender. To violate another's sense of space typically causes a negative reaction, be it annoyance, anger, or general discomfort. Changing the space between two people can also create a sense of privacy or personal interest.

This study tracked the distance in disciplinary interactions between four veteran teachers and their students at East Forsyth High School in Winston-Salem, NC. The hypothesis was that closer interactions would prove to be more effective in quelling inappropriate behavior than those made from a lecturing distance.

The classes of four English teachers served as the testing grounds. The teachers were two females and two males. The researcher diagrammed each classroom to record the position of the teacher and the position of the student at any time the teacher intervened in any behavior. The researcher also subjectively judged that intervention as successful or unsuccessful.

The distances for the study were defined as follows:

D	12 feet or greater
C	12 to 7 feet
B	7 to 2 feet
A	2 feet to contact

S. Grubaugh (1989) notes that a distance of 12 to 25 feet is the standard for American public space, particularly for a one-way communication. The average teacher to student distance is 12 feet in a classroom.

The data gained from the charting of teacher-student proximity allowed an analysis of the success of each teacher's use of distance in classroom management. References in relation to the gender of teachers and students proved to be of some significance.

Review of Related Literature

A fundamental aspect of the management of the classroom revolves around the relationships created and established between teacher and student, and human relationships form heavily around communication. Grant and Hennings (1971) note that 82% of the messages sent by teachers are nonverbal in nature. One aspect of these nonverbal cues is proxemics, or a person's perceptions and use of space. Miller (1988) tells us that "... other cultures rely heavily on close proximity to decipher truth and honesty, [but that] American culture accepts closeness only for intimate relationships." Assuming that a modern teacher wishes to establish a close relationship with the student, knowledge of the use of proximity becomes indispensable. Miller confirms this as he writes, "The distance between teacher and students is a critical factor in the communication process. Teachers can transmit messages of acceptance or rejection simply by the distance they maintain."

The dual nature of proximity holds some importance for teachers, for as noted by Varnadore, et al (1994) "...proximity is a primary determinant of liking as proximity increases both familiarity and perceptions of similarity" whereas Banbury and Herbert (1992) make the point that "In certain situations a person may use close physical proximity to influence, intimidate, or warn another person." Thusly, the use of proximity can allow teachers to navigate the difficulty of creating a personal rapport while also establishing a position of authority.

Proximity allows the teacher to create a relationship with students who might otherwise be difficult to reach. Dykman and Reis (1979) show that high school students who feel inadequate or vulnerable have a tendency to sit in the back and far-sides of a classroom while those students with a stronger concept of self sit in the front. Cavallin and Houston (1980) theorize that people who are maladjusted and/or aggressive need more personal space in encounters on the basis that "...the more people anticipate or experience unpleasant feelings in

a situation, the more personal space they will prefer in that situation." The additional space serves as a buffer to these people, shielding them from undesirable emotional responses.

Dykman and Reis (1979) write that the emotional results of a feeling of vulnerability manifest as anxiety, self-concept, emotional disturbance, and defensiveness. These traits are many of those shown by students who tend to be habitual disciplinary problems in the classroom. French (1972) recorded the average distance between a teacher and student in an American classroom as 12 feet. The act of a teacher coming closer than that to a student should send a message of concern and notice to the student while emphasizing the teacher's authoritative right to set the limits of space in the classroom.

Methodology

Each teacher at East Forsyth High School (Ms. X, Ms. Z, Mr. X, and Mr. Z) were observed in class a total of 10 times each over the course of approximately 8 weeks.

The researcher created a series of charts mirroring the seating plans in each teacher's classroom, marking each incident of disciplinary action. The record included the gender of the student, the position of both teacher and student, a zone classification, and a subjective appraisal of the success or failure of the intervention. As a rule of thumb, compliance equaled success.

Data was tallied into total successful and unsuccessful interventions for each proximity zone. The data was also categorized to display the intervention totals by gender of the student. Additionally, totals were calculated specifically for each teacher.

Data analysis was accomplished by use of a chi square goodness of fit test to compare the expected results of the interventions (equal across groups) with the observed results. With degree of freedom at a value of 1 and $p=.05$, the value for the chi square equaled 3.841.

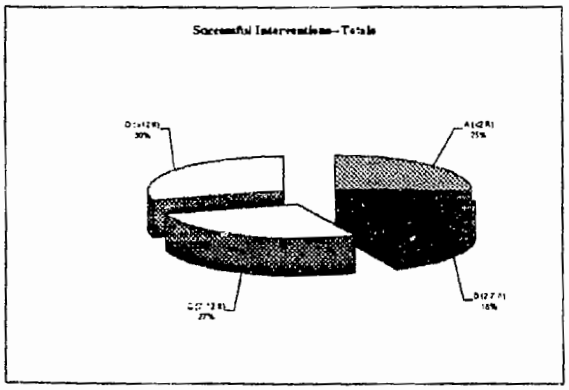
Results and Conclusions

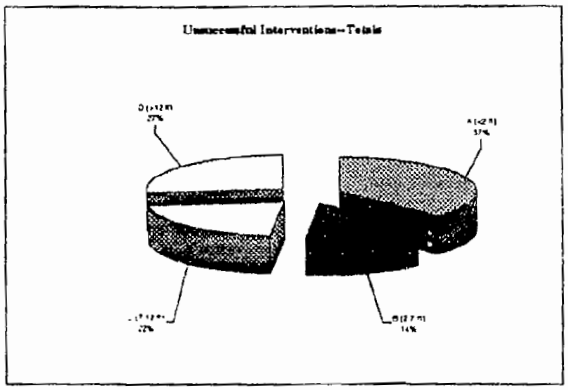
The study's hypothesis held that disciplinary interventions made at a closer range between student and teacher would prove more effective. The total number of interventions, however, showed no significant effectiveness in Zone A, leaving the hypothesis generally unproven. For Total Interventions, observations in each of the other zones did show a significant success result. The most effective zone generally would have to have been Zone C where 42 of 56 interventions were successful.

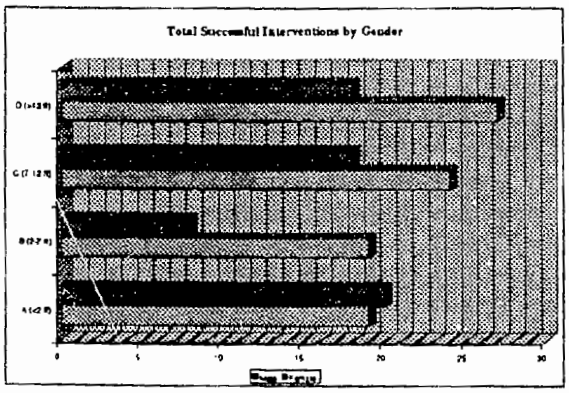
Narrowing the scope to include only the male students also showed no significance for interventions in Zone A. However, in Zone B, the significance of disciplinary effectiveness was

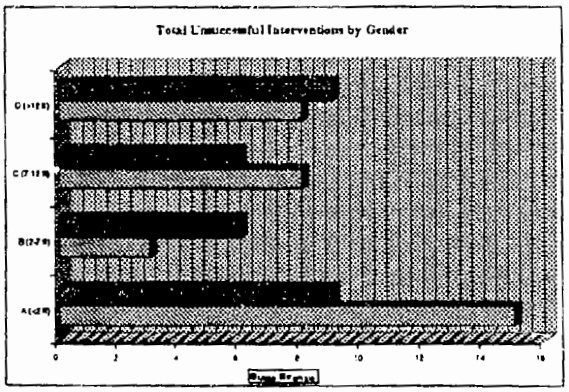
notable with 19 of 22 interventions ending successfully. This result is relevant because the Zone B of 2-7 feet still comes in below the average distance of 12 feet between American teachers and students.

Among female students, the hypothesis did hold. Interventions in Zone A with female students showed a significant effectiveness rate, with 20 of 29 interventions ending successfully.









The failure of the hypothesis in this study shows that closer is not necessarily better in proxemics and discipline. As a figure traditionally imbued with some air of authority, the teacher operates with a noticeable influence on the space of himself or herself and on the students. Factored in with the role of teacher are the issues of the use of space by gender and by specific types of personalities and styles.

Generally, this study found that female teachers tended to be more effective disciplining male students from a more public distance and female students from a more intimate distance. Male teachers were found to be most effective at discipline, regardless of gender, at more public

BEST COPY AVAILABLE

distances. As general guides these trends hold, but more practical are the individual results. The teacher needs to be personally aware of the profound yet unrealized potential that personal space plays in social interaction. Messages of acceptance or rejection fly tacitly around the distance between two people. Thus proximity can be a very effective tool for a teacher, or it can be a cause of never-ending failure as students receive messages that the teacher does not even know are being sent.

References

Altenburger, J. D. (1983). Effects of invasion of students' personal space by male and female authority figures. (ERIC Document Reproduction Service No. ED 286 083).

Banbury, M. M. & Herbert, C. R. (1992). Do you see what I mean? Body language in classroom interactions. *Teaching Exceptional Children*, 24 (2), 34-37.

Cavallin, B. A. & Houston, B. K. (1980). Aggressiveness, maladjustment, body experience and the protective function of personal space. *Journal of Clinical Psychology*, 36 (1), 170-176.

Dykman, B. M. & Reis, H. T. (1979). Personality correlates of classroom seating. *Journal of Educational Psychology*, 71(3), 346-354.

Ferraro, F. R. (1990). Field experiments in personal space invasion for introductory psychology. *Teaching of Psychology*, 71(2), 124-125.

French, R. L. (1972). Building student involvement through nonverbal communication. *Tennessee Education*, 2(7), 5-9.

Grant, B. W. & Hennings, D. G. (1971). *The teacher moves: An analysis of nonverbal activity*. New York: Teachers College Press.

Lomax, C. M., Mappleback, S. E., Bates, J. L., and Brownlow, S. E. (1994). Proxemics in public: Space violations as a Function of Dyad Composition. (ERIC Document Reproduction Service No. ED 367 940).

Miller, P. W. (1988). Nonverbal Communication, 3rd edition. (ERIC Document Reproduction Service No. ED 293 190).

Patterson, M. L., Kelly, C. E., Krondracki, B. A., & Wulf, L. J. (1979). Effects of seating arrangement on small group behavior. *Social Psychology Quarterly*, 42(2), 180-184.

Sills-Briegal, T. M. (1996). Teacher-student proximity and interactions in a computer laboratory and classroom. *The Clearinghouse*, 70(1), 21-23.

Varnadore, A. E., Howe, S. C., & Brownlow, S. E. (1994). (ERIC Document Reproduction Service No. ED 367 939.

Using Media in the Secondary English Classroom:
A Survey of Teachers

by
Donna N. Chandler
with
Joseph O. Milner
Wake Forest University
Department of Education
December, 1998

Introduction

In an effort to establish and meet new goals for the English curriculum, teachers are looking for effective ways to engage students in the learning process and to encourage critical thinking in the classroom. One approach that some educators feel may be useful in teaching many aspects of the language arts is media literacy. The practice of media literacy allows teachers to build on students' interest in film, television, and other media to encourage thoughtful analysis, evaluation, and discussion. Teachers may also use such topics for writing assignments, as a way to teach oral communication skills, and to make connections to studies in literature.

Because the practice of media literacy may well be an effective means to promote students' learning and to facilitate the teaching of many aspects of the English curriculum, it is important to examine how media is currently being used. It is also important to determine teachers' awareness of this practice and their willingness or hesitancy to use it in their classrooms. The purpose of this study was to investigate how media is currently being used in the public high school English classroom by surveying teachers about their use of media, their familiarity with media literacy, as well as their perceptions of its possible effectiveness.

Review of the Literature

Among the number of ideas and practices that are gaining increased attention from reform-minded scholars and educators is media literacy. It is clear that media, including television, film, newspapers, and computers are a pervasive and influential force in our society. Singer and Singer (1998) cite research on the pervasiveness of media in the lives of young people, and educators who support the use of media literacy argue that to ignore these facts is to weaken students' educational opportunities. Scholars and educators in the field of media literacy cite the importance of drawing on students' interest and experience as another measure of its

usefulness. Furthermore, Megee (1997) compares the limitations faced by those in our society who cannot read and write with those who are media "illiterate."

Perhaps one of the greatest obstacles to media literacy's widespread acceptance in the United States is arriving at a clear understanding of the term. Generally, media literacy is founded on the idea "that electronic and other popular media are 'texts' that require comprehensive understanding" (Megee, 1997). Most educators accept the definition proposed at the 1993 conference in Aspen defining media literacy as "the ability to communicate competently in all media forms as well as to understand, interpret, analyze, and evaluate the messages we receive from television, radio, magazines, newspapers, and advertising" (Ferrington & Anderson-Inman, 1996). While some educators feel that such broad definitions and differing views may be problematic (Tyner, 1992), others feel that this diversity of opinions allows for a variety of approaches which strengthen its potential in the classroom (Hobbs, 1998).

Just as the definition of media literacy is unsettled, so too are the goals for its inclusion in American classrooms. Among those who support its use, the most often cited objectives are to curb the negative influences of mass media, to promote principles of citizenship and democracy, and as a tool to bridge to other language arts topics such as writing, reading, and critical thinking skills. In her article, "The Seven Great Debates in the Media Literacy Movement," Renee Hobbs summarizes the wide variety of goals and objectives held by educators (1998). Tyner (1992) divides the goals into four broad, overlapping categories: protectionism, technology education, democratic education, and media arts education.

Among the most often cited goals of media literacy is to foster other academic skills. Megee (1997) notes that discussion of media in the classroom can easily lead to assignments involving research writing and production in the context of almost any traditional discipline or course. Ferrington and Anderson-Inman (1996) also concur that media literacy is critical to language development. Another central goal for some of its supporters is to promote citizenship for a strong democracy. Megee (1997) explains, "Information Age freedoms hinge upon a new basic--our ability to read, write, and comprehend the media of our time."

Others support media literacy for its broader social function, claiming that thinking critically about media helps students become more conscious consumers, helps them think about images of sexuality on television, tempers their fears about a violent world, and improves students' attitudes toward school. Some advocates of media literacy are hopeful that it has the

potential to reform traditional modes of instruction and can democratize the teacher-student relationship (Masterman, 1997).

In addition to the problem of defining and establishing goals for media literacy's use in the classroom, Anderson and Ploghoft (1993) have identified three conditions that have prevented media literacy's acceptance in the U.S. including the inadequacy of existing models, the limited space in academic schedules, and teachers' lack of support and training. Another potential problem is gaining the support of parents and others in the community who may question the use of popular media, especially if they feel it is at the expense of traditional, text-based materials. Also, Christ and Potter (1998) raise the issue of assessment and question what methods teachers should use to measure the success of media instruction.

While there have been many efforts to gain a more unified vision of the goals of media literacy and to facilitate its implementation into public school curriculums, as it now stands, New Mexico and North Carolina are the only states that require schools to provide media education of some sort (Megee, 1997). Many educators believe in the potential for media literacy's success in improving students' education and suggest ways to improve its chances for success. Singer and Singer (1998) call for more empirical research saying, "If a case is to be made for school districts to adopt courses in media literacy, we must prove to the administrators in charge that such mediation efforts are not in vain." Hobbs (1998) proposes that teachers must be central to the process, stressing that they must be aware of what is going on in the field and must know how to use media literacy effectively.

Methodology

The subjects for this study included 44 English teachers from four high schools in Winston-Salem, North Carolina: East Forsyth, Parkland, Reynolds, and Mt. Tabor. These four schools were chosen because they represent the diversity of student populations and socioeconomic backgrounds in Forsyth County.

The researcher developed a survey which asked teachers to indicate how frequently they use media, the types of media used, purposes for media use in the classroom, and teachers' attitude about its effectiveness in meeting a variety of educational objectives. The format of the survey included two checklists, ranking, a 10-item Likert scale, and one open-ended question. The researcher distributed the surveys to the English department chairperson at each of the four high schools. The chairperson was asked to distribute one survey to each English teacher in his

or her department. After one week, the complete surveys were collected from the department chairperson.

Results and Conclusions

Of the 44 teachers given surveys, 29 returned completed surveys. The majority of teachers surveyed indicated that they use media as part of classroom instruction 1-2 times per week. Ninety-four percent of the teachers use media 2 times per week or less. These numbers are significant given the overwhelming support of media the teachers indicated in their responses to the Likert scale questions. Their answers indicated that 94% of the respondents either agreed or strongly agreed that media was an effective way to teach critical thinking skills. Likewise, all of the respondents said that popular films or television programs can be an effective way to bridge the study of literary works. Ninety-four percent also said that media would be an effective way to teach writing. It is important to note that the teachers surveyed had differing opinions about whether media are an acceptable alternative to print-based texts: 48% strongly agree or agree, while 52% disagree or strongly disagree.

Teachers also indicated a positive attitude about their students' interest in and response to lessons using media. All of the teachers either agreed or strongly agreed that students enjoy lessons in which media is a major component, and 90% said that they recognize that their students are familiar with a variety of media.

Teachers said that they are comfortable with using media in the classroom. Only 13% indicated that they were not comfortable using a variety of media. Seventy-five percent said that they had received helpful instruction in using media in the classroom. One negative finding of the survey is that 31% of the teachers felt that they did not have access to a variety of quality media at their school.

Most teachers said they use literature-based videos regularly and these were overwhelmingly the type of media that teachers said they use most often. The other types of media were chosen considerably less often. Also, the teachers said that they most often use media to discuss literary elements in written work and/or to introduce class discussion of a written work.

While the teachers' responses to the survey questions suggest that they recognize the potential for using media, they also suggest that teachers actually use media for a relatively limited number of purposes and they limit their use to a few types of media. It is important to

question *why* teachers are not using media for a wider variety of purposes. The teachers' responses to the open-ended question indicate that a lack of quality media at their schools and lack of instruction in using media effectively may be contributing factors.

While it is impossible to get a true sense of how teachers are using media, it seems evident that a great deal of potential remains to be tapped. Classroom teachers are, of course, the ones who ultimately determine if changes are to be made in the way we teach English. Therefore, their attitudes are crucial in determining if new classroom practices will succeed or fail in the classroom. The research on media literacy indicates that new and innovative instructional strategies employing a variety of media are having positive results. By listening to teachers' opinions, concerns, and reflections, we may be better able to capitalize on the potential benefits of media literacy for our students.

References

Anderson, J.A., & Ploghoft, M., (1993). Children and Media in Media Education. In Berry, G.L., & Asamen, J.K. (Ed.), *Children and Television: Images in a Changing Sociocultural World.* Newbury Park, CA: Sage.

Christ, W.G., & Potter, W.J. (1998). Media Literacy, media education, and the academy. *Journal of Communication,* 48(1), 5-15.

Ferrington, G., & Anderson-Inman, L. (1996). Media literacy: Upfront and on-line. *Journal of Adolescent and Adult Literacy,* 39(8), 666-670.

Hobbs, R. (1998). The seven great debates in the media literacy movement. *Journal of Communication,* 48(1), 16-31.

Masterman, L. (1997). A rationale for media education. In R. Kubey (Ed.) *Media literacy in the information age* (pp. 15-68). New Brunswick, NJ: Transaction.

Megee, Mary. (1997). Media literacy: The new basic. *Emergency Librarian,* 25(2), 23-26.

Singer, D.G., & Singer, J.L. (1998). Developing critical viewing skills and media literacy in children. *Annals of the American Academy of Political and Social Science,* 557, 164-179.

Tyner, K. (1992). The tale of the elephant: Media education in the United States. In Bazalgette, et. al. (Ed.), *New Directions: Media education worldwide* (pp. 170-176). London: British Film Institute.

Involvement, Engagement, and the Dynamics of Underachievement in the High School English Classroom

By

Rachel C. Childs

With

Joseph Milner

Wake Forest University

Department of Education

December, 1998

Introduction

Research shows that engaging the attention and interest of a class is key to the success of a daily lesson; generally, students will listen and respond in class if they have been captivated enough to do so. Ideally, students in a classroom should feel free to express this sense of engagement. However, in some classrooms there exists a current of negative pressure which might suppress the natural interest and engagement of a student. Inattentive or disinterested students might define the ethos of the classroom passively, by not participating, or actively, by intimidating or ridiculing students who are interested in or responsive to the lesson. If left unchecked, the essence of classroom learning --- discourse and dialogue --- could be hindered by this negative attitude. The high school teacher is placed in a unique position: he or she must overcome this current of negative peer pressure and overturn such attitudes to re-establish a positive learning environment.

This study explores the dynamics of negative pressure in the classroom and what methods English teachers find effective in combating what I will term "the cult of underachievement." I observed in several English classrooms of East Forsyth High School which students had a tendency to participate more or less often, and how both the teacher and the rest of the class responded to these students. Through ethnographic research methods, I studied each teacher's attitude towards and outward treatment of two groups: students who are voluntary underachievers and engaged students who could be undermined by the aforementioned students. Using classroom maps based on participation, as well as general observation, I isolated such groups and noted the teachers' responses concerning the groups or the dynamic involved. I then documented whether or not the teachers acknowledged such divisions and how they responded to

these groups in the classroom, or in conference after class. Finally, I attempted to assess which methods prove most effective in creating a positive ethos and an environment in which avid student participation is the rule rather than the exception.

Review of Literature

The presence of what researchers term a "classroom culture" is often a strong factor determining whether or not a student will participate in class. Because there often exist complex interactions between the students in a classroom, as well as implicit power structures based on class, gender and achievement level, it is difficult for many students to effortlessly contribute (Lewis, 1997). While some students eagerly "play up" to a teacher in hopes of greater success (Thompson, 1994), others choose not to do so and even antagonize participating students (Stinson, 1993). Purcell (1994) suggests in his research that a large majority of high school students have negative attitudes towards high-achieving students in the classroom, and choose reticence over participation.

Presently, teachers combat the negative tendencies of some "classroom cultures" --- that is, the pressure of underachievers against those who choose to participate in class. Gage (1995) suggests that students who do not participate may have differing learning styles, which are not reflected in the typical classroom, and promotes alternative activities in the classroom (i.e. videotaping and role-playing). Others suggest collaborative learning (Mallinger, 1998); others point to the merits of peer teaching (Olguin, 1991). Both of these methods take the central position away from the teacher, thus eliminating hierarchy and establishing an equal speaking ground for the students of the class.

Further suggestions are given by researchers who strive to find the most effective ways of teaching a class full of both engaged students and voluntary underachievers. Guyton (1994) stresses the importance of teacher enthusiasm and the need to recognize and cease the phenomena of "playing favorites." Coleman (1995) adds that teachers must demand a lot of all of their students, regardless of demonstrated ability, and address all types of intelligence in varying teaching methods. In a similar championing of communication through relationships, Wubbels (1997) states that the best way to overcome classroom discrepancies in participation is to know each student on a personal basis. This will help a teacher understand why some students may voluntarily underachieve, and how he or she may best involve those students and in doing so balance the classroom atmosphere.

Research Methodology

Throughout the past four months of this year, I observed the English classes of four Master Teachers at East Forsyth High School. Classroom levels spanned all categories, including Honors, Regular, and Remedial placement. Each grade level was also included in the study. One teacher taught only senior classes, one only freshmen, and the other two taught several grade levels. Each classroom session lasted approximately fifty minutes.

The first few weeks of my study were devoted to finding patterns in classes of the students who were most likely to participate in classroom activity and those who tended to be more reticent and, in extreme cases, undermine the members of the class who were interested in participating. I conducted this part of the study with the use of classroom maps, which indicated by desk location which students answered questions and participated in class most enthusiastically, as well as which students either slept, put their heads down on their desks, or displayed a generally bad attitude to the teacher or to students around them. Accompanying these maps were descriptions of each noted students' behavior and the way they seemed, on these first impressions, to relate with the classroom in general, specifically to the teacher and his or her surrounding peers.

The second step of this research involved the observation of the teachers' treatment of such individuals, and ultimately, the teachers' reaction to these class dynamics. I noted whether or not teachers praised participation or reprimanded the lack thereof, taking into account those who chose not to reprimand non-participants or undermining students. I recorded these conversations in my notebook and tried to assess in the aftermath if the teacher was effective in this dialogue, and if it led to further class productivity and a good classroom dynamic. I also found it helpful to discuss with the teacher various situations which had occurred during the class session and how he or she felt about it. The mode of my research was strictly ethnographic, based solely on observation and occasional discussions with the teachers after class. Through these methods, I observed the methods teachers employed in encouraging full-class participation and maintaining the positive, receptive ethos of the classroom.

Results and Conclusions

Based on the evidence from my observations of high school English classrooms, it would seem that there are several ways to counter voluntary underachievement in classroom participation. The teachers' methods were relationship- based or method-based, and were often

combinations of the two. In the course of my observations, I have found that an awareness of and subtle dealing with class dynamics, teacher-to-individual relationships, and the understandings that rise from both of these aspects are integral to dealing with any undermining currents in the classroom. Teachers who understood the ways that students interacted within the classroom, and who addressed these dynamics, were less likely to have incidences of ridicule, embarrassment, or confrontation between participating and nonparticipating students. Subtlety in these dealings, however, proved key; using students as direct public example usually fostered resentment or self-consciousness. Most importantly, I found that the establishment of relationships between the teacher and the individual student encourages cooperation and humanizes the teacher, making him/her less of a static figure to rebel against, and instead someone with whom communication is comfortable and easy.

As far as methods are concerned, fast-paced lessons administered to the entire group, rather than group work, were more successful in combating underachievement. Because in these classes there was little time between lessons to contend with other classmates or to lose interest in the lesson, there was a smooth progression between activities, with a reasonable balance between students with different learning styles and different levels of participation. Furthermore, fast-paced, high-energy lessons gave students less time to become self-conscious about responding, and were more likely to maintain the interest level of the class.

Teachers who had the most success in capturing the interest of the entire class, and eliminating possibly disastrous class dynamics, were those who strove to stimulate the interest of the class, answer all their questions, and challenge every student, regardless of ability and participatory level. Although Mallinger champions small-group work in the classroom, the instances I observed only intensified the negative dynamic between active participants and nonparticipants. The groups were mere microcosms of the whole, creating a situation in which the participatory students did the majority of the work and the nonparticipants remained inactive. In most instances, because the teacher could not address all the groups at once, this dynamic continued unheeded. The teachers who were able to maintain a healthy classroom ethos and draw nonparticipants into discussion operated on two levels: firstly, they were keenly aware of the dynamics of their classes; most significantly, they were able to incorporate methods in the classroom which balanced the individual differences of students and encouraged the participation of all students.

References

Coleman, R.J. (1995, February). Advice to new English teachers. English Journal, 84 (2).

Gage, R. (1995, December). Excuse me, you're cramping my style: Kinesthetics for the classroom. English Journal, 84 (8).

Guyton, D.C. (1995, February). Good teaching: Passionate performances. English Journal, 84 (7).

Lewis, C. (1997, May). The social drama of literature discussions in a fifth/sixth grade classroom. Research in the teaching of English, 31 (2).

Mallinger, M. (1998, August). Maintaining control in the classroom by giving up control. Journal of Management Education, 22 (4). 472-484.

Olguin, R.A. (1991, January/February). Classroom culture and cultural diversity: Teaching in the crossfire. Liberal Education, 77 (1). 24-27.

Purcell, J.H. (1994). Attitudes of suburban high school students toward behaviors associated with high- achieving peers: Development and validation of the peer assessment scale. Educational and Psychological Measurement, 54 (2). 383-394.

Stinson, S.W. (1993). Meaning and value: Reflections on what students say about school. Journal of Curriculum and Supervision, 8 (3). 216-228.

Thompson, T. (1994). Self-worth protection: Review and implications for the classroom. Educational Review, 46 (3). 259-274.

Wubbels, T. (1997, April). Paying attention to relationships. Educational Leadership, 54 (7). 82-87.

Examination of Classroom Learning Environments in Tracked Biology Classes

By

Erin A. Clesen

with

Robert Evans and Kathy Monroe

Wake Forest University

Department of Education

December, 1998

Introduction

Research continues to accumulate in the area of classroom learning environments, which is the dynamic environment created by the physical features of the classroom, the behaviors of students and teachers, and finally the interaction between students and teachers. Much of the contribution to the classroom learning environment is established by numerous teacher variables, which are investigated in this study. Evidence exists that students achieve better when they perceive their classroom environment as the preferred setting (Fisher and Fraser, 1983, Fraser, 1998, Tobin and Fraser, 1998). However, the tracking systems in place in many of our high schools are influencing teachers to create various classroom learning environments, which leads to the question of whether students in different tracks are experiencing their preferred learning environments (Gamoran, 1990).

Thus, this study has three main purposes. The first was to examine the difference in perception scores between actual and preferred classroom environments (established by the teacher) between regular and honors biology students. The second goal was to determine the relationship between the perception of the actual classroom environments between students and teachers. Finally, the results of this study provide a list of guidelines for teachers to follow in creating classroom environments in regular and honors classes.

Review of Literature

Students spend up to 15,000 hours in the classroom by the time they have finished their senior year in high school. This impressive number shows the potential significance of students'

experiences in school. Trickett and Moos (1973) regarded the classroom learning environment as a distinct atmosphere that has the ability to shape students' interpersonal and educational development. However, an examination of the research on classroom environments by Fisher and Fraser (1983) found a few trends. One trend is that students regard their classroom environment as unfavorable. Another trend is that teachers perceive a more favorable classroom environment than that of their students. Thus, students and teachers may not be experiencing the most conductive classroom environment to facilitate learning (Fisher and Fraser, 1983).

By means of surveying and observing, research indicates that a more positive classroom learning environment exists in high-tracked classes (Gamoran, 1990). Teachers often adjust their teaching style to the backgrounds of their students and may be influenced by a classroom that is predominately one social class or race (McDermott, 1995). As a result, more positive classroom learning environments exist in higher tracked classes (Gamoran, 1990).

The teacher variable in creating the classroom learning environment affects both students' attitudes and achievement (Haladyna, Olsen, and Shaughnessy, 1982). One of the first steps in examining the classroom environment established by teachers is to consider the communication that occurs between teachers and students. Teachers who communicate leadership skills, friendliness, and understanding to their students, enhance the positive attitudes and achievement of their students. In addition, management problems are less apparent in classrooms where the teachers positively communicate with their students (Wubbels and Brekelmans, 1998). Students indicated that they are most satisfied with their classroom learning environment when the teacher used equitable teaching practices.

I believed that by considering all of these research findings into this study, great insight into whether teachers' contributions to classroom learning environments differ in tracked science classes, according to both students and teachers. Furthermore, I proposed several hypotheses. First, I hypothesized that the type of track (regular or honors) will have a significant effect on the difference between the actual scores and the preferred classroom environment scores reported by the students. Second, I hypothesized that the type of track (regular or honors) will have a significant effect on the difference in the actual classroom leaning environment scores between the teacher and the mean response for his or her students. Finally, I expected that my graphs would display visual differences between the mean student scores on actual and preferred

environments and between the mean student scores and teacher scores on actual environments. Each graphical analysis was considered for both honors and regular students.

Methodology

The participants in this study included both students and teachers from two high schools in North Carolina. Two biology teachers and their students were examined in each school. In addition, both an honors and a regular class were surveyed for each participating teacher. Students and teachers were given surveys consisting of ten statements on the condition of the classroom environment established by the teacher as students perceived it and then the same ten variables that they actually prefer. The following variables were included in the surveys: support, management, achievement, understanding, encouragement of participation, clarity, interaction, enthusiasm, equity, and relevance.

There were three analyses performed on the data. Analysis 1 was a T-test of Independence to answer the question "What is the effect of the type of track (regular or honors) on the difference between actual and preferred classroom environments as reported by the students?" Analysis 2 was also a T-test of Independence that sought to answer the question "What is the effect of the type of track (honor or regular) on the difference between the actual classroom environment score between the teacher and the mean response of his or her students?" Analysis 4 was a series of graphs produced to yield descriptive results.

Results and Conclusions

One of the most important findings from the surveys is that the type of track that a biology student is enrolled in (honors or regular) will have a significant effect on the score difference between the actual and preferred classroom learning environment. The critical value for this test was 1.985, which is less than the t-statistic of 5.113, which allowed for the rejection of the null hypothesis. Because the second analysis had a critical value of 5.751, it was concluded that the type of track (honors or biology) has an effect on the difference between the actual classroom learning environment scores between the teacher and the mean response from his or her students. The graphs yielded remarkable differences among the classroom environment variables.

This study found that both regular and honors students are not regularly being taught in environments which they prefer to be taught in; although the problem is greater for regular than honors students. The general trend is that honors and regular students have their own specific

needs in which they would like their teacher to contribute to their learning environment. Of greatest importance about the two groups is that the teacher is fair to both males and females. In addition, honors students prefer competitiveness, while regular students appreciate opportunities to work in groups. Also, students indicated a need for higher teacher enthusiasm. As a result of these specific needs and a few others indicated in this research project, I have proposed a list of guidelines for teachers to follow in creating the classroom learning environment in tracked biology classes in the following table:

Table 1: Recommendations for teachers in optimizing the Classroom learning environment in their tracked biology classes

I. Personal needs:

1. Honors students indicate a high degree of satisfaction within the classroom, so teachers should establish healthy opportunities for their honors students to compete. Examples include having quiz bowls to review for a test or rewarding certain accomplishments.
2. Because regular students prefer to work in groups, the teacher should offer many group-work activities, such as lab groups and group research projects.

II. Societal needs:

3. Classrooms are often mixed gender and multicultural, and both honors and regular students indicate equity as the most important classroom learning environment variable. However, regular students report that equitable practices occur at a very low rate in their biology classes. As a result, teachers should especially focus on raising their equitable teaching practices in their regular biology classes.

III. Academic preparation:

4. Research has shown that a teacher's enthusiasm leads to students' higher academic achievement (Gardner, 1974). In addtion, this research report indicates that both honors and regular students would like their teachers to be more enthusiastic. However, both regular teachers and their students report low levels of enthusiasm in their classes. It is vital that teachers are enthusiastic about biology topics and learning, especially in regular classes, in order to encourage their students' academic success.

The basis of these reforming goals for teachers are from the results obtained from this research project. In addition, Penich and Yager (1986) believe that personal needs, societal

needs, and academic preparation should be addressed when considering science reform. I have used them as a template for constructing my recommendations. I predict that by implementing the suggested recommendations, students will become more satisfied with their classroom learning environments, teachers and students will experience greater cooperation with one another, and the morale of their schools will be increased.

References

Fisher, D.L. & Fraser, B.J. (1983). A comparison of actual and preferred classroom environments as perceived by science teachers and students. Journal of Research in Science Education, 1, (1), 55-61.

Fraser, B.J. (1998). Science learning environment: assessment, effects and determinants. International Handbook of Science Education, 1, 527-564.

Gamoran, A. (1990). The variable effects of tracking: inequality and productivity in American high schools. National Center on Effective Secondary Schools, Madison, WI. (ERIC Document Reproduction Service No. ED 328632).

Haladyna, T., Olsen, T. & Shaughnessy, J. (1982). Relations of student, teacher, and learning environment variables to attitudes toward science. Science Education, 66 (5), 671-687.

McDermott, P. (1995). "Should we do it the same way?" - teaching in tracked and untracked high school classes. Paper presented at the Annual Meeting of the Northeastern Educational Research Association, 26th Annual Conference, Portsmouth, NH. (ERIC Document Reproduction Service No. ED 393170).

Tobin, K. & Fraser, B.J. (1998). Qualitative and quantitative landscapes of classroom learning environment. International Handbook of Science Education 1, 623-640.

Tobin, K., Tippins, D.J. & Gallard, A.J. (1994). Research on instructional strategies for science teaching. Handbook of Research on Instructional Strategies for Teaching Science, 45-63.

Trickett, E.J. & Moos, R.H. (1973). Social environment of junior high and high school classrooms. Journal of Educational Psychology, 65, (1), 93-102.

Wubbels, T. & Brekelmans, M. (1998). The teacher factor in the social climate of the classroom. International Handbook of Science Education, 1, 527-564.

To Whom It May Concern: Specific Audience in Student Writing

by
Bart Ganzert
with
Joseph O. Milner
Wake Forest University
Department of Education
December, 1998

Introduction

A fellow teacher once quipped to me that he did some great writing when he was in school -- only his teachers didn't agree. Of all audiences facing a young writer, the teacher as audience poses the greatest challenge (Monahan, 1984; McTeague, 1980). The writer's audience can be a daunting obstacle, and is as much a factor in determining the success of a paper as verbal accuracy and strength of argument. What is the most effective audience for a student writer? Students must write for a variety of audiences in order to learn writing effectively. Yet, students predominantly write for one audience, the teacher. Most often, however, this audience yields the least effective source for student writing.

This study focused on the effect of a specific audience on student writing, and showed that specific audiences increase student proficiency and effectiveness in writing.

Review of Literature

A tangible audience is a vital element for the writing student. A "real" audience stimulates improvements in organization, development and clarity (Gaunder, 1990). However, the teacher as audience often does not provide the element of tangibility needed for successful prose. G. E. Kirsch (1991) finds that writers need broader audiences than the instructor, and Frank (1992) suggests alternative audiences for more effective writing. Monahan's (1984) findings indicate, as do Berkenkotter's (1981), that freeing the context of the paper heightens audience awareness. The uncertainty of writers when addressing the teacher as an audience can be stultifying to the writing process. G.E. Kirsch (1988) argues that successful writing demands authority, confidence and knowledge of rhetorical choices which cannot be fully executed when catering to the "imagined demands" of a teacher. Cohen and Riel (1989) point out that writing becomes artificial when students are required to write to unspecified audiences. The language,

the logic, the life -- all the aspects needed of good writing are endangered when the writer's audience goes unspecified.

Methodology

The sample population was 42 tenth-grade English students at a private Catholic school in Winston-Salem, North Carolina. Prior to the essay, students completed a series of dramatic skits based on assigned short stories. The skits were used as a topic for essays. Students were given a common topic sentence to write on: Dramatic skits have/have not helped in the understanding of the short stories.

In Group 1, two classes were chosen in random clusters to write for a specific audience, called Specific Audience Assigned (SAA). In Group 2, two classes were chosen in random clusters to write for no specific audience (NSA). No suggestion of an audience was made. Students submitted papers in both cases for a grade. Each group numbered 21 students.

Finished papers were judged in three categories: Quality, Fluency, and Mastery of Convention. Mastery of Convention was determined by a count of grammatical errors, punctuation errors, and spelling. Fluency was judged by word count, incorrect diction, and excessive use of passive voice, which weakens the persuasive intent of the paper. Quality was determined by an overall assessment of paper quality determined on a five point Likert Scale by two objective assessors. The ratings were calculated for an overall "quality rating" for each paper. Assessors were instructed to rate the papers consistently, and to judge only the overall quality of each paper, ignoring individual matters of style or paper errors. After the rating was calculated, the results of Group 1 were compared to Group 2.

Results

The results of the study revealed a greater tendency toward error in NSA papers. SAA papers scored fewer errors in each category except in use of passive voice. In Mastery of Convention, the SAA group scored a total of 14 grammatical errors to 32 for NSA group. Errors in punctuation and mechanics totaled 9 fewer for SAA, 33 to 42. Spelling errors were lower by more than half in SAA, 25 to 63. The Fluency category indicated similar results. Total number of words in SAA papers outnumbered NSA papers 5480 to 4552. Incorrect diction in NSA papers outnumbered SAA papers 49 to 28. The only category to favor NSA papers was number of uses of passive voice, in which NSA papers totaled 14 less instances than SAA papers.

Table: Comparative totals in each category

Group #1 SAA	Grammar 14	Punc/Mech 33	Spelling 25	Word Count 5480	Diction 28	Passive Voice 89
Group #2 NA	32	42	63	4552	49	75

Quality favored the SAA papers as well, averaging 2.04 (with 1 being the highest rating on a 5-point scale) to 2.29 for the NA papers.

Statistics were prepared on the software program, SAS JMP IN, version 3.1, based on a null hypothesis of no difference between group scores. The alternate hypothesis is that there is a significant difference between group scores. Two sample t-tests were run.

The mean of grammar errors for Group 1 is .667; Group 2 is 1.524. The t-Test estimate is -3.110, with 40 degrees of freedom, probability .0034. The probability is less than .05 and is in the rejection range. The null hypothesis is rejected. Power is strong at .8587 and supports the rejection of the null, a statistically significant difference in grammar errors.

The mean of the punctuation errors for Group 1 is 1.57143. The mean of punctuation errors for Group 2 is 2.0. The t-Test estimate is -.0761, with 40 degrees of freedom. Probability is .4510. The probability is greater than .05, and is in the acceptance range. Power is low. The null hypothesis should be accepted, no statistically significant difference in punctuation errors.

The mean of spelling errors for Group 1 is 1.0. The mean of spelling errors for Group 2 is 3.19048. The t-Test estimate is -3.149, with 40 degrees of freedom. Probability is .0031. The probability is less than .05, and is in the rejection range, so reject the null hypothesis. Power is strong at .8670. and supports the rejection of the null. There is a statistically significant difference in spelling errors.

The mean word count for Group 1 is 261.143. The mean word count for Group 2 is 216.762. The t-Test estimate is 1.973, with 40 degrees of freedom. Probability is .0554. The probability is greater than .05, and is in the acceptance range. With a sample size of 92, power would increase to .8236, so increasing the sample size might change these results. However, based on the sample size, there is no statistically significant difference in word count.

The mean of diction errors for Group 1 is 1.1905. The mean of diction errors for Group 2 is 2.2381. The t-Test estimate is -3.066, with 40 degrees of freedom. Probability is .0039. The probability is less than .05, and is in the rejection range. Power is strong at .8488, and supports the rejection of the null. There is a statistically significant difference in diction errors.

The mean of passive voice usage for Group 1 is 4.2381. The mean of passive voice usage for Group 2 is 3.57143. The t-Test estimate is .856, with 40 degrees of freedom. The probability is .3973, and is greater than .05, which is in the acceptance range. Accept the null hypothesis -- no statistically significant difference.

The quality rating mean for Group 1 is 2.19048. The quality rating mean for Group 2 is 2.2381. The t-Test estimate is -0.145, with 40 degrees of freedom. The probability is .8851, and is greater than .05, which is in the acceptance range. Accept the null hypothesis, a statistically significant difference.

Eight questions on audience were mixed with other questions regarding general writing. Students were asked to respond using a five-point Likert Scale. The scale ranged from one (1)-- strongly agree to five (5) -- strongly disagree. Students reacted strongly to questions one and six, indicating that they do consider a primary audience when writing, and that students react negatively to the teacher as an audience.

Conclusions

As indicated by recent literature, audience papers (SAA) showed significantly better results in matters of Fluency and held a slight edge in overall judgment of quality. SAA papers were longer (approximately 20%) and used more precise language. Statistical analysis shows a significance in diction errors, and suggests that, in a larger sample, word count could become significant.

Instances of passive voice appeared more frequently in Group 1 (SAA) papers. This could possibly be due to the vagary encountered by inexperienced writers in relating a classroom activity to an outside audience unfamiliar with the events. However, the increased use of passive voice also indicates a heightened awareness of the writing process, as indicated by Winterowd (1970). Though the passive voice has been maligned by E.B. White and others as an indicator of weak writing, the results of this study suggest that it can also be the product of a more active involvement in the writing process. The results of the questionnaire also show acute awareness of wording by students according to the audience.

Mastery of Convention items in SAA papers was clearly stronger than in NSA papers, in some cases by more than a two to one ratio. This finding agrees with studies such as Kirsch (1988) and Frank (1992) by showing improved writing execution when dealing with an alternative audience to the teacher, but also shows that students' fluency and general writing ability are improved.

Without a specific audience to grasp, many students are at a disadvantage to maximize their writing potential. What effect does an audience produce? What a specific audience produces is effectiveness.

References

Berkenkotter, C. (1981, Dec.). Understanding a writer's awareness of audience. *College composition and communication,* 32, 388-99.

Cohen, M. and M. Riel. (1989, summer). The effect of distant audiences on students' writing. *American educational research journal*, 26, 143-59.

Frank, L.A. (1992, October). Writing to be read: Young writers' ability to demonstrate audience awareness when evaluated by their readers. *Research in the teaching of English, 26,* 277-291.

Gaunder, E. P. (1990). The evolution of the research paper for multiple audiences. Composition for academic discourse communities. (ERIC Document Reproduction Service No. Ed 322498).

Kirsch, G.E. (1988, Fall). Students' interpretations of writing tasks: A case study. *Journal of basic writing*, 7, 81-90.

Kirsch, G.E. (1991, February). Writing up and down the social ladder: A study of experienced writers composing for contrasting audiences. *Research in the teaching of English*, 25, 33-53.

McTeague, F. (1980). Do Teachers teach spelling? *TESL Talk*, 11, 33-35.

Monohan, B.D. (1984, October). Revision strategies of basic and competent writers as they write for different audiences. *Research in the teaching of English*, 18, 288-292.

Winterowd, W.R. (1970, May). The grammar of coherence. *College English*, 31, 828-35.

Using Computer Aids to Develop Three Dimensional Visualization Skills in High School Chemistry Students

by

Jeffrey S. George

With

Robert Evans & Terry Howerton

Wake Forest University

Department of Education

December, 1998

Introduction

Beginning chemistry students, whether at the high school or college level, often struggle with concepts that require spatial recognition in three dimensions. While some may assume that the ability to visualize and mentally manipulate an object is an inherent ability, perhaps a portion of intelligence, evidence clearly indicates that it is a skill that can be learned through practice. Traditional high school chemistry texts, being purely two-dimensional, do not offer the type of training required to prepare students for the spatial tasks that are required in more advanced chemistry classes, as well as in other science and engineering applications. With the rapid spread of computer technology, and the equivalent rise of sophisticated graphics programs, teachers now have a tool at their disposal for the development of visualization skills. This study seeks to evaluate the relative effectiveness of two computer simulations in helping beginning chemistry students grasp the basics of three-dimensional visualization.

Review of Literature

Although there is a great body of research on modeling in general, very little of it focuses on the specific areas of computer modeling and three dimensionality. Unfortunately, what little research there is seems to indicate that computers are not used to their full potential in the classroom (Barrow & Germann, 1996). Furthermore, the models that are used in the classroom are often not adequately explained or presented in a way that brings about conceptual change (Shiland, 1997).

Many researchers have established the importance of modeling in science learning (Gilbert & Boulter, 1998; Rieber, 1992). External models can help students construct knowledge by providing a means for exploring and testing their own experience, and they can also be employed to communicate complex ideas in a manner that is more easily understood (Gilbert & Boulter, 1998). In addition, Welch (1997) found that the physical (or computer-generated) construction of three-dimensional models is an intrinsic part of the problem-solving process that young students instinctively employ. Models can be used to increase understanding of the problem, externalize a cognitive concept, fuel ideas for further cognitive models, and evaluate a particular solution (Welch 1997). Models can also provide a link between the pure facts of science and the constructed experience of the learner, by allowing for both discovery and direct instruction in the same program (Rieber, 1992).

Computer models can simulate the various types of problem-solving that are often taught or encountered in high school science classes. Mikovec and Dake (1995) described a cyclic approach, with students first expressing the ideas in the form of a model, then testing the accuracy of their expressed model, and finally using the information thus gained to re-design the original model. This is a very different process than the traditional linear problem-solving approach. Scudder (1997) contrasted two common types of thinking. A database paradigm involves rote learning of facts that are returned in response to a query--the instructivist "lecture and test" pathway of learning. An expert system paradigm utilizes a core set of facts to attack each problem, attempting to find the best solution by applying that knowledge to a new situation (Scudder, 1997).

A few researchers have applied the information on modeling in order to develop specific software packages. Computer-generated, three-dimensional electron density models can be used to introduce students to the concepts of orbital structure, and also to increase student curiosity (Shusterman & Shusterman, 1997). Another program was prepared to help first-year college chemistry students conceptualize the particulate nature of matter (Williamson & Abraham, 1995). In both cases, the software package was found to increase achievement; Shusterman and Shusterman (1997) also found an improvement in attitudes toward the subject matter. Other recent investigations also indicate that interactive computer instruction is valuable for stimulating interest, raising achievement, and overcoming barriers (Arnone & Grabowski, 1992; Kumar & Wilson, 1997), as well as for saving classroom time (Leonard, 1992).

Methodology

The subjects for this study were the students enrolled in six chemistry classes at a high school in the Winston-Salem, Forsyth County School District in Winston-Salem, North Carolina. The six classes, which were taught by two different teachers, were selected because they had received essentially the same instruction for the semester. The class levels include honors (four) and regular (two). At the time of the study, the subjects had been exposed only to standard classroom/textbook instruction on such subjects as: the periodic chart and its link to electron location; Lewis dot structures; valence electron configurations; and chemical compounds and their formulas. The students had received no instruction in three-dimensional subjects such as molecular shape, electron density, and orbital structure/hybridization.

The study consisted of pre- and post-tests, with a one-class-period exposure to the computer simulation between. The pre-test instrument contained five questions designed to evaluate a student's ability to conceptualize, manipulate, and communicate a three-dimensional figure. The treatment consisted of a guided exploration of the computer simulation, focusing on the shapes of molecules and how they are affected by the presence and locations of electrons. The treatment lesson also attempted to connect the three-dimensional properties of molecules to the students' prior experience by examining structures such as glucose, testosterone, and fatty acids, all of which had been studied in biology classes. The last five or ten minutes of the lesson involved student exploration of more complex structures, with a focus on the principles learned in the earlier sections. The post-test instrument consisted of the same five questions as the pre-test, with an additional four questions designed to gauge the students' attitudes toward the computer simulation (measured on a Likert scale).

The data from the pre- and post-tests were compiled by scoring each test out of ten points, with an emphasis on the questions that covered spatial awareness and mental rotation. The results were entered into Mystat © in the form of the overall change in score from pre-test to post-test, and a two-way ANOVA was performed to evaluate the statistical significance of the data. The independent variables in the analysis were class level (honors or regular) and type of computer representation. The software package used for the treatment, RasMol, was capable of several representations. The wireframe depiction was used to represent a more two-dimensional display (referred to as 2-D) and the ball-and-stick depiction was used to represent a more three-

dimensional display (referred to as 3-D). The dependent variable in the analysis was change in score from pre-test to post-test.

The average score for each class was graphed on an Excel © spreadsheet to display the overall trend of the data. The answers to the Likert-scale questions were converted into percentages and graphed on an Excel © spreadsheet.

Results and Discussion

Although each class showed a slight improvement in score from pre-test to post-test, the overall analysis did not reveal any statistically significant differences between the two class levels (honors and regular) or the two computer representations (2-D and 3-D). Furthermore, there were no statistically significant interaction effects between the independent variables. There are several possible reasons for these disappointing results. Primarily, research indicates that acquisition of skills in three-dimensional rotation takes time and practice, and therefore immediate significant results would not be expected. A second possible explanation for the ambiguous data lies in the conditions surrounding the taking of the post-test: two of the honors classes were pressed for time during that class period, and many students were unable to complete all of the questions. In addition, a third honors class was administered the post-test by a substitute teacher, which might have affected the clarity of the instructions. Finally, the post-test was administered one week after the treatment, with the Thanksgiving holiday intervening (one class took the post-test two weeks after the treatment). This would seem to indicate that the benefits derived from one class period of instruction in three-dimensional visualization were minimal, and furthermore the information gained was not retained in the long-term. Further studies in this area would be well-served in allowing more time for practice and instruction to adequately develop the skills that are targeted.

(Table 1--Results of ANOVA)

Variable	Sum-of-Squares	DF	Mean-Square	F-Ratio	P
Class Level	2.568	1	2.568	0.840	0.361
Treatment	1.043	1	1.043	0.341	0.560
Interaction	3.692	1	3.692	1.208	0.274

The data from the Likert-scale questions provided some very interesting information. Three of the questions focused on design issues related to the computer package: ease of use, clarity of depiction, and enjoyment of use. 66% of the students indicated that they enjoyed the program and lesson; 91% indicated that the program was easy to use; and 75% indicated that they had no trouble visualizing the objects on the screen clearly. The fourth question asked students to evaluate the connection between the material presented during the lesson and the content of their chemistry class. The majority of the students were ambivalent in this regard, which indicates that the computer instruction needs to be better integrated into the standard curriculum.

The data from the testing instrument do not support any major conclusions, but the results are encouraging. Further research needs to be done in order to determine the amount and frequency of computer instruction necessary to provide measurable increases in spatial skills. I believe that this type of instructional supplement could be of great benefit to both teachers and students if designed and implemented in a more effective manner.

REFERENCES

Arnone, M.P. & Grabowski, B.L. (1992). Effects on children's achievement and curiosity of variations in learner control over an interactive video lesson. *Educational Technology, Research and Development, 40(1)*, 15-27.

Barrow, L.H. & Germann, P.J. (1996). The use of computer technologies in Missouri secondary science classrooms. *Journal of Computers in Mathematics and Science Teaching, 15(3)*, 217-236.

Gilbert, J.K. & Boulter, C.J. (1998) Learning science through models and modeling. *International Handbook of Science Education, 1.*

Kumar, D. & Wilson, C.L. (1997). Computer technology, science education, and students with learning disabilities. *Journal of Science Education and Technology, 6(2)*, 155-160.

Leonard, W.H. (1992). A comparison of student performance following instruction by interactive videodisc versus conventional laboratory. *Journal of Research in Science Teaching, 29(1)*, 93-102.

Mikovec, A.E. & Dake, D.M. (1995). Tying theory to practice: cognitive aspects of computer interaction in the design process. *(ERIC Document Reproduction Service, No. ED 391491).*

Rieber, L.P. (1992). Computer-based microworlds: A bridge between constructivism and direct instruction. *Educational Technology, Research and Development, 40(1)*, 93-106.

Scudder, P.H. (1997). Database vs. expert system teaching paradigms: Using organic reaction mechanisms to teach chemical intuition. *Journal of Chemical Education, 74*, 777-781.

Shiland, T.W. (1997). Quantum mechanics and conceptual change in high school chemistry textbooks. *Journal of Research in Science Teaching, 34(5)*, 535-545.

Shusterman, G. & Shusterman, A. (1997). Teaching chemistry with electron density models. *Journal of Chemical Education, 74*, 771-776.

Welch, M. (1997). Students' use of three-dimensional modeling while designing and making a solution to a technological problem. *(ERIC Document Reproduction Service, No. 413885).*

Williamson, V.M. & Abraham, M.R. (1995). The effects of computer animation on the particulate mental models of college chemistry students. *Journal of Research in Science Teaching, 32(5).*

BEST COPY AVAILABLE

Creating Authentic Conversation in Literature Discussion: The Role of Teacher Feedback

by
Mary K. Graciano
with
Joseph O. Milner
Wake Forest University
Department of Education
December, 1998

Introduction

In order to create authentic conversation in the high school English classroom, teachers must know how to place student contributions in a real and meaningful context. Research has shown that asking authentic questions is one of the best means of eliciting meaningful response from students. After students respond, however, what happens next? This ethnographic study investigated the ways in which high school English teachers use teacher feedback and evaluation of student response to help turn recitation into conversation. Teachers who are capable of providing their students with constructive and meaningful feedback, who listen thoughtfully and then respond, will be more helpful in creating classroom conversations about literature.

Review of the Literature

In the high school English classroom, literature is frequently taught through full class discussion. Full class discussion generally consists of three parts: a question (initiated by student or teacher), response, and evaluation of the response (Nystrand & Gamoran, 1991). Effective English teachers are skilled at facilitating discussion, both through asking stimulating and challenging questions and by appropriately handling (or evaluating) student response and comments. Part of the teacher's role is not merely to incorporate student input into the class, but to make it relevant to the goals and content of the class by responding (Applebee, 1996).

Much of the teaching of literature has followed a recitation style, where the questions asked of literature have been similar to those asked of expository prose (Purves, 1992). In literature discussion, if teachers treat their students' responses as mere answers to the questions they ask, students will come to view literature as "answer giving" and not "thought provoking" (Langer, 1992). Teachers may not be aware of this—of the expectations they make known through their question asking and evaluation. Students' reading of literature depends largely, not on stated expectations, but on the actual ones made evident through their teachers' practices (Applebee, 1996).

Good teaching, like good dialogue, requires flexibility and an ability to listen *and* respond. Conversations depend on the participants and cannot be planned out ahead of time. They are generated by the simultaneously ongoing processes of speaking, listening, and responding (Langer, 1995). As a consequence, teachers cannot possibly know where class discussion is going to go since it depends largely on their students. They can make certain points about a text, but they should focus more on responding to what their students have to say than on following their own agendas (Barnes, 1992). If teachers adhere to their lesson plans more than they respond to their students, their students will feel that their contributions are irrelevant.

With regards to response, Barnes (1992) addresses the difference between assessing what students say and responding to them. Assessing, in the students' eyes, places the teacher on a higher level than that of the students and is very different than responding. Responding to students' contributions is perhaps one of the most difficult jobs of teaching. Speech is difficult to quantify (Nelson, 1970), and therefore it is not surprising that there is no textbook to tell teachers how to respond to their students. What does seem clear, however, is that using students' ideas as a springboard to further discussion is one means of response that greatly improves student achievement and engagement (Barnes).

In several of their studies, Nystrand and Gamoran (1990, 1991) differentiate between "procedural" and "substantive" engagement. They describe students who are on-task as procedurally engaged, but show that only substantive engagement—engagement that "involved sustained commitment to the content and issues of academic study"—has a positive effect on students' learning. Their studies showed that the best means of substantively engaging students is through asking authentic questions, high-level evaluation, and uptake. High-level evaluation ideally consists of some type of follow-up question, pertaining to a student response, that weaves what the student has said into the conversation, or some comment that allows the student answer the lead the conversation in a new direction. Uptake may be considered a type of high-level evaluation, since it incorporates the student answer into a new question. High-level evaluation and uptake are two methods teachers can use to help turn class discussion from mere recitation to conversation.

Unfortunately, many teachers are not aware of the part they play in creating conversation (Nystrand & Gamoran, 1990). They think that students' contributions make the difference between recitation and conversation, not realizing how they themselves may strategically

influence what occurs in the classroom. Langer (1991) has used the term "instructional scaffolding" to explain the ways teachers may help their students use discussion to arrive at new ways of thinking. The main point of instructional scaffolding is that teachers should not provide the content for the discussion, but instead help to focus, shape, and link the content provided by student contributions about a literary work.

Outcomes of conversations are not predetermined, but rather are negotiated through arguments that draw from the subject being discussed and from the conversation participants' own experiences. The best conversations involve risk-taking, and sometimes these risks pay off, while other times they may not (Applebee, Burroughs, et al., 1994). Due to the somewhat uncertain nature of literature discussion, establishing a consistent set of conventions for how the conversation will be carried out may be extremely beneficial to both students and teachers (Applebee, Burroughs, et al., 1994). One of the ways teachers will establish these conventions is through the manner in which they respond to their students.

Methodology

Four English teachers (two male, two female) at East Forsyth High School were the subjects for this study. Forty-three of their classes were observed altogether, with thirty-two periods (eight for each teacher) observed specifically for the purposes of coding literature discussion. These thirty-two class periods were observed over a period of two months. All of the subjects remained unaware of the purpose and intent of the research throughout the course of the study, and they were labeled A, B, C, and D to preserve their anonymity. With a coding instrument designed by the researcher, literature discussion was recorded and then coupled with ethnographic descriptions of what occurred within the discussion.

Results and Conclusions:

Empirical findings suggest that literature discussion makes up a very small portion of classroom activity. Of course, since observations were staggered throughout a two-month period, it may be that literature discussion occurred far more frequently than the results themselves would indicate. Nevertheless, finding literature discussion proved to be the greatest impediment to the research.

All of the literature discussion that was observed can be classified as either recitation or conversation. At times, discussion vacillated between the two. Recitation generally results from close-ended questions. Teachers may use fill in the blank type questions to move the discussion

along—questions such as, "The building was made of ___?" and "That was in ___." Students fill in the blanks, and teachers do not wait very long for them to respond. If they do not respond, teachers may answer their own questions. When students do not give a satisfactory answer, the teacher will provide the answer. Recitation resembles drilling, where students succeed if they are able to successfully answer the teachers' questions. It is fast paced and proceeds back and forth between teacher and students.

Conversation, on the other hand, is more circular, travelling between students and teacher. Teacher feedback is more difficult to define in conversation because conversation is not hierarchical. In conversation, the teachers listen to their students with genuine interest and respond with sincerity. The following is an excerpt from a conversation about figurative language that illustrates the concrete ways that Teacher D responded to his students:

> Student 1: I learned what metaphors were last night.
> Teacher D: How'd you learn that?
> Student 1: My mom told me.
> Teacher D: Give me an example of one.
> Student 1: (gives an example, but it's a simile)
> Teacher D: (to whole class) Did you all hear that? (This question shows Student 1 that Teacher D takes his example seriously.)
> Student 2: That's a simile.
> Teacher D: (TFA – affirmative teacher feedback) A cousin to the metaphor! (shows that Student 1's example may not have been exactly right, but has value nonetheless)

In conversation, questions provide students with a lot of space to fill. Educators have often stated that teachers should have high expectations for their students because then their students will rise to meet the expectations. Leaving students with empty space is a concrete example and a direct result of a teacher who has high expectations. Teachers who leave space display trust in their students' abilities to contribute meaningfully to the classroom conversation.

There are no equations to follow in order to have a good conversation. Conversations are generated from one moment to the next and are therefore contingent on a whole range of interactions. Although a teacher is only one of the participants within a dialogue, the teacher sets the standard and expectations through the way he or she asks questions and responds. That is why it is so crucial that teachers reflect on the questions they ask and the evaluations they make within class discussion. If teachers ask fact-based questions about literature, their students will come to view texts as primarily containing facts. Teachers who respond to their students' remarks merely to validate or invalidate what the students say send their students the message that their thoughts need to be validated.

Although this study initially stemmed from a hypothesis that teachers do not provide their students with enough feedback, the hypothesis changed when observations showed that teachers do provide students with a fair amount of feedback. There are different kinds of feedback, however, that reveal not only the significance with which teachers treat their students' ideas, but also teachers' expectations for their students. The teachers' practices showed that students who are allowed real parts in discussion will produce quality conversation. In conversation, teachers listen to their students, not with feigned interest, but with genuine respect for them and their ideas. Teachers can design their classes to arrive at certain ends by meeting checklist criteria, or they can trust their students to discover the details within the literature they read, by encouraging them to share and support their opinions. For students of the latter kind of teacher, literature then becomes a process of discovery—of uncovering mysteries within a text.

Recitation makes literature seem like a dead thing, whereas conversation allows it a context within which it may be brought to life. How teachers respond to their students within literature discussion seems to be the second greatest determining factor (second only to the questions they ask) in producing either recitation or conversation. Conversation requires that teachers provide their students with ample opportunity to speak to them [the teachers] and to their classmates, that they ask authentic questions, and that they push their students' thinking further through the feedback they offer. Feedback is wasted as a validation device. Teachers should thoughtfully consider what they want their students to gain from reading literature. If teachers view literature as living texts, then they should structure their feedback in a way that reflects their view of literature as life.

References

Applebee, A. N. (1996). *Curriculum as conversation: Transforming traditions of teaching and learning*. Chicago and London: The University of Chicago Press.

Applebee, A. N., Burroughs, R., & Stevens, A. S. (1994). *Shaping conversations: A study of continuity and coherence on high school literature curricula* (Report Series 1.11). (ERIC Document Reproduction Service No. ED 370 106)

Barnes, D. (1992). *From communication to curriculum*. Portsmouth, NH: Heinemann.

Gilles, C., Dickinson, J., et al. (1994). Discussing our questions and questioning our discussions: growing into literature study. *Language Arts, 71*(7), 499-508.

Langer, J. A. (1991). *Literary understanding and literature instruction* (Report Series 2.11). (ERIC Document Reproduction Service No. ED 333 469)

Langer, J. A. (1992). Discussion as exploration: Literature and the horizon of possibilities. In G. Newell & R. Durst (Eds.), *The role of discussion and writing in the teaching and learning of literature*, 23-24. Norwood, MA: Christopher Gordon Publishers.

Langer, J. A. (1995). *Envisioning literature: literary understanding and literature instruction*. New York: Teacher's College Press.

Nelson, O. W., & LaRusso, D. A. (1970). *Oral communication in the secondary school classroom*. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Nystrand, M., & Gamoran, A. (1991). Instructional discourse, student engagement, and literature achievement. *Research in the Teaching of English, 25*(3), 261-290.

Nystrand, M., & Gamoran, A. (1990, February). *Student engagement: When recitation becomes conversation*. (ERIC Document Reproduction Service No. ED 323 581)

Purves, A. C. (1992). "Testing Literature." In *Literature instruction: A focus on student response*, ed. by Judith A. Langer. 19-34. Urbana, IL: National Council of Teachers of English.

BEST COPY AVAILABLE

The English Idiom: Figurative Language in the High School English Classroom

by

Jeffrey Hartz

with

Joseph Milner

Wake Forest University

Department of Education

December 1998

Introduction

The high school English classroom, by its nature, must deal in abstractions and ambiguities. Students may have an instinctive sense about things like shades of meaning in literature or the rhetorical structure of essays, but in the English classroom they are asked to think critically and objectively about them. A high school English teacher, then, faces the task of communicating with students about the abstract, the vague, the instinctive, and the indeterminate. Thus, they turn to figurative language - teachers create metaphors, similes, and analogies to talk with students about all manner of language events.

This study examines the idiom that English teachers use to talk about content (writing, literature, oral discourse) in their classrooms. It seeks to analyze teachers' figurative so as to assist pre-service teachers in thinking about the language they will use in their own classrooms by exploring the nature of specific instances of figurative language found in high school classrooms. For the purposes of this study, the phrase "figurative language" will be used to refer inclusively to metaphors, similes, and analogies. The term "metaphor" will also occasionally be used in this inclusive sense to remain consistent with the language of other scholarship.

Review of the Literature

Scholars of language and communication agree that metaphors are a primary mode of meaning-making through language. Understanding is gained when the recipient of a metaphor resolves the tension that exists between the familiar and unfamiliar terms of the metaphor (Ortony, 1975; Pickering & Attridge, 1990; White, 1996). Educators since classical times have been aware of the pedagogical value of metaphor as instructional tool (Ortony, 1975; Sanders & Sanders, 1984; Strickland & Iran-Nejad, 1994). Ortony (1975) suggests that this is because metaphor expresses ideas that cannot always be explained in literal language and accesses

emotion and experience to provide a vividness, which increases learnability. High school students have been found to be engaged and open when working to understand metaphors (Schwalbach, 1992), and theorists suggest that this type of learning is highly valuable to students insofar as it makes explicit and relevant the lessons of students' own experience (Healy and Barr, 1991) and encourages not a fixed understanding but exploration into ever-fresher points of comparison and ways of understanding (White, 1996). Recently, researchers have begun to examine another function of metaphor in education - not metaphor as teaching tool, but rather metaphors as over-arching structures which influence the professional decisions that educators make (Blackwell, 1993; Munby, 1990; Strickland & Iran-Nejad, 1994). Their studies suggest that teachers develop metaphors which guide their understandings of literacy (Blackwell, 1993), language and information, the curriculum, and student learning (Munby, 1990; Strickland & Iran-Nejad, 1994).

Having identified the dual roles that figurative language and metaphorical understanding play in educational settings, researchers assert certain prescriptions for how to best utilize the meaning-making capacity of metaphor in the classroom and in meta-level understandings of education. Instructional metaphors should model cognitive processes, be dynamic, open, and expressive, and allow for the negotiation of meaning (Bruner, 1986; Moffett & Wagner, 1992; Pickering and Attridge, 1990). Similarly, metaphors which view education as a unified, organic whole are espoused, with the suggestion that such will result in a process which engages students and teachers in the extension and creation of meaning (Blackwell, 1993; Munby, 1990; Strickland & Iran-Nejad, 1994). Thus, this study focuses on the figurative language used in the classrooms of four veteran teachers in order to find examples of metaphor as a type of theory-in-practice, examining them in terms of the generative metaphor called for by theorists.

Methodology

This study was carried out in the classrooms of four high school English teachers at East Forsyth High School in Forsyth County, NC. Included in this group were a 12th grade teacher, two 10th grade teachers (referred **10A** & **10B**), and a ninth grade teacher. Roughly equal numbers of honors and general level students are taught by these teachers, and all teach five classes a day. Data was collected through personal observations during the fall of 1998, with a minimum of 7 hours spent in each classroom. Each specific instance of figurative language produced by a teacher or student was noted, along with the circumstances or context of this

language. Observation transcripts were analyzed for emergent patterns with regard to both the intent and context of the figurative language. This research design is not without limitations in terms of sample size and span of time covered. However, since this is intended to be a small-scale exploratory study, this does not invalidate the data provided it is viewed as informational and descriptive of a particular situation rather than as prescriptive for teaching generally.

Results and Conclusions

Over the course of thirty hours of classroom observations, eighty-six instances of figurative language were recorded. These instances separated themselves rather naturally into five categories based on what the figurative language was about: literature, writing, language, education and humor. Of these eighty-six instances, 78% were produced by teachers while students produced approximately 22% of the total (see chart 1). Writing and literature were by far the most common subjects of classroom figurative language, making up 66% of the total.

Chart 1 - Figurative language instances by subject

	Total	total %	Teacher	teacher %	Student	Student %
writing	27	31%	23	35%	4	21%
literature	30	35%	18	27%	12	63%
language	16	19%	14	21%	2	11%
education	9	10%	9	13%	0	0%
humor	4	5%	3	5%	1	5%
	86		67		19	

On a classroom level, computation of the average number of figurative language instances per individual class (see chart 2) shows that the average number of student-generated instances varies minimally from class to class. Teacher-generated figurative language varies widely, however. It is important to note that 10A and 10B, both classrooms with curriculums driven by the North Carolina end-of-course 10th grade writing test, produced all 27 instances of figurative language about writing found in the study. The literature numbers for these two classrooms are comparable to those in grades 9 and 12.

Chart 2 - Figurative language instances by classroom

	12th - 7 hours			10th A - 7 hours			10th B - 9 hours			9th - 7 hours		
subject	tchr	stud	tot	tchr	stud	tot	tchr	stud	tot	tchr	stud	tot
literature	5	3	8	3	3	6	6	3	9	4	3	7
writing	0	0	0	8	1	9	15	3	18	0	0	0
language	2	1	3	2	1	3	7	0	7	3	0	3
education	1	0	1	3	0	3	5	0	5	0	0	0
humor	0	1	1	2	0	2	1	0	1	0	0	0
	8	5	13	18	5	23	34	6	40	7	3	10
total/class	1.1	0.7	1.9	2.6	0.7	3.3	3.8	0.7	4.4	1.0	0.4	1.4

BEST COPY AVAILABLE

This classroom-by-classroom comparison has two major implications. First, it indicates that curriculum and individual teacher style are two important variables in determining how often figurative language is produced in a particular classroom. Second, it suggests that the teaching of writing provides a primary impetus for the generation of figurative language by high school English teachers. Literature appears to be the subject that prompts students to generate figurative language most frequently.

Figurative language about writing and literature tended to occur in clusters, with several examples produced during the same writing lessons or literary discussions. Metaphors about writing tended to be explanatory ones, aiming to elucidate how to *do* writing, likening writing to other activities with which students were familiar. Students produced more of the discourse during literature discussions, and thus produced more figurative language about this subject. The focus was relational, dealing with how-to-understand more than the how-to-do of writing.

Figurative language about language imparted words with a certain active power but also made them passive, mechanical objects which are acted upon. No pattern emerged to indicate when metaphoric understandings of language would be articulated by students or teachers. Figurative language in this category often paired an unusual verb with a language-oriented subject, the verb imbuing the subject with an extended metaphorical meaning. Metaphorical understanding of system-level education and figurative humor were rather infrequent. The rare examples here were generally not fresh or active in any way and sometimes bordered on cliché.

In the course of this study, it became apparent that two factors have a great deal of influence over whether or not a teacher uses figurative language as an instructional tool. The content of the lesson certainly played a role, both at the curricular level and in the day-to-day subjects of lessons. Certain subjects tended to elicit more figurative explanations, and when a teacher was working from prepared materials, they tended to refer back to the specific concrete language on that material when elaborating or answering questions. When the lesson relied largely on a teacher's understanding of the material with no concrete prepared examples, however, teachers turned to figurative language to instruct and explain.

Individual teacher style was also major determinant of how much or how little figurative language was produced in a classroom. Some teachers are inclined to utilize figurative language for clarifying explanations, while others are more likely show models, or speak in specific, concrete terms when faced with the same instructional situations. This emphasis on individual

teacher style makes it worthwhile to note that overarching metaphorical understandings of education did not noticeably manifest themselves in classroom figurative language in this study.

The classroom metaphors recorded in this study were not always the fresh, generative metaphors espoused as most effective by scholars. Some were unique and instructive, and equal shares were stale or cliched metaphors. However, theory and the practice observed in this study do agree on two points. Active, vivid metaphors do appear to engage students effectively and do a useful job of explaining material. Similarly, it was the difficult-to-articulate cognitive or internal processes that prompted students and teachers to turn to figurative language. Things like explaining the qualities of good writing or articulating understandings of literature were the aims of the freshest and most interesting teacher and student-produced metaphor. In these cases, classrooms were confronting the challenge of producing a language to effectively communicate about language.

References

Blackwell, S. (1993). *Teaching and learning about literacy: Metaphors that guide teachers' beliefs*. Unpublished Doctoral Dissertation, Indiana University.

Bruner, J. (1986). *Actual minds, possible worlds*. Cambridge, MA: Harvard University Press.

Healy, M. and Barr, M. (1991). Unifying the English language arts curriculum: Language across the curriculum. In Flood, J. et al (eds.), *Handbook of Research on Teaching the English Language Arts* (pp. 820-826). New York: Macmillan.

Moffett, J. and Wagner, B. (1992). *Student-centered language arts K-12* (fourth edition). Portsmouth, NH: Heinemann.

Munby, H. (1990). Metaphorical expressions of teachers' practical curriculum knowledge. *Journal of Curriculum and Supervision*, 6(1), pp. 18-30.

Ortony, A. (1975). Why metaphors are necessary and not just nice. *Educational Theory*, 25(1), pp. 45-53.

Pickering, J. and Attridge, S. (1990). Viewpoints: metaphor and monsters - children's storytelling. *Research in the Teaching of English*, 24 (4), pp. 415-440.

Sanders, D. and Sanders, J. (1984). *Teaching creativity through metaphor*. New York: Longman, Inc.

Schwalbach, E. (1992). *Teaching comprehension of metaphor in poetry: A look at engagement*. Unpublished Doctoral Dissertation, The University of Wisconsin - Milwaukee.

Strickland, C. and Iran-Nejad, A. (1994). *The metaphoric nature of teaching and learning and the role of personal teaching metaphors*. Paper presented at the Annual Meeting of the Mid-South Educational Research Association, Nashville, TN, Nov. 9-11, 1994. (ERIC Document Reproduction Service No. ED 399 208).

White, R. (1996). *The structure of metaphor*. Cambridge, MA: Blackwell Publishers.

BEST COPY AVAILABLE

Cooperative Learning:
The Effect of Gender and Ability Grouping

by

Tina Lane Heafner

with

John Litcher

Wake Forest University

Department of Education

December, 1998

INTRODUCTION

Cooperative learning of any type rarely ever has negative effects and research indicates that cooperative learning is beneficial to all students of all ability levels. Studies have found that students' knowledge and comprehension levels were higher than those in more traditional classroom settings. Although cooperative learning is a proven teaching practice, little attention has been devoted to the effectiveness of grouping methods. To help students learn, teachers must create the most desirable atmosphere. Cooperative learning is an indispensable teaching tool in helping students understand difficult concepts. Without further research in grouping strategies, teachers will be unable to meet their students' cognitive needs. This study will evaluate the effectiveness of three methods of grouping. Does gender grouping, homogeneous ability grouping, and heterogeneous ability grouping effect the success of cooperative learning?

REVIEW OF LITERATURE

"How research groups are formed may have considerable influence on how the students interact, what they learn, and what they produce" (Rekrut, 31). According to Lando and Schneider's study, academically gifted students benefited more from homogeneous groups than heterogeneous groups. "Gifted children exchanged significantly more often than other homogeneous groups or heterogeneously mixed youth" (Lando, 55). Webb, Baxter, and Thompson analyzed "student achievement, gender and ethnicity—and discussed the effects of these student characteristics on the achievement of individuals within groups" (Webb, 92). They found that when teachers formed groups, they used a variety of rules based on achievement and formed mixed-gender groups (Webb, 97). When students chose their own groups, they created same-gender groups.

Slavin suggests that within class ability grouping for some subject areas may be effective. He indicated the positive effects of homogeneous over heterogeneous grouping. He did not find that ability grouping favored one group over the other. In addition, Webb has shown that medium ability subjects in homogeneous groups outperformed their counterparts in heterogeneous groups. Baron argues that both low and high ability students benefit from heterogeneous groups. Hopper found that achievement of high ability students had the greatest success in homogeneous groups, where as medium ability students achieved the least in homogeneous groups. Heterogeneously grouped low ability students "tended to outscore their homogeneous counterparts" (Baron, 291). Baron's study found that either homogeneous or heterogeneous grouping did not effect the success of high ability students. Baron (300) continued by stating that "no grouping strategy had particularly debilitating effects on either high or low ability children." Lando (56) argued that "highly advanced children. . . may especially gain both academic and socioemotionally" from the experience of cooperative learning. Hopper and Hannafin contend that cooperative learning in heterogeneous ability groups improved academic achievement of low ability students without having a negative effect on the academic achievement of high ability students. They also stated that heterogeneously grouped low ability students outperformed homogeneously grouped low ability students and that homogeneous or heterogeneous grouping had little overall effect on the achievement of high ability students. The National Council for the Social Studies supported heterogeneous grouping over homogeneous grouping within social studies classrooms (Stahl, 61). Heterogeneous ability grouping has significant potential for both academic success and social outcomes.

METHODOLOGY:

A causal comparative study was made of a random sample of 96 high school students enrolled in Economic, Legal, and Political Systems, World History, and United States History. Subjects were ninth, tenth, and eleventh grade students at North Forsyth High School.

Groups were assigned based on gender, homogeneous ability, or heterogeneous ability. The present grade point average, test scores, and teacher observation of performance in class determined ability groups. Homogeneous ability groups were divided into three categories: high ability, those who had a 90-100 average, high test scores and were active participants in class; medium ability, those who had a 77-89 average, average test scores and limited participation; and low ability, those who had a 76 or below average, low test scores and no class participation.

Heterogeneous ability groups consisted of students in high, medium and low ability groups. Gender groups were divided into two categories: male and female. During the cooperative learning activity, students completed a packet comprised of lessons covering key concepts and objectives. Students received a grade for the accuracy of the packet work. Students were tested at the conclusion of the cooperative learning activity. The test assessed student mastery of the objectives for the unit. A final grade was given for the cooperative learning unit. The final grade consisted of an average of the test grade and packet grade. A comparison was made of the test scores, packet grades, and final averages of each grouping method to determine any possible patterns in grouping as it related to success. To analyze the data, a One-way ANOVA was performed to evaluate the effect of grouping on test scores, packet grades, and student averages. The independent variables were the three forms of grouping: gender, homogeneous ability, and heterogeneous ability. The dependent variable was the students' test scores, packet grades, and student averages.

RESULTS and CONCLUSIONS

The one-way ANOVA analysis of test scores revealed that grouping according to gender and ability does effect the success of cooperative learning on test scores. Scheffe Tests were used to evaluate which means were significantly different. The means of female gender groups and high ability groups were significantly different, $F=3.14 > CV\ (5, 90)=2.29$. Also, the means of high ability groups and low ability groups were significantly different, $F=2.94 > CV\ (5, 90)=2.29$. There was no significant difference between the means of other groups, because F was within the acceptable region. Homogeneously grouped high ability students outperformed all groups on test scores. Ability grouping proved a more effective method of grouping for test achievement over gender grouping, because the means of high, medium, and mixed ability groups were greater than the male and female groups.

The analysis of cooperative learning packet scores revealed that grouping according to gender and ability did not effect the success of cooperative learning on packet scores. A one-way ANOVA was performed. $CV=2.316 < F= 2.694$; therefore, the null hypothesis that all means of male, female, high, medium, low, and mixed ability were equal was rejected. However, Scheffe Tests proved that the means of all groups were not significantly different. According to L. R. Gay (480), "the Scheffe Test is a very conservative test" and "it is entirely possible, given the comparisons selected for investigation, to find no significant differences even though the F for

the analysis of variance was significant." As a result, gender, homogeneous ability, and heterogeneous ability grouping does not effect student accuracy of work completed within cooperative learning groups. Low ability groups had the least success.

The one-way ANOVA analysis of cooperative learning unit averages of test scores and packet grades disclosed that gender, homogeneous ability, and heterogeneous ability grouping did effect the success of cooperative learning on student averages. Scheffe Tests were used to evaluate which means were significantly different. The means of female gender groups and high ability groups were significantly different, $F=3.70 > CV\ (5, 90)=2.29$. Also, the means of high ability groups and low ability groups were significantly different, $F=3.92 > CV\ (5, 90)=2.29$. There was no significant difference between the means of other groups, because F was within the acceptable region. Homogeneously grouped high ability students' averages were higher than all other groups. Medium ability students outperformed males; however, males had higher averages than mixed ability grouped students. On average, homogeneous grouping proved more successful than heterogeneous grouping

Within each class, the groups that excelled varied. In 60% of the classes, homogeneously grouped high ability students outperformed all other groups. Homogeneously grouped medium ability students scored the highest in 20% of the classes. In the other 20% of the classes, males achieved the highest scores. At the other end of the spectrum, females and homogeneously grouped low ability students had the lowest scores in 80% of the classes, while homogeneously grouped mixed ability students' scores ranked the lowest in 20% of the classes.

Gender, homogeneous ability, and heterogeneous ability grouping does effect the success of cooperative learning. There was a significant difference between female and high ability groupings. There was also a significant difference between high ability and low ability groupings. Gender grouped females and homogeneously grouped low ability students did not perform well. In all areas, test scores, packet grades, and unit averages, they had the lowest scores.

Gender grouping can have both positive and negative effects. The male students that were grouped according to gender had higher packet scores than their ability-grouped peers. Gender grouped females scored poorer on tests, packet grades, and unit averages than ability grouped females. Females are less productive when grouped by gender. In general, gender grouping was not as efficient as ability grouping.

Homogeneously grouped medium ability students outperformed heterogeneously grouped students. High ability students that were homogeneously grouped outscored all students who were heterogeneously grouped. Although high ability and medium ability homogeneous ability grouping proved to be more successful, it was unsuccessful for low ability students. Heterogeneously grouped low ability students were significantly more successful than their peers who were homogeneously grouped. Homogeneously grouped low ability students were the least productive; therefore, homogeneous grouping is not recommended for low ability students.

In summary, multiple grouping techniques should be implemented for cooperative learning activities. All ability levels and gender groups respond to cooperative learning activities differently and benefit from diverse methods of grouping. High and medium ability students profit from homogeneous ability group; where as low ability students excel in heterogeneous ability groups. Males benefit from gender groups; however, females do not. There is no set pattern for grouping that will meet the needs of all students effectively; therefore, teachers should implement multiple grouping techniques to meet the diverse needs of their students.

References

Baron, L. J. (1997, August). The Effects of Cooperative Training and Ability Grouping on Microcomputer Learning. Computers in Human Behavior, 13, (3), 285-304.

Gay, L. R. (1996). *Educational research: Competencies for analysis and application.* New Jersey: Prentice-Hall, Inc.

Hopper, S. and Hannafin, M. J. (1988). Cooperative CBI: The effects of heterogeneous versus homogeneous grouping on the learning of progressively complex concepts. J. Educational Computing Research, 4 (4), 413-424.

Lando, B. Z. and Schneider, B. H. (1997). Intellectual contributions and mutual support among developmentally advanced children in homogeneous and heterogeneous work/discussion groups. Gifted Child Quarterly, 41 (2), 44-57.

Rekrut, M. D. (1997, September). Collaborative Research. Journal of Adolescent & Adult Literacy, 41, (1), 26-34.

Slavin, R. E. (1990). *Cooperative learning: Theory, research, and practice.* New Jersey: Prentice-Hall, Inc.

Stahl, R. J. and Vansickle, R. L. (1992). *Cooperative learning in the social studies classroom: An introduction to social study.* Washington, DC: National Council for the Social Studies.

Webb, N. M., Baxter, G. P., and Thompson, L. (1997, November). Teachers' grouping practices in fifth-grade science classrooms. The Elementary School Journal, 98 (2), 91-113.

The Efffects of Teacher Facial Expression and Eye Contact on Student Classroom Attitude and Participation

by
Katharine M. Humphrey
with
Joseph Milner
Wake Forest University
Department of Education
December, 1998

Introduction

This study hypothesizes that communication and relationship between teacher and student are necessary to successful classrooms. A classroom community in which all students feel comfortable and valuable results significantly from positive teacher/student relationships. A teacher who conscientiously builds good relationships with students helps to create overall classroom ethos by cultivating trust and respect within each student. This climate of mutual respect is crucial in an English classroom, in which students are asked to become intellectually and emotionally engaged in texts. Therefore, part of an excellent teacher's responsibility is to develop respect between him or herself and each student. This is achieved primarily through productive and clear communication. Teacher immediacy, defined by Mehrabian (1967) as "the degree of perceived physical and psychological closeness between people," comprises the communication practices of teachers, and therefore has an effect on teacher/student relationships. This study presupposes that effective communication has a powerful physical component. Nonverbal teacher immediacy behaviors, such as facial expression, eye contact, body posture, proximity to students, and gesturing physically suggest the psychological accessibility of teachers.

Problem Statement

What effects do teacher facial expression and eye contact, both defined as nonverbal immediacy behaviors, have on teacher accessibility as manifested in student comfort and receptivity toward the teacher? Does teacher accessibility impact student willingness to pay attention and participate in class?

Review of Literature

Teacher immediacy is integral to a positive teacher/student relationship. Student learning is affected not only by what is taught, but also by the relationship between teachers and students (Nisbet & Entwhistle, 1998).

Much current literature focuses on teacher immediacy's effect on student motivation. Brophy (1987) asserts that motivation for learning is often stimulated through various forms of modeling, and Christophel (1990) finds that the classroom learning environment powerfully influences student motivation. Students who perceived teachers to be both verbally and nonverbally immediate reported greater levels of class motivation (Christophel 1990). Finally, teacher immediacy's arousal stimuli is highly associated with attentional focus, enhanced memory, and recall (Kelley & Gorham, 1988).

Kelley & Gorham (1988) found that nonverbal immediacy behaviors, such as vocal expressiveness, smiling, and a relaxed body position, were most salient to students. Nonverbal cues including eye contact, relaxed body position, smiling, and vocal expressiveness positively influenced student affect toward teacher communication (Andersen, 1979). Burgoon, Buller, Hale & deTurck (1984) discovered during their examination of classroom interpersonal encounters that eye contact, close proximity, forward body lean, and smiling conveyed greater intimacy, attraction, and trust.

Butland & Beebe (1992) suggest that nonverbal teacher immediacy be placed within the context of communication theory. Nonverbal immediacy is termed as implicit communication. Implicit communication, expressions of feelings and attitudes that supercede what is conveyed by speech such as head nods, use of personal space, facial expression, and body posture, makes sense out of subtle interpersonal interaction (Butland & Beebe, 1992). Nonverbal immediacy renders the teacher approachable to students and, in psychological terms, increases the "longing to approach the object" (Mehrabian 1981). Gorham (1988) and Christophel (1990) agree that nonverbal immediacy is more predictive of increased student learning than verbal immediacy.

Although the majority of studies researched concluded that smiling was an effective immediacy tool, Neill (1989) shows that secondary school children characterize smiling as weak and uncertain. Gorham and Zahkahi (1990) conclude that teachers have an accurate impression of how they present themselves to their students. Research suggests that teachers can cultivate immediacy behaviors in order to increase the communicative success of their classrooms.

Methodology

Subjects

The subjects of this study include four secondary English teachers who teach at East

Forsyth High School in Kernersville, NC. They will be referred to as Teacher A, B, C, and D. Four English classes were observed for a total of thirty hours.

Procedures

The variety and types of facial expressions and eye contact frequency of the four teachers were observed. Two of Teacher A, B, and C's students were interviewed, and Teacher D's entire fourth period class (seven students) was interviewed. The interview questions were designed to assess the relationship between teacher facial expression and eye contact on student motivation and receptivity to the teacher, including student perception of teacher accessibility.

Results

Teacher A

Teacher A's facial expressions were the least dynamic of the teachers observed; his facial expression rarely changed while lecturing, reading from a text, or discussing a text with students. His facial movement and energy was consistently low in contrast with his speech, which was often filled with high-energy metaphors, insights, and sarcasm. Teacher A made moderate eye contact with students, most often when they were talking out of turn. **Student I** is a senior. She reported that frequent eye contact from a teacher is intimidating if she is struggling with the subject matter, and helpful if she finds the subject matter easy. She feels much more motivated to pay attention and participate in class if the teacher indicates his or her personality through facial expressiveness.Student I feels that frequent eye contact and a variety of facial expressions are attributes of an effective teacher. **Student II** is also a senior. She feels that frequent teacher eye contact conveys the teacher's intention to be in touch with students. She agreed that eye contact increases her willingness to pay attention and participate in class. Student II thinks that a variety of teacher facial expressions keeps the classroom lively and interesting. Student II likes the teacher to smile often.

Teacher B

Teacher B is more expressive than Teacher A. Her facial expression seems to be dictated by the class dynamic. However, her face changes very little as she is giving a lecture or conducting a class discussion. She was most frequently observed to express a small, slightly uneasy smile. Occasionally, she gives the students an exuberant smile in reaction to a salient response or a humorous statement. Teacher B uses very frequent eye contact. **Student I**, a freshman, reported that moderate frequency in teacher eye contact is most effective in persuading her to pay attention and participate in class. She said that expressiveness from a teacher on any level makes her trust and like the teacher more and therefore want to become more involved in the class. Student I feels comfortable and encouraged around a teacher who smiles frequently, but characterizes a constantly smiling face as insincere. **Student II**, a freshman, said that frequent eye contact has no effect at all on his class participation.

Teacher C

Teacher C displays many qualities of nonverbal immediacy. Her face is lively and changes expressions frequently in order to orchestrate the class. Her facial expressions interact with her students: she smiles when she seeks to encourage and frowns when she seeks to discourage. She smiles often, especially when students enter the classroom. Teacher C is conscientious with her eye contact. **Student I**, a senior, feels that frequent eye contact from a teacher keeps her alert in class. To Student I, facial expressiveness is very important, especially smiling. **Student II**, a senior, feels that frequent eye contact from a teacher has no effect on his class involvement or behavior. He noted, however, that constant or intense eye contact makes him feel wary and uncomfortable, and expresses that he hates when teachers stare at him. Student II reported that varied facial expressions and frequent smiling increase his comfort level in the classroom and therefore make him more willing to participate.

Teacher D

When Teacher D interacts with students, his face is open, alive, and energetic. Teacher D makes frequent eye contact with each student.

Class Interview

Overall, the seven members of Teacher D's fourth period class agreed that teachers who make frequent eye contact and use a variety of facial expressions make students more comfortable and receptive than teachers who do not. They expressed that eye contact communicates both interest and concern, and validates student responses. Moderate smiling from a teacher makes the feel relaxed and encouraged. The students repeatedly emphasized the importance of good teacher/student relationships; they are more likely to trust, and therefore perform for, a teacher who attempts to build good relationships with them.

Conclusions

All students interviewed feel that frequent eye contact and a variety of facial expressions are qualities of an effective teacher. Most state that moderate eye contact and a moderate variety of facial expressions positively impact their willingness to pay attention and participate in class. Generally, immediacy in both areas makes students feel comfortable and relaxed in class.

Students enjoy gaining access to their teacher's personality. Most students value enthusiasm, energy, and interest from their teacher. Students appreciate acknowledgement from a teacher but do not like to be watched closely. Students agree that teacher eye contact and facial expressiveness help foster good communication and relationships between teachers and students. Most students feel that good relationships with teachers positively impact their involvement and behavior in class.

References

Andersen, J. F. (1979). Teacher immediacy as a predictor of teaching effectiveness. Communication Yearbook 3, 543-559.

Brophy, J. (1987). Synthesis of research on strategies for motivating students to learn. Educational Leadership, 40-48.

Burgoon, J.K., Buller, D.B., Hale J.L., & deTurck, M.A. (1984). Relational messages associated with nonverbal behaviors. Human Communication Research,10, 351-378.

Butland, M., & Beebe, S. (1992). Teacher immediacy and power in the classroom: the application of implicit communication theory, 1-31.

Christophel, D. (1990). The relationships among teacher immediacy behaviors, student motivation, and learning. Communication Education, 39, 323-339.

Gorham, J., & Zakahi, W. (1990). A comparison of teacher and student perceptions of immediacy and learning: monitoring process and product. Communication Education, 4, 354-377.

Kelley, D.H., & Gorham, J. (1988). Effects of immediacy on recall information. Communication Education, 37, 198-207.

Mehrabian, A. (1981). Silent messages: implicit communication of emotions and attitudes (2nd Ed.). Belmont, CA: Wadsworth.

Neill, S. (1989). The effects of facial expression and posture on children's reported responses to teacher nonverbal communication. English Educational Research Journal, 15, 195-203.

Nisbet, J.D., & Entwhistle, N.J. (1988). The transition to secondary education. London: University of London Press.

Social Studies Teachers and the Internet: Are The Teachers Using It and If So, How?

by
Jeremy Kopkas
with
John Litcher
Wake Forest University
Department of Education
December, 1998

The Internet has become a valuable source for distributing information, conducting research, and providing a forum for discussion on a variety of topics. As the Internet becomes a larger part of the everyday lives of many Americans, it will be important to achieve a functional understanding of this technology and its capabilities to harness the tremendous potential it has for integrating people and nations. Though integration may not be the explicit mission of the Internet, it enables and facilitates open communication, which contributes to its crucial role in aiding in the production of informed and responsible global citizens. Society is rapidly approaching the twenty-first century and it will be imperative for teachers - specifically social studies teachers - to gain a broader understanding of the Internet and its potential for citizenship education. The purpose of this study was to determine how often and it what ways this powerful tool is being utilized in the social studies classroom.

Review of Literature

There is very little literature about the Internet, and there are even fewer studies relating to the social studies and Information Technology. What does exist suggests that schools struggle with integrating information technology on many different levels. School boards, under pressure from the local constituency to minimize spending, often purchase inadequate equipment or simply cannot keep up with the rapidly changing world of technology (Kaplan, Rogers, 1998; Papadakis, 1998; Morton, 1998). Businesses that choose to forgo - or even delay - upgrading technology find themselves outpaced by competition and eventually are out of the game. Additionally, some businesses lose ground if they upgrade technology without keeping their employees up to date with the corresponding technological innovations. Similarly, schools must not only buy modern equipment, but most also train their teachers to use it. Unfortunately, teachers who do receive computer training usually find that it is misdirected or does not give them enough time to absorb the material. Many studies found that the computer training did not provide thorough suggestions for using computers in a way that would be beneficial to them in

the classroom or in lesson planning (Pugalee, Robinson, 1998; Kaplan, Rogers, 1998; Trathen, Blanton, 1998; White, 1997; Diem, 1997; Murray, 1997; Sanche, Haines, & Robertson, 1997; Mc Kenzie, Kirby, Clay, & Davidson, 1997).

The effects of Computer Based Education on student achievement, however, ostensibly display the benefits of the addition of computers and technology to the curriculum (Berger, Lu, Belzer, & Voss, 1993). For example, a study done by researchers at the University of Michigan showed that computer-based teaching raised students' scores by thirteen percentile points. In addition, the students taught on computers developed positive attitudes not only toward computers, but also toward the courses that utilized computers. Using computers allowed students to grasp new concepts more quickly, reducing the amount of time required for learning (Kulik, Bangert, & Williams, 1983).

Unlike the world of business, where the bottom line is almost immediately affected by the introduction of a new technology, schools struggle with measuring and quantifying the impact of technology as it relates to students' long-term success. The task of measuring the effects of technology becomes even more difficult when it comes to civic education (Diem, 1997). The relative newness of computer technology in the classroom and the rapid changes occurring with this technology--specifically the Internet--make it even more difficult.

The Internet is changing so rapidly that 1 million pages are added each month (Pugalee, Robinson, 1998). An estimated 20 to 30 million individuals worldwide use the Web on a regular basis, and by the year 2000, 95% of schools plan to have access to the Internet. (1998). In 1996, 64% of K-12 schools nationwide had Internet access, these schools only have an average of one computer for every ten students. In the state of North Carolina, during 1996, 65% of schools had access to the Internet with an average of seven students per computer (Papadakis, 1998). It would appear that teachers, on the whole, are slow to change, and that social studies teachers, in particular, lag behind the rest of their colleagues when it comes to using technology in the classroom (Morton, 1998; Mehlinger, 1998; Murray, 1997).

Methodology

Subjects. Participants in this study were social studies teachers in the nine high schools of the Winston-Salem/Forsyth County (WS/FC), North Carolina school district.

Measures and Procedures. Surveys were distributed in order to determine the level of Internet usage by the social studies teachers in the schools. The survey dealt with school-wide

accessibility to the Internet, and sought to determine whether teachers are using this tool in lesson planning, classroom instruction, and assignments, as well as to determine the ways they use the Internet to enhance the learning process. Complete anonymity was maintained.

Results and Conclusions

Results. The survey response rates for individual schools varied from fifty to one hundred percent, with an overall response rate of seventy-four percent for the system. The level of teacher experience also varied greatly, from one to twenty-eight years. Of the social studies teachers surveyed, eighty-eight percent had a computer in their home, and fifty-three percent of these computer owners had Internet access at home. Eighty-four percent have computers in their classrooms, and sixty-eight percent of those teachers have Internet access. Furthermore, the average number of computers per social studies classroom is 1.3. All of the WS/FC high schools have Internet access, even if all of their classrooms do not.

A Likert scale measured how often these teachers use the Internet to plan units and lessons, how often they incorporate it in classroom instruction, and how often they encourage or require its use in homework assignments and projects. Five response choices were given: *never*, *rarely*, *sometimes*, *frequently*, and *always*. Data showed a scant two percent reporting *always* using it as a source for creating and enhancing a unit or lesson. The Internet is reportedly used to plan lessons only *sometimes* or *rarely*--forty-seven percent and thirty-five percent, respectively. Use of the Internet in direct classroom instruction is also very low with just two percent noting they *always* use it, while the overwhelming majority (forty-two percent), said they *rarely* use it in the classroom setting. Finally, when it comes to assigning homework and projects, half of the surveyed social studies teachers only *sometimes* encourage or require its use.

Lastly, the survey attempted to discover how the teachers using the Internet use the technology to enhance their teaching. Ninety-five percent of teachers who use the Internet in developing their lesson plans use recommended sites, such as Smithsonian and National Geographic. Seventy-six percent also chose to create their own unique searches to find sources available through various search engines. However, according to the data, very rarely do teachers communicate with one another to find out what others in the field are doing as far as planning lessons – only twenty-seven percent use E-mail or Newsgroups to gather information. Twelve percent use a combination of video and multimedia sources to gather information for use in an Internet search.

Although the Internet is used very infrequently in classroom instruction, its most popular use (ninety-six percent) is as a teacher resource. Teachers gather information from online news sources or from web pages containing information on a given topic. Forty percent of these teachers said that they have centered a class or group discussion around a web site. Still fewer--twenty-eight percent--use E-mail or a Live Feed connection to create an authentic learning environment.

Finally, when assigning homework and projects, one-hundred percent of the teachers who report Internet usage prefer to use it as a source for students to gather additional information for assignments. Only three percent use web page design as a tool for learning about a particular subject or topic. And only six percent have asked students to E-mail homework.

Conclusions. The results of this survey have shown that although teachers have accessibility to the Internet, it is neither convenient nor efficient. In order for the Internet to become more prevalent in the classroom, it must be made more accessible. Comprehensive accessibility requires increases in computer hardware, and the necessary training to utilize the technology. The evidence put forth by these surveys suggests limited amounts of this definition of accessibility. For example, there are only 1.3 computers per social studies classroom, and some teachers reported not using the Internet because they have not been taught how to use the computer technology efficiently.

District policy requires that all students in the WS/FC schools have a permission slip on file before they can have Internet access. If every student had permission to access the Internet, then assigning homework and projects would not pose such a problem. However, the fact that not every student turns in a permission slip makes teachers reluctant to encourage or require its use for homework assignments and projects. Some teachers also report hesitancy using the Internet for homework because some information on the Internet is incorrect, and they have caught students plagiarizing

Social studies teachers cannot assume subjects such as history are static. One needs only to look at the recent discoveries regarding Thomas Jefferson to understand the dynamics of the field. The Internet is a great way to keep up with these advancements. Some courses do take advantage of the current, not to mention the variety of, information available over the Internet. The survey pointed out that courses such as geography and international relations use the Internet more regularly than others. Additionally, teachers in the survey who use the Internet also stated

that the Internet has given some diversity to their lesson plans and they have noticed that students who have used the Internet have had more information in their assignments. This can be explained by the plethora of information available on the Internet which could not possibly be found in a school library.

In conclusion, the relatively recent introduction of the Internet into the public schools would lead one to believe that it would be some time before this technology would be available to all students and educators. The results of this survey point to the contrary: the WS/FC schools are making an effort to achieve higher degrees of accessibility so that more students, faculty, and administrators can have access to computers and the Internet. The school system is headed in the right direction, but there is still a need to increase the ease of use. Additionally, teacher training needs to be much more thorough and comprehensive in order for teachers to become comfortable with these types of technology. This is inextricably linked to the issue of greater accessibility, which combines the call for better training and a greater number of faster machines. Finally, the teachers need to begin to embrace the Internet for its potential to increase the amount and depth of information available to a student. However, the results of the survey state that social studies teachers in the WS/FC schools are using the Internet in an extremely limited capacity and are using it inconsistently. In order for Internet technology to be used constructively for educational purposes by students, it is imperative that the teachers incorporate it in lesson planning and classroom instruction.

References

Berger, C.F., Lu, C.R., Belzer, S.J., & Voss, B.E. (1993). Research on the uses of technology in science education. Handbook of research on Science Teaching and Learning, pp. 466-490.

Diem, R.A. (1995). Technology and civic education: New directions - new issues. In D.A. Willis, B. Robin, J. Willis (Eds.), Technology and Teacher Education Annual - 1995 (pp.42-43). Charlottesville, VA: AACE.

Kaplan, D.A., Rogers, A. (1996, April 22). The silicon classroom. Newsweek, pp. 60 - 61.

Kulik, J.A., Bangert, R.L., & Williams, G.W. (1982). Effects of computer-based teaching on secondary school students. Journal of Educational Psychology, 75 (1). pp. 19-26.

McKenzie, B.K., Kirby, E., Clay, M.N., & Davidson, T.J. (1997). Redesigning technology training programs: What is and what could be. In N. Strudler, N. Hunt, & D. Niederhauser (Eds.), Technology and Teacher Education Annual - 1997 (pp.40-44). Charlottesville, VA: AACE

Mehlinger, H.D. (1996). School reform in the information age. Phi Delta Kappan, pp. 400-407.

Morton, C. (1996). The modern land of laputa: Where computers are used in education. Phi Delta Kappan, pp. 416-419.

Murray, K.C. (1997). Internet activities for preservice social studies teachers: An exploratory investigation. In C. White (Ed.), Technology and Teacher Education Annual - 1997 (pp.4-8). Charlottesville, VA: AACE

Papadakis, M. (1998). Economic and social significance of information technologies. National Science Board, Science & Engineering Indicators - 1998. Arlington, VA: National Science Foundation, 1998 (NSB 98-1).

Pugalee, D.K., & Robinson, R. (1998). A study of the impact of teacher training in using internet resources for mathematics and science instruction. Journal of Research on Computing in Education, 22 (1), 78-81.

Sanche, R., Haines, L., & Robertson, G. (1997). Coplanner: Integrating computer technology into preservice resource education. In N. Strudler, N. Hunt, & D. Niederhauser (Eds.), Technology and Teacher Education Annual - 1997 (pp. 11-15). Charlottesville, VA: AACE

Schlagal, B., Trathen, W., & Blanton, W. (1996). *Structuring telecommunications to create instructional conversations about student teaching*. Journal of Teacher Education, 45 (3), pp. 175-183.

White, C. (1997). *Preservice to the "real world": Transforming social studies through technology*. In C. White (Ed.), Technology and Teacher Education Annual - 1997 (pp.12-17). Charlottesville, VA: AACE.

BEST COPY AVAILABLE

Integrating Culture and Language in the Elementary School Foreign Language Program

by
Claire W. Maddrey
with
Mary Lynn Redmond
Wake Forest University
Department of Education
December, 1998

Introduction

In the field of foreign language study, cultural awareness is essential to understand a language, to develop positive student attitudes, and to promote general interest in foreign languages. Developing cultural sensitivity towards others also helps us to respect and relate to those whose cultural backgrounds differ from our own. In the foreign language classroom, this awareness of cultural similarities and differences cannot be imparted through the teaching of vocabulary and grammatical structures alone. Rather, foreign language teachers should emphasize cultural concepts in conjunction with the teaching of vocabulary, grammar, and reading, beginning at a young age (Curtain and Pesola, 1994)

This responsibility presents a unique challenge to foreign language specialists who teach young children. Robinson (1985), Crawford-Lange and Lange (1984), and Curtain and Pesola (1994) indicate that early childhood is the most impressionable time in a child's cognitive development. This is because it is during childhood that a student forms his patterns of perceptions. If the teacher can develop an atmosphere that celebrates and incorporates aspects of the target culture in the foreign language classroom, students will be more likely to develop a positive attitude towards the target language.

One of the many goals of the Foreign Language in the Elementary School (FLES) Program is to develop within each student an understanding and appreciation of the target culture. In "Guidelines for Starting an Elementary School Foreign Language Program," Rosenbusch (1995) explains that in addition to the cognitive benefits and gains in academic achievement, foreign language learning at a young age results in the development of positive attitudes towards diversity. It is from this perspective that this researcher will determine both how cultural awareness is taught in the FLES Program and how the children's thinking extends beyond factual recall.

Review of Literature

In assessing cultural awareness in a FLES program, it is first necessary to define the term "culture". Educators define the concept of culture in various ways, making it difficult to determine what aspects of culture foreign language students should be taught in order to achieve cultural competence (Seelye, 1993). Omaggio (1986) explains that culture with a capital "C" involves geographic, historic, and aesthetic factors to include such aspects as opera, philosophy, and literature. Culture with the small "c" is the anthropological approach to culture and includes the study of people's customs, behaviors, values, and beliefs. Recently, educators have been placing emphasis on the "c" when it concerns beginning foreign language learners, explaining that the "C" should be viewed as the ultimate goal of foreign language students. Tomalin and Stempleski (1993) explain that "c" culture can be viewed in three parts: products (literature, folklore, art, music), ideas (beliefs, values, institutions), and behaviors (customs, habits, dress, food). Almost all of these parts are taught on some level to students in the elementary grades.

Once culture has been defined and categorized, it is necessary to determine how one learns about culture. Robinson (1985) argues that we acquire cultural messages through many different learning modes. She describes learning modes as "analytical, emotional, kinesthetic/tactile, temporal, physiological, olfactory, and aesthetic/visual" (26). Robinson (1981) continues that in addition to learning about culture through the verbal system with the syntax and lexicon of a language, one also learns of differences in a culture through the study of paralinguistic signs and the nonverbal system (Robinson, 1981).

Once the many ways in which one learns about culture have been determined, one must identify specific ways to teach culture and instill cultural awareness. This can include bringing speakers into the classroom who are natives of the target culture (Seelye, 1993). A second way to teach culture is through the use of French advertisements as an educational tool (Doering, 1993). Hughes (1986) contends that the use of newspapers in the foreign language classroom is a very effective technique to teach cultural awareness.

Yet, this researcher seeks to determine specific ways to introduce culture to elementary children. Students acquire cultural awareness when they are surrounded by meaningful language experiences that are representative of the culture. Language and culture are essential in developing language skills and cultural awareness, hence, the two should be taught together, and not as separate skills. For example, Curtain and Pesola (1994) contend that the entire school, not

just the foreign language classroom, should reinforce cultural concepts. Students find purpose in their studies when they use knowledge from their foreign language classroom in their daily activities outside of the classroom. Curtain and Pesola (1994) continue to say that when introducing cultural aspects to young children, the teacher must be certain the activities and games used are appropriate for the age and maturity of the students. By creating a more authentic cultural environment, teachers are bringing elements of the target culture into the classroom.

Additionally, Seelye (1993) explains that incorporating folklore is an ideal way to teach anthropological aspects of a particular culture. Curtain and Pesola (1994) say that another way to teach students cultural ideas and values of a target culture is through the use of storytelling. West and Donato (1995) agree that by incorporating folktales and legends from francophone West Africa, for example, students' global awareness and cultural assumptions will be broadened.

After determining specific methods regarding how to introduce children to culture in the elementary grades, one must determine how to define, test, and implement cultural goals. Seelye (1993) explains that specific competencies or objectives must be identified so teachers will have an effective way to assess how well their students have reached specific cultural goals. Yet, how do we define these specific cultural objectives?

In an attempt to clarify and codify the cultural goals of foreign language learners at various levels, the American Association of Teachers of French (AATF) National Commission on Cultural Competence (Abrate, 1998) created a framework of objectives, called *Acquiring Cross-Cultural Competence: Four Stages for Students of French,* which closely corresponds to those outlined in the National Standards for Foreign Language Learning (National Standards in Foreign Language Education Project, 1996). The National Standards are broad in scope and give the direction foreign language teachers should follow for K-12 language development (National Standards in Foreign Language Education Project, 1996). Only recently, in 1998, has the American Council on the Teaching of Foreign Languages (ACTFL) drafted a list of cultural competencies that are precise and clearly defined for grades K-12 (ACTFL Proficiency guidelines for K-12 Learners Task Force - Draft, 1998).

Various goals and objectives are defined and students are tested in different forms. This researcher focused on the Foreign Language in the Elementary School (FLES) Program of Forsyth County, North Carolina, in determining how cultural awareness is taught. The focus was

on specific activities used in FLES programs that teach culture and develop cultural awareness beyond recall and memorization of factual information.

Methodology

This researcher conducted classroom observations and interviews in two of the public elementary schools of Forsyth County, North Carolina. I observed French classes in Grades 2-5, each taught by an experienced French teacher. These classes receive French instruction twice a week in thirty-minute sessions with approximately twenty-five students in each class. I recorded my classroom observations throughout the observation period in my journal, noting specific cultural topics addressed. In addition, to gain a deeper understanding as to why certain activities are selected in the teaching of cultural aspects, I posed ten questions to the two elementary French teachers that I observed. I investigated ways in which elementary teachers go beyond identification of aspects of French life to convey a richer and fuller understanding of the target culture to young students. Also, as part of my interview I assessed the students' level of understanding, using Bloom's Taxonomy of Thinking Processes as my instrument of measurement to determine how the children's thinking extends beyond factual recall.

Results and Conclusions

As a result of the ten interview questions posed to the two foreign language specialists, this researcher learned that both teachers approach the teaching of culture in similar ways. First, for their teaching purposes, they define culture by the "c" definition and their goal is to make the study of language interesting and multi-dimensional. This definition includes teaching the daily aspects of a French person's life. The two language specialists described similar methods and activities including the use of Venn Diagrams to compare and contrast francophone areas with familiar areas, the creation of authentic francophone foods, and the celebration of francophone holidays. Finally, both Teacher A and Teacher B agreed that when cultural concepts are integrated into the rest of the language curriculum as opposed to being introduced separately, students are able to experience the language and its culture in an authentic manner, thus developing an appreciation of cultural differences.

A second goal of this researcher's interviews was to determine how the children's thinking extends beyond factual recall, and I used Bloom's Taxonomy of Thinking Processes as my instrument of measurement to do this. Overall, both Teacher A and Teacher B agreed they most frequently require their students to exercise the more basic levels of taxonomy: knowledge,

comprehension, and application. For the first level of taxonomy, knowledge, students are constantly required to recall specific bits of information such as colors, numbers, and farm animals. Second, to demonstrate comprehension, the second level of taxonomy, a student may express orally what he is shown visually. For example, when shown a picture of a sun on a clear day, the student shows he understands the idea communicated when he expresses in the target language that the weather is nice or sunny. A student exercises the third level of taxonomy, application, when he applies his new knowledge, most often in drawings. For example, students illustrate their comprehension of a story that is read to them when they draw pictures that come from the story. This can include drawing the characters or illustrating a scene from the story.

Thus, from the interviews and data collected, this researcher feels many activities are being employed to ensure that the goal of instilling cultural awareness in students of a FLES Program is being accomplished. Moreover, I found that both Teacher A and Teacher B employ activities that exercise, to some degree, students' thinking on each of Bloom's levels of taxonomy.

References

Abrate, J.E. (1998). Dimension '98 - communications, cultures, connections, comparisons, communities. In D. Alley & P. Heusinkveld (Eds.), *Selected Proceedings of the 1998 Joint Conference of the Southern Conference on Language Teaching* (pp. 19-25). Valdosta, GA: SCOLT Publications.

ACTFL Proficiency Guidelines for K-12 Learners Task Force. (1998). *ACTFL proficiency guidelines for K-12 learners: Some important background information* (Draft). Yonkers, NY: ACTFL.

Crawford-Lange, L.M. & Lange, D.L. (1984). Doing the unthinkable in the second language classroom: A process for the integration of language and culture. In T.V. Higgs (Ed.), *Teaching For proficiency, the organizing principle* (pp. 139-177). Lincolnwood, IL: National Textbook Company.

Curtain, H.A. & Pesola, A. (1994). *Languages and children: Making the match.* New York: Addison-Wesley Publishing Company.

Doering, E.J. (1993). Gaining competence in communication and culture through French advertisements. *French Review, 66*, 420-432.

Hughes, G.H. (1986). An argument for culture analysis in the second language classroom. In J.M. Valdes (Ed.), *Culture bound: Bridging the cultural gap in language teaching* (pp. 162-169). New York: Cambridge University Press.

National Standards in Foreign Language Education Project. (1996). *Standards for foreign language learning: Preparing for the 21st century.* Lawrence, KS: Allen Press.

Omaggio, A.C. (1986). *Teaching language in context: Proficiency-oriented instruction.* Boston: Heinle & Heinle Publishers.

Rosenbusch, M.H. (1995). Guidelines for starting an elementary school foreign language program. (ERIC Document Reproduction Service No. ED 383227).

Robinson, G.L.N. (1985). *Crosscultural understanding: Processes and approaches for foreign language, English as a second language and bilingual education.* New York: Pergamon Press.

Robinson, G.L.N. (1981). *Issues in second language and cross-cultural education: The forest for the trees.* Boston: Heinle & Heinle Publishers.

Seelye, H.N. (1993). *Teaching culture: Strategies for intercultural communication.* Chicago: National Textbook Company.

Tomalin, B. & Stempleski, S. (1993). *Cultural awareness.* New York: Oxford University Press.

West, M.J. & Donato, R. (1995). Stories and stances: Cross-cultural encounters with African folktales. *Foreign Language Annals, 28*, 392-406.

BEST COPY AVAILABLE

Create Active Students Through Active Teaching

by
Mark Makovec
with
John Litcher
Wake Forest University
Department of Education
December, 1998

Introduction:

Research tells us that pupils generally remember 10 percent of what they read, 20 percent of what they hear, 30 percent of what they see, 50 percent of what they hear and see, 70 percent of what they say, and 90 percent of what they say as they do something. According to this research, the more active students are in the classroom, the more they learn. In order to create active students, teachers must incorporate an active learning environment into their classroom. By doing so, students may enjoy learning history as active participants rather than passive learners. The purpose of this research project was to learn from high school students what type of a learning environment they prefer. Will implementing active learning methods such as class discussion, group work, and other intriguing activities create more of an interest among the students, rather than traditional passive methods such as lecture, textbook reading, worksheets, and individual work?

Literature Review:

One of the most important elements in education is to create active learners rather than accept passive listeners. Social Studies teachers have to be creative and flexible to the demand social studies presents. Adaptation is a key term because, in order to become an effective teacher, you must first adapt to the strengths and weaknesses of your class with the present subject matter at hand.

Effective teachers create active learning environments for their students. Ron Pahl performed a meta-analysis in 1990 entitled "Review of Teaching For and Learning Social Studies Outcome". Pahl (1990) and a handful of scholars came to the conclusion that, "the outcome of social studies teaching is citizenship achieved through decision making within a democratic society" (p.276). This outcome, however, can only be achieved through active learning. This study suggests that, "passive learning of content alone is not sufficient preparation for active participation in a democratic society" (Pahl, 1990, p.277). Some scholars report

consistent research findings that indicate, "positive affective attitudes, global understanding, race and gender attitudes, and positive attitudes for political participation come from active learning" (Pahl, 1990, p.277). In other words, students are more likely to become active citizens if given interesting ways to learn.

Gallo and O'Brien cover topics that are essential to developing critical thinking in the classroom. These two researchers applied real life issues to their classrooms, in order to produce an active learning environment. By encouraging classroom discussion, the students develop thinking skills that are necessary in our society.

The article by Mario Gallo presented research in citizenship education that discussed the use of real life issues to stimulate critical thinking. For this particular study, the teacher used the issue of church, state, and constitution to stimulate critical thinking. The class was an honors class and Gallo (1996) states that, "the lessons helped students improve their critical thinking skills and learn more about the constitution and the role of the judiciary in government" (p. C1). The teacher prepared the students for real life experiences by taking real life situations and allowing students to discuss them freely while respecting other points of view. The process appeared to be an effective way to build knowledge of our law and government.

Joseph O'Brien wrote an article called, "The Beginning of Life" that related the topic of abortion to active learning. The article proposes that our educational system must create a futuristic vision in the eyes of the students. O'Brien (1996) states, "often lost in social studies is the need to enable the students to look and think into the future" (p.32). The purpose of social studies, according to the National Council for the Social Studies is for students to learn from the past and apply that knowledge to issues confronting them in the future. Since people have the freedom of choice in a democratic society, abortion is a topic that many Americans develop strong feelings for in both directions. O'Brien suggests that students today do not know enough about this issue and that it is necessary to teach students certain scenarios they may face as young adults. Students may only learn Roe vs. Wade and form biased opinions, when in fact abortion may be necessary in specific situations. For example, a pregnant woman gets into a car accident and the fetus is severely damaged and unable to develop properly. What is the right decision to make? Schools can not answer that, nor do they intend to influence students but rather inform them of situations that are possible, thus stimulating critical thinking as an American citizen.

Methodology:

The research for this project took place during the "Teaching Round Seminar", in which each social studies education graduate student participated. Each student was required to observe four different high school history classes and the perspective master teacher at each school. For this particular project, students observed from history classes at West Forsyth and Reynolds High School were given a questionnaire to fill out. A total of ninety-seven questionnaires were handed out and completed. Each student that filled out the questionnaire was a member of an honors history class.

The students were aware the questionnaire was part of an extensive research project. I emphasized how vital their honesty and sincerity was for this research. A brief explanation of the project was provided. This explanation included a definition of both active and passive learning. Active learning was defined as one of the critical elements in education, which involves role-playing, simulations, case studies, presentations, group discussion, and many other intriguing ways to learn. Passive learning was defined as a method that relies on lecture, textbooks, and requires minimal student involvement. There were a total of seven questions.

The first two questions asked the students whether they feel their teacher incorporates an active and passive learning environment in the classroom. The student had to circle "never", "seldom", "occasionally", "often", or "constantly". The next question required the students to check any active learning method they preferred. There were six choices, which consisted of class discussion, role-playing, case studies, presentations, mock-trials, and group work. After checking off the choices that applied to them, the next question required the students to mark any passive learning method they preferred. These choices consisted of textbook reading, lecture, worksheets, and individual work. Students were to check off only those that applied to them. The next two questions consisted of a Yes or No format, and a space was provided so the students could explain their decision. These questions simply asked, "Do you prefer an active learning environment, and if yes, please explain". Then the same question was asked for a passive learning environment. The final question asked what gender the student was.

Results:

All data was collected on a gender basis and as a whole group collectively. Which school the students attended was not relevant due to the fact that schools were not the issue. Statistics were obtained by counting each response and dividing that number by the total number of

participants in each category. The data from the first two questions suggest that both master teachers observed incorporate more of an active learning environment into their classroom. This is evident because collectively, there is a higher percentage of often (56%) and constantly (27%) marked answers for the incorporation of active learning, as oppose to often (24%) and constantly (8%) for the incorporation of a passive learning environment. There is a reciprocal effect for both males and females because both genders recorded a higher percentage for active learning incorporation (often and constantly), in comparison to their higher percentages for passive learning incorporation (seldom and occasionally).

The data collected from the next two questions suggests students prefer more active learning activities because there were more active learning choices above 50% (2) in comparison to zero responses above 50% for passive learning preferences. The males had a higher percentage for class discussion (81%) when compared to the female responses (65%). Group work had a percentage above 50% for both males and females. The males (69%) were slightly lower than the females (76%). This suggests that males may be comfortable in large classroom discussion where as females may feel more relaxed working in smaller groups.

Passive learning preference was considerably low. Collectively, only 14.4% of the students preferred textbook reading. The percentage for lecture and individual work was also low at 38% and 33%, respectively. Worksheet response was somewhat higher at 43%. This data suggests that the majority of students do not prefer passive learning activities.

The data for the next two questions revealed that 96% of the students prefer an active learning environment. There were only 20% who prefer a passive environment. These percentages do not add up because several students enjoy both active and passive learning. Reasons given for preferring both learning environments consisted of introverted personalities, fuller explanation of material by the teacher, and personal learning style. Most students, however, state that they prefer as active learning style because it grabs their attention. They suggest that passive teaching methods create boredom among the student population and they end up dozing off or daydreaming during vital class time.

Conclusions:

It is important to note that honor students answered these questionnaires. Therefore, it is very difficult to generalize about the students in regular mainstream history classes. Even though I provided a definition for active and passive learning, I failed to define each active and

passive learning activity. Students were well aware of what constitutes an active learning environment, yet some did not understand the concepts of a mock-trial, case study, and role-playing. I tried explaining by giving examples of each, however, the students still appeared confused. Had a definition been provided, percentages for those activities may have been slightly higher. Not one student questioned passive learning methods.

Each and every student had his or her own unique style of learning. Some students are introverts and prefer a quiet, laid back setting, while others are more open and willing to partake in discussions. From this research, I suggest students want to become involved in their education. They do not want to hear a teacher constantly talk because they become bored, which was the number one reason they did not prefer a passive learning environment. If teachers can create an active learning environment, students will respond more favorably to their educational development.

Literature Resources:

Gallo, M. (1996, January). Controversial issues in practice. Social Education, 60, C1-C4.

O'Brien, J. (1996, January). The beginning of life: A topic worthy of discussion. Social Education, 60, 32-37.

Pahl, R. (1990, November/December). Review of teaching for and learning social studies outcome. The Social Studies, 81 (6), 271-277.

The Effects of Teacher Questioning Patterns on Classroom Discourse

by

William E. Owen Jr.

with

Joseph O. Milner

Wake Forest University
Department of Education
December, 1998

Questioning is considered by many to be "the central skill in the teaching-learning experience" (Nash & Shiman, 1974, p.38). Accordingly, "the attention teachers give to planning questions will determine how well they and the students achieve their educational goals" (Chuska, 1995, p. 7). Questioning is vital to teaching because of the many purposes that teachers use questions to achieve. Classroom questioning patterns also provide a model for the students' individual modes of inquiry. If students observe questioning behaviors that promote further inquiry, such as follow up questioning, probing, and analyzing relationships, they may be more inclined to develop these questioning skills. In so doing, they may learn how to guide their own inquiry (Hunkins, 1972). Effective questioning should seek to help students develop and refine thinking skills (Dantonio, 1985).

Gall reports that most research concerning the types questions teachers ask simplifies data analyses into the two categories of fact and higher cognitive questions (1984). Borich (1988) details some of the more predominant categories and characterizes them as content questions and process questions. Borich (1988) explains, "direct, low-level, convergent, closed, and fact questions are more likely to be posed for the explicit purpose of having the student deal directly with the content taught, as when the teacher asks a question to see if a student can recall and understand specific material." (p.15) In process questions, "content is not an end itself but is a means of achieving what some have called 'higher order' ends" such as problem solving, guiding, arousing, encouraging, analyzing, synthesizing and judging (Borich, 1988, p. 15).

Both lower cognitive and higher cognitive questions may be put to effective use in the classroom; however, teachers need to be able to recognize the specific functions these questions serve in order to integrate them effectively. In the English classroom, factual information regarding background and textual elements facilitates the opportunity for meaningful discussion

of ideas that emerge during the students' experience with the text. Yet, when teachers begin to equate the purpose of education with the retention of information instead of the process of helping students to make meaning of their lives, they inadvertently discourage discussion and independent thinking. Factual questioning, when it does not allow the progression to higher order thinking, excludes the student from the learning process and perpetuates the fallacy that "everything has a place, and a learner's sole responsibility, therefore, is to *understand* and *accept* preexisting knowledge and expertise, and *not* to question or modify it" (Nash & Shiman, 1974, p.40).

Higher order cognitive questions may help students develop the skills necessary to apply knowledge in making judgments or solving problems without necessarily providing the student with a sense of relevance and subjective participation in the creation of meaning. In the secondary English classroom, the subjective aspect of meaning seems particularly relevant since literature provides an opportunity for students to learn vicariously through the experience of the text. Nash and Shiman (1974) take this concern for meaning into account and divide classroom questions into three categories: factual, conceptual, and contextual (p.38). Contextual questions incorporate the cognitive skills implicit in the other two types of questions. They encourage students to apply factual knowledge and conceptual generalizations to their own personal context. "The conceptual question is meant to get students to analyze, compare, generalize, and theorize on higher levels of abstraction, while the contextual is designed to help students discover and understand *the personal meaning of the themes for their own lives*" (Nash & Shiman, 1974, p.43). This type of learning has a uniquely subjective impact which far transcends the typical goals of retaining information and developing cognitive skills.

Classroom discourse, in the context of this study, refers to relevant verbal interaction between teachers and students that serves the advancement of educational goals. Depending on the teacher's use of questioning patterns, discourse can take the form of recitation or discussion. Recitation is characterized by Dillon (1984) as consisting primarily of "recurring sequences of teacher question plus student answer, where students 'recite' what they already know or are coming to know through the questioning" (p.50). In recitation, questions occur frequently, "three questions a minute or more" and responses are rarely followed up with a subsequent question (Nystrand and Gamoran, 1990, p.6). According to Gall (1984), most teacher questions occur in recitation after new curriculum content has been introduced. Beach and Marshall (1991) observe

that this "three turn sequence of teacher question - student response - teacher evaluation" is "the most frequently noted pattern of classroom discourse" (p.54).

Discussion, on the other hand refers to an interactive process, in which students and teachers explore meaning by "[discussing] what they do not know." (Dillon, 1984, p.51). Dillon (1984) cites Bridges (1979) in describing the sufficient conditions which are necessary for discussion to ensue. Participants in discussion must be willing to submit multiple points of view on a subject. They must also be willing to examine the merits and flaws of differing points of view with the intention of increasing their personal understanding of the topic (Dillon, 1984). When teachers ask questions that solicit the students' opinions or feelings on a topic and allow students to pose questions of their own, both to the teacher and to other students, the learning environment becomes more conducive to independent inquiry and discussion. In this capacity, questioning can play a significant role in students' creation of meaning.

This study addresses the topic of how questioning is most effectively used in the development of classroom discourse. Four high school English teachers of differing styles and the student constituents of 14 individual classes of different grade and ability levels provided a representative sample of total population. Data was collected in a total of 36 classroom observations utilizing note-taking, audio-recording, post-study interviews and a checklist of observed behaviors.

Although each of the four teachers was observed asking questions that reflected each of the categories, Teacher A and B tended to utilize a predominantly textual questioning pattern while Teacher C and D more frequently asked conceptual and contextual questions. Within these divisions, students were significantly more active during discourse in the classes of Teacher A and Teacher C. In considering these patterns, the researcher felt that clear implications could be drawn regarding student participation in questioning practices of varying purpose.

In the post-study interview, Teacher A stated that "developing an appreciation for literature, improving communication skills and making students realize the association between real life and literature" were primary individual goals in teaching English. When asked about a personal questioning strategy, Teacher A described a progression of goals which seeks to confirm that the student understands the text, ensures that the student is familiar with the elements of the text and then proceeds into "some further analysis of what I think are the main

points." In an interview with Teacher B, a concurring set of purposes was revealed. In each of these teacher's classes, the majority of questions asked were textual in nature. Classroom discourse proceeded in a recitation pattern, which teacher B described as "whole class discussion." Occasionally, conceptual and contextual questions were asked but they often received a very short limited response.

Although Teacher A and Teacher B fundamentally agreed in theory of practice, they differed most significantly in the degree which questions were pre-planned and the rules they followed for student participation. Teacher A asked questions very spontaneously and was more inclined to depart from the recitation to pursue conceptual and contextual responses. Teacher B planned questions to a greater extent and followed the directed path more rigorously, often putting students on hold if they posed a question that disrupted the pattern being followed. Teacher A also reported a preference for a free discussion where students did not have to raise their hands to talk; Teacher B more commonly called on students or recognized students with hands raised. As a result of these practices, Teacher A succeeded in achieving a much higher level of quantitative response with most of the class participating as opposed to very few.

Teacher C and D both indicated in the post-study interview that their perception of the primary purpose of teaching English depended more upon raising the level of consciousness and awareness in students and helping them form habits of thought that would serve them better in life. The questioning patterns revealed in their practices also suggests this orientation. Teacher C utilized a questioning pattern that was primarily conceptual / contextual. Students were invited to respond to issues, make value judgments, elaborate on interpretations suggested and support their assertions with textual evidence. Classroom discourse in teacher C's classes frequently developed into discussion and typically only concerned itself with factual information in establishing a foundation. Teacher C promoted a very experiential approach to literature and used contextual questions to establish points of reference for the conceptual analysis being invoked. Students were encouraged to pose questions which were often directed back to the class for consideration. On multiple occasions, Teacher C shared with the class some point that a student in another class period had contributed or proclaimed that the class had discovered a level of meaning that hadn't been previously considered. In this approach to learning, students are actively involved in the creation of meaning and participation is quantitatively high and qualitatively rewarding.

During the course of these observations, Teacher D used questioning patterns very infrequently. Interactive classroom discourse did occur however, as students participated in dramatizing activities that were performed before the class. When questioning was utilized, the questions were contextual in nature and seemed intended to establish a relevant context for students to empathize with the characters of the text being studied. Accordingly, students were willing to respond with personal feelings and affective judgments but were not observed to offer independent thoughts of a conceptual or analytical nature. Consequently, student participation resulting from questioning was quantifiably high but qualitatively limited in response.

This research suggests that the opinions teachers hold concerning the purposes of education have a profound effect upon the strategies that teachers put into practice. For many English teachers, meaning is either created through experience or communicated to students through guided inquiry. The patterns of questioning and discourse that exist within each teacher's classroom are largely determined by these views. In order for teachers to improve teaching practices, it is fundamental that they understand the belief system that influences their actions. They must then consider the effect that their actions will have on the process by which students formulate meaning. To effectively use questioning, teachers must be able to identify the goals they are hoping to achieve through each questioning pattern. When teachers encourage a classroom environment that respects all of its members, allows them freedom of thought and expression, and is capable of allowing open-ended discourse, students will be more actively involved and will generate successful qualitative discussion.

References

Beach, & Marshall. (1991). Teaching literature in the secondary school. San Diego: Harcourt Brace Jovanovich.

Borich, G.D. (1988) Effective Teaching Methods Columbus, OH: Merrill Publishing Company.

Chuska, K.R. (1995) Improving classroom questions. Phi Delta Kappa Educational Foundation. Bloomington, Indiana.

Dantanio, M. (1985). Teaching thinking in English. Illinois Schools Journal, 65 3-9/

Dillon, J.T. (1984). Research on questioning and discussion. Educational Leadership, 42 (3), 50-56.

Gall, M.D. (1984). Synthesis of research on teachers' questioning. Educational Leadership, 42, (3), 40-46.

Hunkins, F.P. (1972). Questioning Strategies and Techniques Boston: Allyn and Bacon Inc.

Nash, R.J. & Shiman, D.A. (1974). The English teacher as questioner. English Journal, 63 (9), 35-[illegible].

Nystrand, M. & Gamoran, A. (1990). Student engagement: when recitation becomes conversation. (ERIC Document Reproduction Service No Ed. 323 581)

BEST COPY AVAILABLE

A Feminist Pedagogy in the Mathematics Classroom

by

Beth Payne

with

Leah McCoy

Wake Forest University

Department of Education

December, 1998

Introduction

Throughout history, women have been considered the second-class gender. They were denied access to careers outside the home, higher education, credit for historical contributions, and the freedom to be who they desired to be. Even as women began to receive higher education and move into the male domain, they faced numerous obstacles. In recent years, we have made important strides towards a gender equitable society. Females are now welcomed into colleges and universities and make up more than fifty percent of the workforce. Though these steps have been made, we have not yet accomplished the goal of attaining a gender equitable society.

Review of Literature

Researchers have studied one particular sector of society where gender inequities flourish: education. Grossman and Grossman (1994) indicate that beginning in preschool, boys receive more attention than girls do, as well as a different quality of attention. They explain that the pattern of giving more attention to males than females is especially seen in the science and mathematics classrooms. Although the achievement gap between males and females is narrowing, girls are choosing not to take advanced math classes in high school (Campbell & Storo, 1996). This carries over into college and careers where the differences between males and females intensify (Campbell & Storo, 1996). Secada, Fennema, and Adajian (1995) report that in 1989, out of all freshman entering college, only 0.6% chose mathematics as an interest for a possible major. Although women now comprise over half of the workforce, they are still paid less than their male counterparts with similar levels of education (Sadker & Fox, 1997). This is in part due to the lack of encouragement for females to take advanced math classes. Females are thus denying themselves the opportunities that advanced mathematics can offer them.

Given that a gender equity problem exists in the mathematics classroom, what can we do to address the problem and attempt to correct it? Jacobs and Becker (1997) suggest that a feminist pedagogy can be an effective mechanism for achieving an equitable mathematics classroom. The four principles of this pedagogy are 1) using students' own experiences to build knowledge, 2) writing in the math classroom, 3) incorporating cooperative learning into the mathematics classroom, and 4) creating a community of learners.

Using students' own experiences in the math classroom is the first principle of the feminist pedagogy. Jacobs and Becker (1997) suggest that instruction should include experiences that allow students to build on their own understandings, provide reasons for the area of study, and encourage activity rather than passivity. The second principle is implementing writing in the math classroom. Writing helps students develop their own voices and become more independent. It emphasizes the process of solving a problem rather than merely focusing on a correct answer. By using writing in everyday math activities, students become better communicators and learn to express their thoughts more clearly. Implementing cooperative learning in the mathematics classroom is the third principle of the feminist pedagogy. Research indicates that students from all ability levels can benefit from cooperative learning (Powell, 1994). Grossman and Grossman (1994) find that students typically learn more, get along better with their peers, and feel better about themselves and school when they learn in a cooperative environment. The fourth principle is developing a community of learners. Students in a community of learners are all there to learn together and from one another. Jacobs and Becker (1997) emphasize that students need to be able to validate their answers so that their peers and the teacher understand their work and accept it. In a community of learners, the students need to be a part of determining what they will learn and how they will learn it.

Jacobs and Becker (1997) have suggested that the four principles of a feminist pedagogy are effective ways to achieve an equitable mathematics classroom. Further research will give teachers examples of the feminist pedagogy in practice as well as provide them with a guide, so they can alter their own math classrooms to make them more gender equitable.

Methodology

The subjects of this study are middle school teachers involved in GET SET, GO (Girls and Educators Teaming in Science Education To Generate Opportunities). GET SET, GO, which is funded by the National Science Foundation, was implemented in 1995 as a three-year project to

encourage girls in science and mathematics by training teachers and providing support. Nine mathematics teachers in GET SET, GO were interviewed to find out if and how they use each of the four principles of the feminist pedagogy in their classrooms.

Using Students' Own Experiences

Teachers participating in this study feel that using students' own experiences is crucial in bringing mathematics to the students' lives. They believe it is important to relate the topic to how it is used in the real world and have students investigate their own intuitions and ideas. 89% of the teachers indicated that they use this principle at least once per week in their math classrooms. 78% of the teachers feel that using students' own experiences is very helpful to their students while 100% of them believe it is at least somewhat helpful to their students.

The following are examples of how these teachers incorporate their students' own experiences into their mathematics classes. Example 1: Incorporate students' names and interests into word problems and lessons. Example 2: Have students offer stories of how they have used a particular mathematical concept outside of school or how they have seen it used. Sharing these experiences enables students to relate to the lesson and see how math is used in the world.

Writing

Participants find that writing is difficult to implement because the students resist it; however, they feel that students benefit tremendously. From the interviews, 67% of the teachers indicated that they use writing in their math classes at least once per week. 67% also indicated that this principle is very useful to their students, while 100% find it at least somewhat useful.

The following examples are ways in which these teachers try to include writing in their math classes. Example 1: Have students write their own word problems and explain how they are to be solved. They can then share the problems with others in the class. Also, students can be given the answer to a word problem and be asked to create a problem that goes with that answer. Example 2: Have students explain how to solve a problem or describe a concept. Writing prompts include: Explain how right, acute, and obtuse angles are different; Compare and contrast using a calculator versus doing math in your head; and Explain what you like about this class and how you think it can be improved.

Cooperative Learning

78% of the teachers in this study use cooperative learning at least once per week in their math classes, and 22% use it every day. Teachers indicate that students tend to learn a great deal from working together, and it gets them actively involved. 78% of the teachers feel that cooperative learning is very helpful to their students. Since so many companies are relying on teamwork to complete daily goals and projects, students need to be able to work in this kind of environment.

Teachers provided the following examples of how they use cooperative learning in their math classes. Example 1: Use "think-pair-share." This gives the students time to think about the problems and concepts on their own, pair up with a classmate, and discuss how they solved the problem. The pair must figure out the right answer and share their thinking with the class. Example 2: "Probloramo" – Divide students into small groups. At each table or station, have a problem for them to solve. Problems can involve manipulatives, word problems, brainteasers, or concept builders. The students work together for five minutes to solve the problem and write out the solution. Then, the groups rotate to the next station.

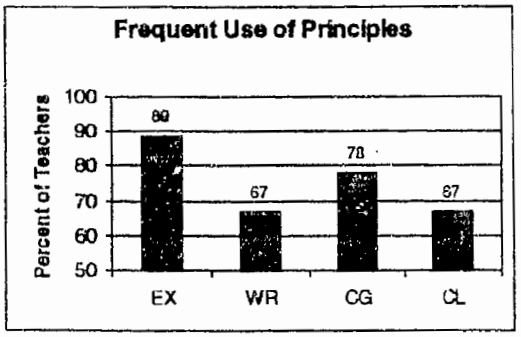
Most of the teachers commented that they put students in groups that are made up of different genders, races, and levels of thinking. This way, students bring in different perspectives and learn to work with and help one another. Teachers commented that you have to monitor the groups closely to make sure no one or two students are taking control, and give each student a responsibility and role.

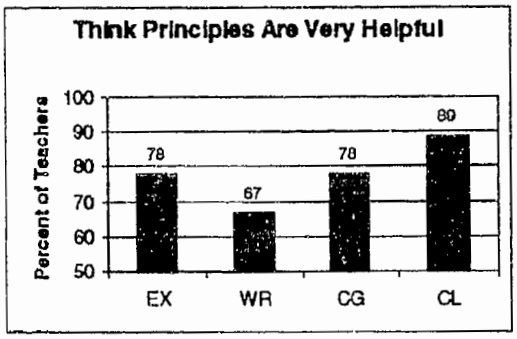
Creating a Community of Learners

Teachers explained that creating a community of learners plays a vital role in determining a student's success in the classroom. This is evident from the 89% of them who indicated that this principle is very helpful to their students. 67% of the teachers use this principle in their math classes at least once per week, and 56% work on this principle everyday.

Teachers offer the following suggestions on how to achieve a mathematical community of learners. Example 1: From the first day, explain to the students that they should support and respect each other. Everyone needs to work together to make sure that all succeed. Example 2: Divide the class into small groups, giving each group the responsibility of making sure that each member understands the concepts. Before the students turn in their work, they have the opportunity to check answers and decide what they agree and disagree on. Each student turns in

what he or she feels is correct. Note that only students who actually complete their homework/classwork have the chance to change their work.





Summary

Jacobs and Becker (1997) provided us with four principles which can create an equitable mathematics classroom: 1) using students' own experiences, 2) writing , 3) cooperative learning, and 4) creating a community of learners. This study attempted to find out how teachers actually incorporate these principles into their math classes. Math teachers participating in GET SET, GO, a gender-equity program sponsored by the National Science Foundation, provided hands-on examples of how they use these principles in their classes. Six out of nine teachers indicated that they use all four principles in the math classes at least once per week. 67% of the teachers believe that all four principles are very helpful to their students. A couple of teachers explained that these principles definitely help the two extremes, but they are not sure how well they help the average students. None of the teachers believe that these principles do not help any of their students. This study has provided other teachers with activities and suggestions that they can use in their own mathematics classes, hopefully helping them develop more equitable classrooms.

References

Campbell, P.B. & Storo, J.N. (1996). Why me? Why my classroom? Equity in the coed math and science classroom. Newton, Massachusetts: Education Development Center, Inc. (ERIC Document Reproduction Service No. ED 409 247).

Grossman, H. & Grossman, S.H. (1994). Gender issues in education. Needham Heights, Massachusetts: Allyn and Bacon.

Jacobs, J.E. & Becker, J.R. (1997). Creating a gender-equitable multicultural classroom using feminist pedagogy. In J. Trentacosta and M.J. Kenney (Eds.)., Multicultural and gender equity in the mathematics classroom: The gift of diversity: 1997 yearbook. (pp. 107-114). Reston, Virginia: The National Council of Teachers of Mathematics.

Powell, M.J. (1994). Equity in the reform of mathematics and science education: A look at issues and solutions. Austin, Texas: Southwest Educational Development Laboratory. (ERIC Document Reproduction Service No. ED 401 131).

Sadker, D. & Fox, L.H. (1997). Strategies for achieving gender equity in the classroom. In N. Kreinberg and E. Wahl, (Eds.)., Thoughts and deeds: Equity in mathematics and science education. (pp. 53-60). American Association for the Advancement of Science.

Secada, W.G., Fenemma, E., & Adajian, L.B. (1995). New directions for equity in mathematics education. Cambridge, Massachusetts: Cambridge University Press.

BEST COPY AVAILABLE

Teacher Politeness in the Secondary English Classroom

by
Jamie T. Ravenscraft
with
Joseph O. Milner
Wake Forest University
Department of Education
December, 1998

Introduction

"Why don't we start the homework?" "Would you care to have a seat?"

When spoken by a teacher in the context of the classroom, these sentences express something different than what is indicated by the surface meaning. The teacher will probably not be starting the homework, nor will he/she be offering students choices about starting the homework or sitting. The understood meaning is for students to start the homework and to sit. Teachers, instead of giving the direct command their authority allows, will often use polite speech, just as in the above sentences. This study attempted to investigate how teachers use polite speech. Do patterns of polite speech surface in the classroom? Do teachers use polite speech in different ways for different audiences? If research could reveal *how* teachers use polite speech, it perhaps could lead to insights into *why* teachers use it.

Review of Literature

Of central importance to this study is defining what is meant by "politeness." Lakoff (1990) defines politeness as a "system of interpersonal relations designed to facilitate interaction by minimizing the potential for conflict and confrontation" (p. 34). When people converse, they enter that exchange with some personal desire. That desire is to gain something, whether that be a favor, geographical directions, or something intangible like respect. Brown and Levinson (1987) suggest what is at stake in these exchanges is "face." Face can be positive or negative. Positive face is the desire of a person for approval or acceptance by others and can be understood as a person's self-image. Negative face is the desire for a person's actions to be unimpeded by others and can be understood as a person's autonomy. Conversation can be a "Face Threatening Act" (FTA) that may change a participant's face condition. Participants generally act to maintain each other's face and minimize the FTA. This is achieved through politeness.

Brown and Levinson have described four types of politeness strategies used in reacting to FTAs; from least to most polite, they are *bald on record*, *positive politeness*, *negative politeness*, and *off record*. *Bald on record* involves no effort to attend to another's face needs. Use of the *positive politeness* acknowledges the addressee's positive face and communicates similarity between the speaker's and addressee's wants. *Negative politeness* conveys the speaker's desire not to impede on the hearer. If someone responds *off record*, he/she has decided to be very indirect

and to remove any appearance of imposition. Lakoff (1990) suggests three categories of politeness: distance, deference, and camaraderie. These respectively parallel being off record, negative politeness, and positive politeness, and their names characterize each of these strategies.

Brown and Levinson (1987) have also identified variables influencing the type of politeness selected: power, social distance (degree of social solidarity), and the degree of the imposition. Brown and Levinson predict that a person of greater power will use less polite strategies and a person of lower power will use more polite strategies. If people are of relatively equal power and of great social distance, they will select more polite strategies. If the value of the imposition is great in any situation, the speaker will use more politeness. Holmes (1995) includes the variable of formality. The greater the formality of the situation the more likely a participant will choose a very polite strategy.

Cazden (1979) proposes that the classroom is an environment that creates many FTAs; teachers continually threaten the positive and negative face of students when they give directions or evaluate students. Overall, management of the classroom and control of students through politeness becomes a necessary part of a teacher's practice. Galbenski (1992) found that female teachers use more negative politeness and that using negative politeness and giving students autonomy may be related. Results revealed no relationship between face-saving strategies (politeness) and preferred classroom climate, but did suggest English teachers used fewer positive politeness strategies. Manke's research (1997) suggested that teachers and students use politeness as part of an agenda of "collusion."

There is ample reason to explore classroom politeness further, however. Some research, indicates students may be disadvantaged by teacher politeness or the lack of it. For example, White (1989) found that politeness constrained academic knowledge. Teachers compromised the academic content of lessons for the sake of politeness and for the purpose of suppressing confrontation, a dynamic necessary for foster engagement and learning. Delpit (1995) theorizes that teachers are too polite and indirect, especially with minority students who then do not learn what is expected of them. Teachers who speak indirectly, thus, make it more difficult for some students to succeed. Holmes (1995) is concerned that teachers are not polite enough and, thus, disadvantage female students, who are very polite and may succeed more in a polite classroom. Both Holmes (1995) and Galbenski (1992) suggest that if teachers increase their politeness in the classroom, they will model better behavior and encourage an environment where all students may learn better.

Methodology

For this study, four English teachers from one North Carolina high school were observed. The teachers taught students in grades nine through twelve. Classes observed included both standard and honors courses, as well as journalism classes. Eight fifty-minute classes were

observed for each teacher over a four-week period. For three teachers, four of those classes were honors classes and four were standard; for the fourth teacher, two classes were journalism classes and six were standard English classes. A variety of class formats (including group discussions, teacher lectures, and individual or small group work) was observed for each teacher.

Research recorded occurrences of polite speech acts made by teachers in those classes. The context of speech acts, as well as the frequency, was noted. This included documenting the intended audience of the speech act, noting the number, gender, and race of the audience. The intention of the speech act was classified as providing behavioral direction, focusing academic content, or maintaining the social relationship of the teacher and student. Speech acts were then categorized as examples of positive politeness, negative politeness, or being off record, according to Brown and Levinson's (1987) model of politeness.

At least two classes for each teacher were audiotaped to provide a comparison with researcher notes. These comparisons revealed that researcher notes underdocumented the frequency of teacher politeness by as many as ten polite speech acts a class, but supported the general trends observed. Frequency of teacher polite speech was averaged to create a general profile, but data was generally summarized by qualitative analysis.

Results and Discussion

Distinct patterns of polite speech acts emerged from observations; these patterns develop both a picture of teacher politeness in the classroom and a profile of politeness for each.

Teacher A, at an average of 21 polite speech acts per class, used the fewest politeness strategies of any of the teachers. Polite speech acts were divided almost equally between positive and negative politeness. Positive politeness was especially common in group discussions. Teacher A made only a few off record comments in all observations. Approximately one-third of polite speech acts were directed to individuals and two-thirds to the entire class as a group.

Teacher B, averaging 25 polite speech acts a class, consistently used positive politeness more than any other strategy; Teacher B selected positive politeness strategies almost twice as often as negative politeness strategies. Teacher B most frequently used positive politeness strategies like using in-group identity markers (e.g., using slang like "I'm down with it, dawg...") or asserting common interests of both speaker and addressee (e.g., engaging in small talk). Teacher B also used politeness to maintain a social relationship with student more frequently than other teachers. In general, Teacher B's speech embodied Lakoff's (1990) politeness category of camaraderie. What camaraderie signifies is a politeness which emphasizes solidarity in relationships and which does not attempt to suppress FTAs. Teacher B's students commonly reflected camaraderie and positive politeness in their own politeness

Teacher C, at an average of 28 polite speech acts per class, used politeness strategies the most of any of the teachers. In one class, Teacher C was observed speaking with politeness as

many times as 50 times, at least once a minute. Each politeness strategy was observed in Teacher C's class. A positive politeness strategy frequently used was including both the speaker and hearer in the FTA. This strategy is employed whenever conversation participants say "we" or "us" during a FTA. For example, when Teacher C says "Let's start the test," this strategy is used. In at least two classes, Teacher C used "we" / "us" in polite constructions 30 times. The use of "we" / "us" was especially prevalent as Teacher C made transitions in a class. Though no clear relationship could be established, it seemed as if speech acts directed to individual students often consisted of negative politeness constructions.

Teacher D, averaging 26 polite speech acts a class, used positive politeness only slightly more than negative politeness and used off record politeness very rarely. Unlike the other teachers, Teacher D addressed individuals almost as often Teacher D addressed the group. Like Teacher A, Teacher D commonly responded to FTAs baldly. Teacher D's students seemed to echo this willingness to be bald on record in the selection of their own politeness strategies.

Although the teachers' personal styles of politeness varied, there were similarities. Averages of politeness frequency were similar, ranging from 21 to 28 times a class. Overall, the average was 25 polite speech acts a class, meaning teachers said something polite every other minute. Most polite speech acts had the goal of directing student behavior, whether that behavioral goal was to read or to cease talking. Politeness about academic content was second most common, with politeness for social relationships least common. Further, there was no discernible relationship between the audience and the type and goal of politeness. Any audience member, regardless of the gender, ethnicity, number, and standard/honors class placement, was as likely to receive, for example, a negatively polite academic comment as another. Finally, while student politeness was not the focus of observation, it was observed that students' politeness styles resembled their teachers' politeness style.

Overall, research established a pattern of politeness for these four teachers:

1. teachers are very polite;
2. teachers possess distinctive individual styles of using politeness;
3. teachers select positive politeness strategies above negative or off record politeness; and,
4. teachers address politeness to groups more than individuals in the classroom.

Given that the classroom creates many FTAs (Cazden 1979) and given previous research, it was not unexpected to discover that teachers are very polite. What is more interesting, though, is discovering how findings may be involved with the "agenda of collusion" discussed by Manke (1997). It appears that the observed teacher politeness could be a critical part of creating the climate of the classroom, where the most influential variable was social distance--not power, formality, or degree of imposition. For example, findings show that teachers predominantly used

positive politeness strategies. Positive politeness is a strategy used particularly with friends or between people who know each other well. It signals solidarity and lack of social distance between parties. If teachers select positive politeness more, it seems that their politeness recognizes either genuine intimacy or the construction of a cooperative relationship that requires a small social distance. Even in classes where teachers used positive politeness less, their use of positive politeness seemed to occur in the moments where the teacher desired the most cooperation, such as during transitions or class discussion. In general, it seems teacher politeness strategy selection reflects the type of environment that teachers want to create or to sustain. Galbenski's (1992) conclusion that strategy selection and preferred classroom climate are not related does not seem supported in actual teacher practices

It is acknowledged that the pattern detailed here is only partially complete. Politeness occurs in the context of an exchange between people; teacher politeness, more specifically, appears to occur in the context of teachers and students creating classroom climate through exchange. This study focused only on how the teacher acts within that context. Future research should also incorporate student politeness and then begin linking how teacher and student politeness may actually affect each other. Research would also be complemented well by examining how effective politeness is in communicating the teacher's agenda to the students. This is important, particularly in light of how some observations supported White's (1989) findings that politeness can stifle learning. Even if the findings presented here do not present a full picture, they do begin an important inquiry into one of the subtle yet sophisticated ways that teachers communicate and relate to their students.

References

Brown, P. & Levinson, S. (1987). *Politeness: Some universals in language usage.* Cambridge: Cambridge University Press.

Cazden, C. B. (1979). Language in education: Variation in the teacher-talk register. In J. E. Alatis & G. R. Tucker (Eds.), *Georgetown University Round Table on Languages and Linguistics 1979: Language in public life* (pp. 142-162). Washington, D.C.: Georgetown University Press.

Delpit, L. (1995). *Other people's children: Cultural conflict in the classroom.* New York: New Press.

Galbenski, P. R. (1992). *An investigation of politeness in the secondary classroom.* Master's thesis, Central Michigan University, Mount Pleasant, Michigan.

Holmes, J. (1995). *Women, men and politeness.* London: Longman.

Lakoff, R. T. (1990). *Talking power: The politics of language in our lives.* New York: Basic Books.

Manke, M. P. (1997). *Classroom power relations: Understanding student-teacher interaction.* Mahwah, NJ: Lawrence Erlbaum.

White, J. J. (1989). The power of politeness in the classroom: Cultural codes that create and constrain knowledge construction. *Journal of Curriculum and Supervision, 4*, 298-321.

Effective Questioning Techniques: In Theory and Practice

by

Sari Rose

with

John Litcher

Wake Forest University

Department of Education

December, 1998

Introduction

Questioning has traditionally been considered essential to effective teaching because questions serve a myriad of purposes. Wilen (1991) has suggested that two of the main purposes of questioning "are to determine student understanding of basic facts associated with specific content and to have students apply facts using critical skills." Despite the enormous amount of research that suggests questions contribute to learning gains, and the plethora of books and workshops designed to improve teachers questioning techniques, studies have consistently shown that 80 percent of teachers' questions do something other than ask students to think (Wilen, 1991; Appalachia Educational Laboratory, 1994).

This study will examine the current research on questioning techniques that lead to effective teaching. It will also explore the questioning philosophies of teachers and then observe teachers' use of questioning in their classroom. The purpose of this study is to discover whether a congruency exists between teachers' self-perceived questioning behavior and their actual questioning behavior.

Literature Review

Questioning is viewed as the most influential devise a teacher can use to activate, motivate, and cultivate student thinking. Interest in questioning methods is not a new phenomena, but one that dates back to the time of Socrates and Plato (Ellis, 1993). Although the first research studies focused on describing and evaluating teachers' use of questions in the classroom, studies in the last twenty years have focused on "process-product" research which

investigates the individual behaviors that cause learning outcomes (Wilen 1991). Researchers such as Cunningham (1987), Wilen (1991), and Ellis (1993) have identified various reasons why questioning leads to learning gains. They concluded:

1. Questions serve to stimulate student interest in a subject, which leads to greater participation and motivates students to concentrate on the specific task.
2. Questions aid in assessing the progress of the students and whether or not they understand and have learned the material.
3. Teachers' questions can serve to elaborate and clarify students' responses.
4. Questions allow the teacher to diagnose students' abilities and possible weaknesses.
5. Questions especially higher order ones, can stimulate critical and creative thinking in the student.
6. Questions elicit further practice and rehearsal of the material. This is most visible in the form of review sessions.
7. Questions enable the teacher to probe the students' for their personal opinions toward the material. By questioning the teacher may also personalize the material for the student, which leads to increased participation.
8. Questions are a means in which to control students' behavior.
9. Through questioning students are able to support their contributions to the class and possibly (if responses are correct) build up the confidence of the student.
10. Questions are an essential means of stimulating class discussions of an issue or problem.

In order to maximize the efficiency of questioning in the classroom it is important to know not only what questions can be used for, but also the types of questions and the effective techniques in which to use them. The majority of researchers categorize questions according to the thinking levels established by Bloom (1956). Sanders (1966) developed questioning levels that correlated to the desired level of thinking which certain questions sought to elicit (i.e. knowledge, translation, interpretation, application, analysis, synthesis, and evaluation). Cunningham (1987) later reorganized these categories into factual recall questions, which are lowest cognitive level questions; conceptual questions such as convergent and divergent types; and evaluative or higher level questions.

Once question types are understood it is important to construct a plan to implement them into the lesson. Hunkins (1972) devised a strategy that called for teachers to immerse themselves in the subject matter, analyze the situation, examine the goals and objectives of lesson, choose appropriate questions, and finally write them into the lesson. This information is useless however, unless teachers are able implement effective questioning techniques. Authors such as

Hunkins (1972), Rowe (1974), Wilen (1987 and 1991), and AEL (1994) have all contributed to the following list of effective questioning techniques:

1. **Wait Time**-The more time a teacher waits for students to answer a question the better the response and the greater the participation.
2. **Phrase Questions Clearly**- Clearly phrased questions communicate what the teacher expects of the students.
3. **Ask Questions At All Levels**- Learning gains increase as the variety of question types does.
4. **Ask Higher Level Questions to Older Students**- The teacher should act as a facilitator of knowledge and therefore use deeper questions to motivate students to learn for themselves.
5. **Rephrase and Redirect**- If a student is struggling to answer a question either redirect it to another or rephrase it so it is clearer.
6. **Probe**- Ask students more questions in order to elaborate on their answer or discover new information.
7. **Provide Praise and Acknowledgement**- Reward good responses justly.
8. **Do Not Repeat Students' Responses**- Let students have to listen for themselves.
9. **Encourage Student Response**- All questions should at least be acknowledged.
10. **Do Not Direct the Question to Anyone until it is Asked**- This forces all students to pay attention.

Subjects

The participants in this study were five high school social studies teachers (three females and two males) from four different high schools in Forsyth County, North Carolina. The grade, class level, and subject areas taught varied individually. The teaching experience also varied from beginning teacher to twenty-nine years experience.

Procedure

Each teacher was observed for a minimum of five hours and the questioning practices of the teachers during that time were observed paying special attention to the specific behaviors that are believed to improve learning gains. Once the observations were completed the researcher filled out a general questionnaire classifying the question types and attending behaviors of the teachers. A different questionnaire was also given to the teachers concerning their individual beliefs on questioning and class participation. The teachers' responses were then compared to the observations to look for the application of effective questioning techniques and congruency between teachers' self-perceived questioning behavior and their actual questioning behavior.

Results

The results of the teacher questionnaire found that all the teachers were familiar with the categorizing of question types and had attended either a seminar or workshop on teacher questioning. Although answers varied somewhat, all the teachers felt that questions were important for stimulating discussion, assessing student comprehension, and promoting critical thinking. In addition all the teachers placed a heavy emphasis on student participation and reflected it in their grading systems. Finally, all the teachers said that they formulated questions into their lesson plans.

From the observations it was apparent that all the teachers utilized various forms of effective questioning techniques in their discussions. Although some were more involved than others, all had excellent attending behaviors and were encouraging of students' questions and responses. Excellent questioning techniques were displayed throughout the observation, but the level of questioning was still limited mostly to the factual recall level. It became apparent that the self-perceived questioning behavior and actual questioning behavior were not congruent. Only one teacher truly implemented all the ideas that were stated in the answers to the questionnaire.

Conclusions

The responses of the teachers meant that all of them were familiar with effective questioning techniques and understood the importance of questioning in elevating the learning gains of the students. All of the responses were representative of the ideal goals researchers of questions and student discussion hope teachers practice. However, despite knowing what the ideal is, all the teachers except for one fell short of it. This may mean that teachers are indeed learning what they can do to lift the level of questioning, but they may need to practice implementing the techniques. The research conducted by AEL might lead to changes in teacher training that can alleviate this problem.

When reading this research it is important to consider some variables that may affect its results. Although the researcher observed numerous hours of class for each teacher, outside factors could have influenced the teachers behavior, so that the days observed may not represent the normal activities of the teacher. The observations were staggered over several weeks, so that a consistent evolution of a unit was hard to observe. In addition, although the research was suppose to focus on the use of questioning during lectures, many of the teachers' use activities

throughout the periods observed, which sometimes led to a decrease in teacher student interactions.

References

Appalachia Educational Laboratory, Inc. (1994, February). Questioning and understanding to improve learning and thinking (QUILT) : The evaluation results. Charleston, WV: Appalachia Educational Laboratory. (ERIC Document Reproduction Service No. ED 403 230)

Bloom, B. S. et al., eds. (1956). Taxonomy of educational objectives: The classification of educational goals: Handbook I: The cognitive domain. New York: David McKay.

Cunningham, R.T. (1987). What kind of question is that? In W. Wilen (Ed.), Questions, questioning techniques, and effective teaching (pp. 67-94). Washington, D.C.: National Education Association.

Ellis, K. (1993, February). Teacher questioning behavior and student learning: What research says to teachers. Alburquerque, NM: Paper presented at the Annual Meeting of the Western States Communication Association. (ERIC Document Reproduction Service No. ED 359 572)

Hunkins, F.P. (1972). Questioning strategies and techniques. Boston: Allyn and Bacon, Inc.

National Education Association. (1991). Questioning skills for teachers. What research says to the teacher (3rd ed.) Washington, D.C.: Author. (ERIC Document Reproduction Service No. ED 332 983)

Rowe, M.B. (1974). Pausing phenomena: Influence on the quality of instruction. Journal of Psycholinquistic Research 3, (3), 203-23.

Sanders, N. M. (1966). Classroom questions: What kinds?. New York: Harper & Row.

Wilen, W. (1987). Effective questions and questioning: A classroom application. In W. Wilen (Ed.), Questions, questioning techniques, and effective teaching (pp. 107-35). Washington, D.C.: National Education Association.

The Importance of Young Adult Literature In the Secondary English Classroom

by
Rhonda Faircloth Saweliew
with
Joseph Milner
Wake Forest University
Department of Education
December, 1998

Introduction

Young Adult Literature has long been thought to be an important part of the reading development of young adolescents. However, its influence has been mostly noted in the Middle grades and the extra curricular realm. Many English classrooms do not even use this type of literature. It is too often forgotten in the rush to cover course objectives. The absence of Young Adult Literature from the high school English class is robbing today's students of an important learning resource. This researcher intends to examine the reasons and remedies for this absence.

Review of Literature

Adolescent Literature, or Young Adult Literature, is known quite simply as "literature written for or about adolescents" (Bushman and Bushman, 1993, p. 2). For the purpose of this paper, "adolescent" will be defined as a person between the ages of 11 and 18. Adolescent Literature includes "books written especially for adolescents, and books written for children, adults or a general audience that can relate to the young adults' needs and interests" (Reed, 1994, p. 4). Young Adult Literature has many common characteristics: simplicity, characters who are young or experience situations of the young, modern themes that relate to the life of today's young adults (Reed, 1994, p. 4), conflicts that are consistent with the young adults' experience, protagonists and most characters are young adults, and the language parallels that of young people (Bushman and Bushman, 1993; Carlsen, 1980). Nilsen and Donelson (1993) define the following as characteristics of the "best" Adolescent Books: the author writes from the viewpoint of young people, parents play a minor role, if any, in the plot of the book, the authors avoid "elevated language" and write in the language spoken by adolescents, it includes a variety of genres and subjects, it includes stories about characters from diverse ethnic and cultural groups, they are "basically optimistic" with characters making important contributions, and it is influenced by fads, mass marketing and trends in culture.

The use of adolescent literature in the English classroom has many advantages: it improves the reading skills of adolescents (Reed, 1994; Tighe, 1991), it instills into the adolescent a permanent love of reading (Atwell, 1987; Bushman and Bushman, 1993; Reed, 1994), it offers adolescents the chance to experience life and hone their decision making skills, and it addresses social issues that many teenagers will face (Boreen, 1994; Hurwitz, 1993; Noll, 1994; Smith and Rhodes,1994). Adolescent Literature also allows students to interact with books as equals. This perception helps students to develop their reading skills, encourages them to read more books, and encourages them to keep reading (Reed, 1994). On a psychological level, Young Adult literature caters to the egocentric view of the world that most adolescents possess.

Young adult literature, when used, has a profound effect on the development of the curriculum of today's schools. The curriculum of today's schools is described by Atwell (1987) as being "nonreading". She states that teachers turn students into "aliterate" readers (ones who have the ability to read but choose not to). This occurs when teachers send messages to students in which they discourage the reading growth process (Atwell, 1987). This is also done with the constant use of worksheets, vocabulary drills, and lectures given in isolation of thematically related works.

When Young Adult literature is incorporated into the curriculum, several things occur. First, teachers are able to incorporate more books and reading activities into the classroom, therefore avoiding the "nonreading" curriculum (Reed, 1994). Also, students become more enthusiastic about reading and sharing what they read. Students are able to connect what they read with the world around them. They are thus given a compass in which to direct their growth as readers and as critical thinkers.

The importance of Adolescent Literature on the learning of today's students is something that has been studied often. Atwell (1987) addresses the reading development of adolescents at length. She suggests that the current curriculum used in most U.S. schools discourages reading and sends messages to students that reading is difficult. Atwell (1987) also states that teachers have reduced reading to a performance art where students are constantly taught how to dissect books into pieces, that the teacher's interpretation of the text is the only correct one, and that reading somehow always involves testing. All these messages are turning students into "aliterate" readers (p.152). They are able to read, but choose not to. She asserts that it is the job of the educator to stop sending these messages and to encourage students to rediscover the joy in reading.

Carlsen (1980) presented research that made three generalizations about the development of reading patterns in young adults. First, age is more important that ability level when determining what subjects an adolescent will enjoy reading. For example, a very advanced

thirteen year old reader will be interested in reading books of the same subject matter and theme as her less advanced peers. However, titles may vary.

Second, reading preferences are determined by culture and gender as well as age. Boys tend to gravitate toward books with male protagonists and realistic style, while girls prefer female protagonists and internal, or romanticized action. Finally, Carlsen (1980) states that adolescents will choose books based on their subject matter. If a book is not interesting to them, they will reject them, regardless of their literary merits. With these developmental changes in mind, it is not surprising that young adults are not often passionate about reading. They need books that fulfill their needs as developing readers.

Bushman and Bushman (1993) assert that Adolescent Literature fulfills a void left by today's literature. They describe adolescence as "a time of change: a time for physical growth, sexual awareness, emotional upheaval, and cognitive development" (p.1). Therefore, they reason that an understanding of young adult literature and how it meets the growing interests and needs of young people is necessary to facilitate them in their physical, moral, psychological and reading development. According to the researchers, adolescents have special needs that are not met by traditional or contemporary literature. Adolescent Literature provides situations with which the students are familiar, and provides examples of young adults much like themselves solving problems and dealing with adversity effectively. Young adult literature also meets the needs of at-risk and gifted students. At-risk students are often those in danger of failing. These students usually detest school and reading because of their fear of failure. Bushman and Bushman (1993) state that because Young adult literature is written from the perspective of the young adult, these novels are more attractive to reluctant readers. They say: "Students will comprehend more if they have previous knowledge about what they are reading. Young adult literature makes the connections between reading and experiences" (p. 22).

Adolescent literature benefits gifted students in much the same way. While these students are able to read and understand more complex language, developmentally, they lack the maturity to comprehend some of the issues presented in classic literature. Bushman and Bushman (1993) state that teachers should present literature with which the students can interact, "not just analyze" (p.23). Adolescent Literature bridges that gap between reading and experience. Reed (1994) states adolescent literature is appropriate for all reading levels. By choosing literature that is relevant to the lives of teenagers, teachers can help their students gain an understanding not only of themselves, but also of the world around them.

Tighe (1991) suggests the use of adolescent literature to motivate reluctant readers. She bases her ideas on the studies of Carlsen (1980). As he asserts, adolescents tend to be very self centered. Because of this, they use literature primarily to form their identity. This egocentrism makes it extremely difficult for students to analyze and understand literature that is far removed

from their lives. She states that adolescent students "want to identify and empathize with protagonists...Yet, too often in our classrooms, we ask them to struggle with books that have little connection with their own lives, and we require them to focus on literary analysis which holds little meaning for them" (Tighe, 1991, p.3). Tighe (1991) suggests using adolescent literature because these books "speak more directly to reader interests and needs" (p.3). By appealing to the egocentric tendencies of adolescents, teachers can engage the adolescents' interest while using this type of literature to help develop students' reading and discussion skills. One caveat the author mentions is that it is extremely necessary to choose quality literature in order to address higher thinking skills.

Considering the large impact adolescent literature has on the development and attitudes of students, it seems logical to conclude that when traditional classic literature is paired with books written especially for young adults the result would be increased interest in and identification with the subject matter. The researcher intends to observe if this is indeed true.

Methodology

The data for this study was gathered by means of an anonymous survey administered to English teachers in grades 9-12 in a large, Western North Carolina High School. The participants were asked to list the Adolescent novels they teach in their courses, to indicate the level of importance placed on teaching various types of literature. The purpose was to ascertain teachers' attitudes about teaching adolescent literature.

Results and Conclusions

For a proponent of Adolescent Literature, the results of this study were discouraging. Of all the teachers surveyed, none listed any works of adolescent fiction in among the works taught. The works selected were almost exclusively from the canon and included such titles as: To Kill a Mockingbird, Romeo and Juliet, Great Expectations, Les Miserables, Animal Farm, The Odyssey, The Adventures of Huckleberry Finn and The Scarlet Letter. When asked to indicate the single biggest factor that influenced the decision to teach these works, the most popular answer was their inclusion in State Curriculum and State administered tests (58%), relevance of themes to students' lives (32%), readability (8%) and other reasons, such as tradition, availability of texts and teacher preferences (2%) .

Teachers were also asked to indicate the relative importance of the inclusion of several English curricular elements into classroom instruction. The importance index was derived from the responses on a Likert scale in which teachers indicated that these elements are either Very Important or Important.

Of these elements, the teachers deemed it most important to teach Writing (31%) and The Canon (22%) followed by Media Literacy (22%) and Grammar (21%). Only 2% of those teachers surveyed believed it was Important or Very Important to teach Adolescent Literature.

The comments of teachers are perhaps the most revealing. Several teachers stated that Adolescent Literature is useful and appropriate "on a student's own time, but not during class time." A ninth grade English I teacher seemed to summarize most of the concerns of the teachers surveyed in this way: "Ninth grade would probably be the best place for 'Adolescent Literature,' however, End of Course tests and ABCs of Education [North Carolina's Accountability Program] dictate crucial importance be placed on editing, reading comprehension, vocabulary and spelling. The State curriculum also has a suggested reading list-- with all the above requirements, we only fit two novels in, so they come from 'the Canon.'"

While there is much research to prove the value of Adolescent Literature to young and developing readers, the results produced in this study show that this resource is not being tapped. What do these results mean to researchers, teachers and students? For proponents of Adolescent Literature, it means that there is still much work to be done. In spite of all the research that has been done that proves its worth to developing readers, it is still not being utilized in classrooms. Teachers still seem to have the idea that Adolescent Literature is an inferior genre and not worth using class time to teach. The best way, in this researcher's opinion, to dispel that misconception is for these teachers to be exposed both to the books themselves and to the research on these books. There are many resources available for this purpose. It is up to educators and legislators to take the first steps toward integrating Adolescent Literature into the curriculum. Our students deserve to be presented with every opportunity to become lovers of reading.

References

Atwell, N: (1987). In the middle. Portsmouth, NH: Boyton/Cook/ Heinemann .

Boreen, J. (1994). Censorship for all seasons: considering the fiction of the past present and the future to help students understand the concept of censorship in our world today. Paper presented at the Annual Meeting of the National Council of Teachers of English, Orlando, FL: November 16-20, 1994. (ERIC Document Reproduction Service No: ED 376 491).

Bushman, J.H. and Bushman, K.P. (1993). Using young adult literature in the english classroom. New York, NY: Macmillan Publishing Company.

Carlsen, G.R. (1980). Books and the teenage reader: A guide for teachers, librarians and parents. New York, NY: Harper and Row, Publishers.

Hurwitz, S. (1994) Using literature and technology to relieve adolescent problems. ALAN Review, 20 (2), 33-38.

Nilsen, A. P. and Donelson, K. L. (1993). Literature for today's young adults. New York, NY: Harper Collins College Publishers.

Noll, E. (1994). Social issues and literature circles with adolescents. Journal of Reading, 38 (2), 88-93.

Reed, A.J.S. (1994). Reaching adolescents: the young adult book and the school. New York, NY: Macmillan College Publishing Company Inc.

Smith, J.L. and Rhodes, J.W. (1994). Exploring female representation in current adolescent literature. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA: April 4-8, 1994. (ERIC Document Reproduction Service No: ED 380 348).

Tighe, M.A. (1991). Using young adult literature to motivate reluctant readers or what to do when they haven't read their assignment. Paper presented at the annual meeting of National Council of Teachers of English, Seattle, WA: November 22-27, 1991. (ERIC Document Reproduction Service No: ED 341 962).

BEST COPY AVAILABLE

The Gender Bias in Science: The Missing Links

by
Jeff Streeter
with
Robert Evans and Betsy Crossley
Wake Forest University
Department of Education
December, 1998

Introduction

The existence of gender inequity in the science classroom is among the most widely disseminated results of education research. This research demonstrates, among other things, that female students are not called on as often in science classrooms (AAUW, 1992). The gap exists, but the reasons for its existence, and the action which should be taken, remain to be discovered. The immediate impulse is to say we simply must even out the questions asked of boys and girls in our science classrooms, but this may not be the best answer.

The feminist movement has increasingly embraced a program of difference feminism (Howes, 1998). The goal of this movement is to recognize the fundamental differences between men and women, and take advantage of them. It is a difficult process; one must be careful not to perpetuate stereotypes. Yet differences exist, and we cannot serve the entire population well while ignoring them.

Review of the Literature

The classic work in gender bias research is Becker's 1981 study which took place in ten geometry classrooms. She found that males received 55% of the direct questions, answered 55% of the open questions, and received 64% of the sustaining feedback. In addition, 70% of the time when a teacher persisted in questioning a student having difficulty, the student was male, and male students also received more praise and criticism. This research led to similar studies in science classrooms, including a 1992 study by the American Association of University Women, demonstrating that female science students suffered the same inequities. It is generally accepted that at least partially as a result of this inequity, females take fewer courses, score lower in achievement and interest, and major less often in science at the college level (Greenfield, 1997; Renne, 1991).

While demonstrating that these inequities exist, none of the research on gender bias has generated an explanation for the phenomenon. Discussion of the topic among researchers often results in an explanation based on the belief that females are generally less comfortable answering questions in the classroom setting (Krockorer & Shepardson, 1995; His & Handley, 1997; Guzzetti & Williams, 1996; Jewett, 1996). This perception, which is often mentioned but seldom studied in education research, will be examined in this study. If one accepts this explanation, it seems plausible that the bias in science classrooms is not based on gender, but rather on another variable strongly correlated with gender. The implication of this is that forcing those students who currently are not answering questions to do so may not be an effective method of teaching these students because they find the situation highly uncomfortable.

The fundamental question being asked is what causes teachers to ask more questions of some students than of others. Tobin and Gallagher (1987) discovered that a small group of 3-7 'target' students tend to answer the majority of questions in almost all science classes. Target students tended to be those who 'enjoyed responding to questions' or 'projected themselves into whole class interactions.' In contrast, teachers avoided calling on many other students for fear of embarrassing them. Teachers call on aggressive students whom they perceive to be confident and comfortable answering questions in the classroom.

Some fundamental gender differences may lead to male students being more aggressive, confident, and comfortable in the classroom. Females may be less willing to take risks in the classroom due their confidence being more extrinsically based, and their tendency to place blame internally (Rothman, 1991; Ware et al, 1981). There are many arguments as to why males are naturally more aggressive than females, ranging from biological determinism to extreme socialization. Although there is no hard evidence to substantiate these various theories, there is general agreement that male students are more aggressive (Granstom & Frost, 1990).

The dominant environment in science classrooms may simply be uninviting to female students. Guzzetti and Williams (1996) show that there is a lack of emotional and intellectual safety in the traditional science classroom, and argue that this is especially harmful to female students who tend to be less aggressive and confident in science classes. The science classroom tends to be a male environment, favoring exclusionary thinking. Lawson and Hammerbacher (1990) argued that teacher questions in science are generally viewed as having a single correct answer, favoring competitive thinking, based on hierarchies and dichotomies, that is overly

reliant on logic and rules. This discourages female students who tend to incorporate the thoughts of others and accept multiple viewpoints in a more inclusionary model of thinking.

There may be fundamental underlying variables that explain the inequities in questioning taking place in science classrooms. The hypothesis of this study is that variables like aggression, confidence, and comfort can account for the gender bias in science classrooms.

Methodology

Four science classes in three different Winston- Salem/Forsyth County high schools were observed through two periods. Every occurrence in which the teacher requested a response from a particular student was recorded as a 'call'. It is very straightforward to compare this data to student gender, and the expectation was that such a comparison would demonstrate an unequal distribution of questions favoring male students (Becker, 1981; AAUW, 1992). The purpose of the study was to determine whether this inequity might not represent a difference in the treatment of male and female students, but rather might be a phenomena arising from underlying fundamental gender differences. It was necessary to create a device that would measure these hypothesized fundamental variables. This need resulted in a questionnaire which asked students (in questions #1, #2, #4, #6) about how aggressive they were in science classes, how upsetting they found it to answer a question incorrectly, how confident they were when answering questions, and how comfortable they were when called on to answer a question without volunteering. While the scale's polarity varied in the questionnaire, in computing the results a score of five was given to high aggression, lack of discomfort resulting from incorrect answers, high confidence, and high comfort. The expectation was that each of these variables would show a high correlation with gender, as well as a high correlation with the number of calls a student received.

If, as expected, high ratings in confidence, aggressiveness, and comfort were correlated with a high number of calls; and there also existed a correlation between gender and these ratings; it is possible that differences in these variables are the underlying explanation for the apparent gender bias found in science classrooms. In order to demonstrate that this might be the case, it must be shown that a group of students who demonstrate equal degrees of confidence, aggressiveness and comfort cannot be differentiated on the basis of gender.

Results

The first question to be considered was whether the data collected supports Becker (1981), and all subsequent demonstrations of gender bias in the classroom. 85 students were called upon 161 times during the course of the study. 47 girls answered 83 of those questions, while 38 boys answered 78 questions. A perfectly even distribution, where all students are called on an equal number of times, would have predicted the girls answering 90 questions and the boys 71. The raw data does point to an inequitable distribution of questions in favor of the male students. The numbers match very closely with the type of numbers that have been obtained in other studies of gender bias. Becker (1981) reported that male students received 55% of the directed questions, and the numbers above predict, that in a class with equal numbers of male and female students, the males would receive 54% of the direct questions.

Three variables proved to have a significant statistical correlation with the number of times a student was called on (see Figure 1.).

Figure 1. Significance of Correlation between each variable and number of calls

Question	Topic	r(CV = .2172)
#1	Aggression in the classroom	.359
#4	Confidence in answering	.318
#6	Comfort in answering (un-volunteered)	.298
Avg.	Average of questions #1, #4, and #6	.379

The gender bias can only be explained by these variables if they are related to gender. The raw data appears to support the notion that gender is related to these variables, but due to the small sample size no statistically significant correlation is found. The raw data is as follows in Figure 3.

Figure 3. Average rating in variables by gender

Question	Topic	Avg. male rating	Avg. female rating
#1	Aggression in classroom	2.974	2.87
#4	Confidence in answering	3.658	3.47
#6	Comfort in answering (un-volunteered)	3.684	3.28

The women consistently rated themselves lower in aggression, confidence, and comfort, although not enough so to demonstrate a statistically significant correlation with gender.

BEST COPY AVAILABLE

Conclusions

The data collected supports the existing research that demonstrates an inequity in the number of questions asked of male and female students in the science classroom. The research demonstrates that teachers call more often on those students who are aggressive in the classroom, demonstrate confidence in answering questions, and who don't seem to be uncomfortable when called upon without having volunteered.

In order for this result to explain the gender bias there must be a relationship between gender and these variables. As expected, female students, on average, rated themselves lower in all three variables. Until, however, a larger scale study can demonstrate that the relationship is statistically significant, these results can only be viewed as demonstrating the promise these variables have for explaining this gender bias.

It will also be crucial for future studies to show that these variables can control for an observed gender bias. This can only be accomplished by demonstrating that when these variables are controlled for within a group of students, the gender bias disappears. If students of equal aggression, confidence, and comfort, answer the same number of questions regardless of gender, the gender bias can be fully explained by these variables. This was not demonstrated by the data collected in this study. The sample size, when divided into multiple groups, was simply too small to provide truly meaningful data in this area.

References

The AAUW Report (1992). How schools shortchange girls. Washington, D.C.: American Association of University Women Education Foundation.

Becker, J.R. (1981). Differential treatment of females and males in mathematics classes. Journal for Research in Mathematics Education 12(1), 40-53.

Granstam, I & Frost, I (1990). Science, technology, a future for all? Report Book of the European and 3rd World Gender and Science and Technology Conference. Jonkoping, Sweeden. May 6-11, 1990. (ERIC document # 343796, 235p.)

Greenfield, T.A. (1997). Gender and grade-level differences in science interest and participation. Science Education 81(3), 259-276.

Guzetti, B.J. & Williams, W.O. (1996). Gender, text, and discussion: Examining intellectual safety in the science classroom. Journal of Research in Science Teaching 33(1), 5-20.

Howes, E. L. (1998). Connecting girls and science: A feminist teacher research study of a high school prenatel testing unit. Journal of Research in Science Teaching 35(8), 877-896.

Hsi, S. & Handley, C.M. (1997). Productive discussion in science: Gender equity through electronic discourse. Journal of Science Education and Technology 6(1), 23-36.

Jewett, O. (1996). "And they is us:" Gender issues in the instruction of science. (ERIC document #402202, 14 p.)

Krockorer, G.H. & Shepardson, D.P. (1995). The missing links in gender equity research. Journal of Research in Science Teaching 32(3), 223-224.

Lawson, M. & Hammerbacher, G. (1989). "Masculine" and "feminine" ways of thinking. Proceedings of Second Annual Conference on Critical Thinking, Montclair State College, NJ.

Renne, L.J. & Parker, L.H. (1993). Curriculum reform and choice of science: Consequences for balanced and equitable participation and achievement. Journal of Research in Science Teaching 30(9), 1017-1028.

Rothman, R. (1991). Schools are called partly responsible for drop in self-esteem among girls. Education Week 10(17), 6.

Tobin, K. & Gallagher, J.J. (1987). The role of target students in the science classroom. Journal of Research in Science Teaching 24(1), 61-75.

Ware, N.C., Nicole, A.S., & Lesserman, J. (1985). Undergraduate women: who chooses a science major? Journal of Higher Education, 56(4), 73-84.

BEST COPY AVAILABLE

The Use of Formal and Informal Language in the Science Classroom

by

Jodi Wheeler

with

Robert Evans and Richard Gizinski

Wake Forest University

December, 1998

Introduction

The writing - to - learn movement has made educators more aware of the uses of writing in classrooms of all disciplines. However, science educators face a unique set of issues in responding to the push to increase the use of writing. While it is recognized that writing can be an effective learning tool, educators debate what role different types of language should play in the science classroom.

Post-laboratory writing assignments are some of the most common writing assignments in secondary science classrooms. This study is designed provide teachers with a comparison between standard laboratory reports, an alternative report that allows students to use familiar language, and a report that does not involve writing. This should help them make informed decisions about when to use which type of assignment.

Review of Literature

Writing can be an important tool for learning because writing tasks require students to process information in a unique way. The production of text requires that the student have a goal, access the needed information from memory that relates to that goal, and logically relate the information (Glen and Muth, 1994). Writing requires students to examine their thoughts in greater detail, so it can help students identify gaps in their knowledge. Many writing assignments help students see patterns, such as hierarchical organization or causality. By writing, "the student endeavors to communicate a mental representation of scientific ideas, which includes not only the ideas but the relations among those ideas" (Glen and Muth, 1994). However, there is considerable debate among science educators and linguists about whether students should be taught to imitate scientific writing, or encouraged to write in language with which they are more comfortable (Jones, 1997).

Some hold that it is critical that the primary language used in the science classroom be the formal language of scientific discourse. This group argues that students need to acquire these language skills so that they will be able to understand and perhaps participate in scientific discourse (O'Neill, 1997). In addition, scientific language represents a world view that is fundamentally different from a common sense approach to the world. Therefore, common sense, or everyday, language cannot adequately express scientific ideas. Science, "has evolved a special language to interpret the world in its own, not in common sense, terms" (Halliday and Martin, 1993, p. 200).

Another group of educators and linguists argue that both word usage and genres should be varied in a student's educational experience. They claim that elements of scientific writing misrepresent the nature of science to students, giving the impression that "facts were not argued into existence; language was not involved in creating them; the scientists' role was just to find them, ready-made" (Sutton, 1998, p. 30). Other authors support this observation (O'Neill, 1997; Lemke, 1990). Writing that uses the passive voice removes the human element from the statement, and makes it appear that science has a monopoly on "true" ideas that are unquestionable (Lemke, 1990). Finally, everyday language has a place in the science classroom because it is a valid means for expressing ideas. Lemke (1990) examined transcripts from a variety of classroom situations and found that student comments on material, in everyday language, expressed logical and scientific ideas.

More research is needed to explore the interaction between specific writing tasks, topics, and situations (Levine and Geldman-Caspar, 1997; Rivard, 1994).

Methodology

Three post-laboratory assignments, one requiring formal writing (a scientific report), one requiring informal writing (a note to a friend), and one requiring only calculations, were assigned to 63 tenth and eleventh grade honors chemistry students, ages 15 to 17, in three classes taught by the same chemistry teacher. For the first laboratory, on Boyle's Law, Class A completed the scientific report assignment, Class B completed the peer explanation assignment, and Class C completed the laboratory calculations assignment. For the second and third laboratories, classes were assigned the reports which they had not done, until all classes had tried all three report styles. These classes were accustomed to writing post-laboratory assignments, and the experimental assignments were substituted for the students' standard report.

Each student was given a handout explaining the writing assignment along with a handout detailing the laboratory procedures as part of the normal pre-laboratory process. The reports were due two days after the laboratory was completed.

Two days after the third laboratory, the students completed an unannounced post-test to evaluate their understanding of the labs and completed an opinion survey asking their post-laboratory assignment preferences. Standardized directions were used to ensure uniformity in administration.

Results and Conclusions

Students responded to the treatment with varying degrees of success (fig. 1). Many students either had difficulty writing the scientific report in formal language or simply did not do so. Other students had correct style except for writing the methods section in the command tense. About a third made extensive use of informal language. For the peer explanation report, only about half used a "note" format, as instructed. One problem with the peer explanation report, was that many students simply wrote the procedure without answering the questions "why did you do this?" or "what did you learn?" Scientific reports tended to be longer and cover more information, because most students included all of the requested sections.

Figure 1- How well did students use the assigned format?

Scientific Report	Class A	Class B	Class C	Totals
Correct	9	5	6	20
Methods written in command form, as directions	7	10	8	25
Included several examples of casual speech	6	1	8	15
Peer Explanation	Class A	Class B	Class C	Totals
Note format with casual language (correct)	14	8	8	30
Note format covering only methods	6	3	3	12
Not note format, methods only	3	5	2	10
Full scientific report	4	1	4	9
All calculations contained minimal writing.				

Scores on the post-tests (fig. 2) were very similar across the classes, although they differed greatly between labs. For this reason, the results from different labs were evaluated separately. A one way analysis of variance (ANOVA), with $p = .05$, was used to determine if there were any significant differences between post-laboratory assignments. No significant differences were found for the Charles' Law or Graham's Law labs, but there was indication of a significant difference in the Boyle's Law lab (fig. 3). A Sheffé test indicated that the significant difference for the Boyle's Law lab lay between the Scientific Report (SR) and Calculations (CL) groups.

Figure 2- Average post-test scores

Laboratory	*Scientific Report (SR)*	*Peer Explanation (PE)*	*Calculations (CL)*
Boyle's Law	11.4	9.5	7
Charles' Law	6.0	5.7	5.6
Graham's Law	13.8	10.0	12.1

As there was only one significant result, it may be that changing the laboratory report did not substantially affect comprehension of the laboratory material. It is difficult to assess what effect the lab reports may have had, since only about half of each class wrote the lab report as assigned. While this casts doubt on the effect of language style on the post-test scores, the structure of the report may have had effect. The scientific reports tended to be longer and cover more of the material because students were careful to include information in every category. The peer explanation assignment asked for the same information, but subjects were more likely to overlook this request. Therefore, it is probable that any results from this experiment refer more to quantity of material covered in a writing assignment or the structure of the assignment.

More clear conclusions can be drawn from the opinion surveys. The subjects overwhelmingly enjoyed the peer explanation report more than the scientific report. Explanation for this choice ranged from, "Peer explanation gave me a chance to review what we had done and rewrite it in a way that I understood it" to "Because it's easier and more fun to write in slang to your friends."

Many students put extra effort into the peer explanation lab reports. One report was written entirely in African American slang. Another carefully detailed the places where the friend might make a mistake and get the wrong results. Others included serious diagrams or fanciful doodles. The reports also included comments that might be helpful to a teacher. Students felt more free to write communicative comments, such as "I don't know why we did this," and "today's class was da' bomb."

Gender comparisons revealed that males were even more likely than females to enjoy the peer report and find it helpful. Males were also less likely than females to give informative explanations for how they made their choices, so perhaps it is more useful to examine why females chose the scientific report. Females commented that the structure of the scientific report was helpful, that it was more thorough, and that it was less confusing. One female student wrote, "I feel the scientific is best because of the career I am pursuing. I think it is important to see <u>why</u> you get your conclusions and results."

Differences between the report styles should be examined further. Another study using a larger sample size without varying the laboratory experiment would be useful in clarifying the effects of post-laboratory assignment on understanding. The effects of structure should also be examined separately from writing style. It would be interesting to investigate the use of informal writing within such a structure. Also, it would useful to find out why males tend more than females to prefer peer explanation to scientific report.

It would also be useful to examine the effects of teaching specific language skills in the science classroom. Many students were unsuccessful at using scientific language appropriately, while other students commented that they had difficulty using peer explanation for science, as they were not accustomed to it. Explicitly addressing the language aspects of assignments with students may be the clearest way to uncover the effects of different language styles on student learning.

References

Glen, S. and Muth, K. (1994). Reading and writing to learn science: Achieving scientific literacy. Journal of Research in Science Teaching, 31, 1057-1073.

Halliday, M.A.K. and Martin, J. R. (1993). Literacy in science: Learning to handle text as technology. In M. Halliday and J.R. Martin (Eds.) Writing science: Literacy and discursive power (p 166-202). Pittsburgh: University of Pittsburgh Press.

Jones, C.L. (1997). Communicating through writing about processes in science. Journal of Biological Education, 31, 55-64.

Lemke, J.L. (1990). Talking Science: Language, Learning and Values. Norwood, NJ: Ablex Publishing Corporation.

Levine, T. and Geldman-Caspar, Z. (1997). What can be learned from informal student writings in a science context? School Science and Mathematics, 97, 359-367.

O'Neill, K. (1997). Bluffing their way into science: Analyzing students' appropriation of the research article genre. Annual Meeting of the American Educational Research Association, Chicago, IL. [ERIC Document Reproduction Service No ED 409 184]

Rivard, L.P. (1994). A review of writing to learn in science: Implications for practice and research. Journal of Research in Science Teaching, 31, 969-983.

Sutton, C. (1998). New perspectives on language in science. In B. Fraser & K. Tobin (Eds.), International Handbook of Science Education (p 27-38). Great Britain: Kluwer Academic Publishers.

Improving Foreign Language Instruction at the High School Level Using Early Language Techniques

by

Leslie White

with

Mary Lynn Redmond

Wake Forest University

Department of Education

December, 1998

Introduction

Foreign language instruction in the elementary grades is gaining attention nationally and becoming an increasingly important component in the elementary school curriculum. By beginning language learning between the ages of four and eight, the student can acquire the second language more easily and is able to gain a greater level of proficiency in an unbroken sequence of study over a period of time. Curtain and Pesc la (1994) note many advantages to studying a foreign language, including increased knowledge of one's native tongue and improved critical thinking skills. In addition, there is a correlation between foreign language study and increased test scores in other subjects as well as SAT and ACT scores. Foreign Language in the Elementary School (FLES) programs have been developed in order to teach foreign languages to young learners. The methodology of FLES programs differs from that of high school foreign language programs because of the way in which the students learn language. Early language learners do not study grammar explicitly as adult learners do because they are not cognitively ready to do so (Curtain & Pesola, 1994). Elementary students acquire language by listening and speaking in communicative experiences before being introduced to reading and writing activities. While middle/high school learners should also have a listening period prior to being asked to produce language, they are ready to study grammatical structures (Krashen, 1982). This researcher proposes that while young learners and adult learners approach language differently, there are methods used in the FLES program that can be used effectively at the high school level to teach grammar for communication. This researcher seeks to identify specific methods used in FLES that enhance and reinforce the teaching of grammar in high school.

Review of Literature

Before discussing the methods used in FLES and in middle/high school, the distinction between acquisition and learning should be noted. Acquisition of a language is a subconscious process. Young children are not aware of the grammar rules they are learning, nor can they explain the rules. While older learners are able to study grammar formally because of their cognitive development, young learners often gain a greater level of proficiency because they have a longer sequence of language study, and factors such as the desire to imitate and participate in role play enhances the learning process (Krashen, 1982). Dulay et al. (1982) concur by noting that children are not only more likely to produce native-like pronunciation, but they are also able to achieve native-like proficiency better than adults. Dulay et al. (1982) also note that adult learners may not acquire language as easily as young learners because the second language environment in which adults typically learn is not rich in "natural communication and the concrete referents which foster subconscious language learning (p. 78)." In other words, adult learners are often not given the opportunities to communicate that foster acquisition of the foreign language. This suggests that a second language classroom should provide opportunities for natural communication, whether it is an elementary or middle/secondary class.

Krashen's (1982) Natural Order Hypothesis states that "the acquisition of grammatical structures proceeds in a predictable order" when acquiring a second language (p. 12). According to Krashen and Terrell (1983), the second language acquirer progresses through six stages of development. In the first stage, or "silent period", the acquirer is generally silent and learns by listening and comprehending oral second language input. Responses in the first stage are indicated by nonverbal communication such as by following commands or directions. In the second stage, the acquirer begins to produce language in single word and yes/no responses, while in the third stage speech becomes more advanced and includes simple sentences as opposed to one-word or answers in phrases. The fourth stage includes production of phrases, the fifth stage consists of the production of sentences, and the final stage is complex discourse. It is therefore logical that the foreign language teacher should focus on listening activities before asking students to produce language in a formal instruction setting.

In a FLES program, grammar rules are not taught explicitly. Rather, lessons focus on language experiences that engage the children in purposeful communication. For example, in order to practice vocabulary about clothing, students would describe what other students are

wearing and have the class guess about whom they are talking. This activity would not involve explicit explanation of grammar rules, rather, the students would follow a model provided by the teacher in order to describe their peers. In this activity language is acquired because of a need to communicate in the classroom.

Various techniques used to involve students in the target language are important in the FLES program. As previously noted, listening is the first skill to be developed in acquiring a second language. Total Physical Response (TPR) is a technique in which students react physically to oral commands given by the teacher (Asher, 1986). This allows the learner to understand before producing language and make the connection between the input and its meaning (Curtain & Pesola, 1994). Other FLES techniques include storytelling, games, songs, role play, and dialogues (Curtain & Pesola, 1994; Shrum & Glisan, 1994). Storytelling helps the students develop listening skills and integrates culture instruction by presenting people and activities typical to the culture of the second language. Games are interesting and motivating for students and can be used to introduce or practice specific language concepts. Songs incorporated with actions are also helpful in reinforcing and teaching the second language because they help students link language with actions. Role play is a communicative technique which encourages students to create language for a particular cultural situation as well as react to the language of their peers. Dialogues help learners to practice previously learned language and conversation skills as well as promote students' creativity and dramatization skills.

In the elementary school, grammar is not taught categorically, but is implied and embedded into lessons so that students acquire the structures without being consciously aware of them (Krashen, 1982). In high school however, grammar structures are studied and memorized, sometimes without being associated with practical language use. Krashen and Terrell (1983), write that adult learners benefit from grammar instruction and that the sequencing of such instruction should be based on communicative goals. This means that while students study grammar explicitly, the structures are practiced in real-life communicative settings. In an effective secondary foreign language class students study grammar in order to communicate in the second language and are able to apply the rules they learn.

Since the goal of the foreign language program should be proficiency in listening, speaking, reading, and writing, methods used to teach foreign language in the elementary grades can also carry over into the secondary classroom. An important component of a FLES program

is the use of content-based instruction. Shrum and Glisan (1994) describe a content-based FLES program as one in which the curriculum is formed using basic subject matter such as science, social studies, math, etc. In such a program, students use the second language to learn or reinforce information presented in core classes. For example, if fourth graders are studying their state's geography, the same information can be studied in the foreign language class. Dulay et al. (1982) report that using the target language as a medium for instruction, as is done in content-based classes, is more effective than direct target language instruction in achieving proficiency. Glisan and Fall (as cited in Glisan & Shrum, 1994) go on to suggest that content-based instruction be implemented in secondary programs as well because students receive concrete practice that aids in comprehension of the second language.

Because of the differences in grammar instruction at the elementary and middle/high school level, the researcher wanted to investigate how FLES methods might improve and enrich high school foreign language classes.

Methodology

In order to study effective foreign language grammar instruction at the secondary level the researcher observed two high school Spanish classes in the Winston-Salem/Forsyth County Schools, four times each, conducted interviews with the teachers, and distributed questionnaires to both teachers and students. The researcher observed a Level I class taught by Teacher A and a Level II class taught by Teacher B. The researcher attended classes that focused on grammar and used a checklist of common communicative methods for teaching grammar to record those observed. The teacher questionnaire was designed to identify the techniques and methods the teachers use to introduce and practice grammatical structures as well as any training in FLES methodology that may have changed their teaching. The student questionnaire was designed to discover whether students enjoy learning Spanish and which methods they feel are motivating and help them learn best. The researcher compared the students' responses with the teachers' responses and observation results in order to determine how the teachers' practices compared with their answers and students' expectations.

Results and Conclusions

The results of this research differed between the two classes studied. The teachers' responses on both the questionnaire and interview were similar, but the students' responses were more varied. Both teachers felt their students enjoyed learning Spanish and said they used a

variety of methods in order to teach grammar. They both indicated that FLES methods training had affected their secondary teaching, and they incorporated those methods in their classes. However, in observing the two teachers, the researcher noted many more examples of FLES methods in Teacher A's class than in Teacher B's. Teacher A used several songs and chants as well as TPR in order to practice verb conjugations, indirect objects, and syllable division. However, Teacher B did not use any FLES methods in the classes observed.

The students' responses were more varied than the teachers'. More of Teacher A's students felt comfortable with grammatical structures than Teacher B's, possibly because Teacher A provided more opportunities for communicative grammar practice. Many more students reported that Teacher A varied her activities than did Teacher B's students. However, nearly all the students said they learn better from the use of different activities in order to practice grammar.

Given the results of the students' and teachers' responses, it seems that FLES methods can be used effectively in the secondary foreign language class. The students observed enjoyed and learned from such methods and communicated in the second language while using FLES methods. Overall, the students participating in Teacher A's class were more motivated and reported that they learned better than the students in Teacher B's class. Therefore, this researcher feels that older learners can benefit from some methods used to teach young foreign language learners and middle/high school foreign language classes can be enriched by the use of FLES methods to teach grammar.

References

Asher, J. J. (1986). *Learning another language through actions: The complete teachers' guidebook.* Los Gatos, CA: Sky Oaks Publications.

Curtain, H., & Pesola, C. A. (1994). *Languages and children: Making the match: Foreign language instruction for an early start grades K-8.* White Plains, NY: Longman Publishing Group.

Dulay, H., Burt, M., & Krashen, S. (1982). *Language two.* New York: Oxford University Press.

Krashen, S. D. (1982). *Principles and practice in second language acquisition.* New York: Pergamon Press.

Krashen, S. D., & Terrell , T. D. (1983). *The natural approach: Language acquisition in the classroom.* New York: Pergamon Press & San Francisco: Alemany Press.

Shrum, J. L. & Glisan, E. W. (1994). *Teacher's handbook: Contextualized language instruction.* Boston, MA: Heinle & Heinle Publishers.

Discipline Style and Teacher Personality

By

Jill Wolf

with

Joseph O. Milner

Wake Forest University

Department of Education

December, 1998

Introduction

While observing four high school English teachers with vastly different personalities, the one issue that seemed interwoven in the context of all classroom activity was discipline. Though the particular class, student, or situation played a part in shaping discipline choices, patterns quickly emerged as teachers consistently relied on methods with which they felt most comfortable.

In this suburban school comprised of 1,473 students, the same set of rules hang on the walls of each classroom. However, it is not these rules which dictate what a student can and cannot do. As an observer, the student's viewpoint on discipline becomes clear. Yes, rules exist, but the *real* rules are determined by a teacher's personality and preferences, combined with the degree to which a student is willing to challenge the constraints.

This paper will examine four teachers with different dispositions, senses of humor, and teaching styles. Drawing on research and classroom observations, I hypothesize that teachers, often unwittingly, choose very specific discipline techniques, gravitating toward styles that work most easily in conjunction with their own personalities. Not only does a teacher's style reflect his or her goals for the class, it also impacts how much learning takes place.

Review of the Literature

Since 1970, Americans have consistently cited discipline as the most serious concern in schools (Fitzsimmons, 1998, p.1) and educators concur. Discipline and the conditions necessary to gain respect do not come naturally to teachers. Ellis and others (1996) note that "the notion that teachers will somehow... learn how to keep thirty kids from going thirty different directions once teachers are 'on the job' is amazing—a cruel hoax used to cover up a major deficiency in

teacher training" (p. 26). This raises a crucial question, then: can teachers be prepared to be disciplinarians during teacher training, or must the necessary qualities already be an intrinsic part of their personalities? Ellis speculates that the ability to discipline in a competent manner is either nurtured or neglected far earlier than teaching begins. "Just as we teach the way we were taught, we tend to discipline with the same ineffectual methods that were used on us" (p. 27).

Much of the research present suggests that any teacher or school can achieve order by following specific guidelines. However, few researchers acknowledge the link between a teacher's personality and his or her ability to carry out suggestions. Bell (1973) suggests that a leader's personality greatly impacts his success or failure with different techniques.. Clearly then, success not only depends on the methods used, but the unique agendas that accompany each teacher's individual personality.

Analysis and Discussion

"Every teacher has a theory. Even the educator who cares only about practical strategies... is operating under a set of assumptions about human nature, about children.... These assumptions color everything that happens in classrooms" (Kohn, 1996, p. 1)

Every teacher has particular strategies, based on their goals for the class and their beliefs about students in general. It is often these beliefs which shape the essence of the classroom more than any lesson plan or school wide policy. Though usually unspoken, each teacher's "theory" surfaces and becomes observable when they practice discipline.

Traditional Discipline

Traditional discipline refers to attempts to gain order in a classroom after disruptive behavior has occurred. Additionally, teachers who use traditional discipline methods rarely use techniques to prevent disruption from taking place initially. One teacher in this study relied on it as the predominant method. Teacher A's classes were characterized by off-task, highly social students. This seemed to stem directly from Teacher A's discipline style. During observations, it was apparent that the style was incongruous with the rest of Teacher A's personality. Instead of being a controlling, angry teacher who desires to chastise students for every infraction, Teacher A is understanding, creative, and intelligent. However, several problems regularly arose that caused traditional discipline to be used.

First, Teacher A rarely used preventative techniques to curb disruptions. Most of the major discipline issues stemmed from extraneous talking. This was magnified because of extensive periods of "dead time", where students were left without an assignment or goal for

long periods of time. Much disruption could have been prevented if Teacher A had anticipated the lack of activity caused by students finishing early, and created another assignment.

Sometimes, creative lessons were not met with enthusiasm in Teacher A's class because of poor planning. For instance, one afternoon in September, Teacher A demonstrated the skill of revising a paper using the class video screen. Instead of delegating the responsibility of typing to a student, Teacher A typed, which caused his back to be turned from the class. Also, several of the students could not see the screen, because of the seating arrangement. These students became highly disruptive, resulting in one student being referred to the office (Observer notes, September 23, 1998).

Teacher A rarely attempts an alternative disciplinary tactic, perhaps because he has become consumed with the small yet draining disruptions that occur so regularly. Because Teacher A is an imaginative, likable teacher, this example illustrates the degree to which effective discipline is needed in order to guarantee that learning takes place.

Classroom Management

Two of the observed teachers used this method primarily. Maintaining order in these classrooms is a top priority, and is primarily accomplished through using preventative techniques as a way to suppress extraneous energy. One way this was accomplished was through physical movement around the room. Teacher C, for example, often moved in an L-shape in order to be in close physical proximity with those who might potentially misbehave.

These two teachers often attempted to move students through material at rapid pace. Problematically, in such a classroom where this is the ultimate goal, students' questions and opinions are not acknowledged. In both classrooms, calling out was almost the exclusive method for answering questions. By doing so, the teacher was able to move more quickly through information. These teachers rarely checked for students' understanding, often causing confusion and disinterest. When one student complained, "I'm lost", Teacher D replied, "I have no patience for people who are lost when they were never paying attention in the first place" (Observer notes, September 16, 1998). Clearly, though unspoken, the primary goal is moving from one task to the next, rather than creating a learning environment.

Both teachers who use classroom management are pleasant, sweet-natured individuals. However, they both also strive to avoid confrontation. This is evident to students, who interpret

this distanced approach as being uncaring and uninvolved. Students therefore feel excused from becoming truly engaged in these classes.

Leadership

One of the four teachers observed consistently achieves an atmosphere of leadership in the classroom. Leadership involves inspiring students to motivate themselves. In the most ideal leadership situation, discipline is not a problem, because students are willingly involved in their role as learner. This implies that the atmosphere of learning itself is used by a leader as a preventative measure to squelch discipline issues.

Much of Teacher D's success comes from his charismatic personality. Not only is he witty and playful, but importantly, he has an innate understanding of how his students view him, and how they view themselves. Students are so receptive to this because it implies that he understands and respects them, even though he acknowledges that he is not a part of their culture.

Teacher D's personality is not the only element that helps him to be a leader. His classes are generally fast-paced, and contain a large portion of interaction with students. Instead of suppressing the students' natural energy, he channels it into the class activity.

In Teacher D's tenth-grade remedial class, several unspoken rules exist that are woven into the class ethos. Interestingly, many of these rules are for the teacher, not the students. Students expect Teacher D to respect and encourage their opinions, and to be involved in the class, even when students are doing work independently. Teacher D often verbally enforces his own high expectations for them. The students seem dedicated to following these expectations, because Teacher D respects his own commitments to them.

When discipline issues arise, Teacher D uses his genuine understanding of the class in order to solve problems, rather than merely assign a punishment. His tone during such conversations is calm and speculative. Teacher D involves students in the process of evaluating the event. This type of openness to the students as individuals paves the way for true leadership.

Conclusions

It is much easier to analyze teachers and group them into categories than it is to explain why they fall into the categories they do. Are certain individuals predisposed to being leaders based on personality? The teachers observed here suggest that, though personality traits play a part, and investment of time and energy devoted to making the class interesting is crucial.

Discipline works when students believe that teachers are truly committed—that is, they are willing to invest time and energy into the class and the students themselves.

Why do teachers continue to use techniques that work only minimally with students? Because being a leader rather than a rule-enforcer takes tremendous time and energy, as well as, perhaps, a deviation from what may be comfortable based on one's personality. To evolve into a higher stage of discipline might involve Kohn's idea that "every teacher has a theory". It is this theory, or mindset, that must be altered in order for a teacher to become a leader.

References

Brown, D. (1971). *Changing Student Behavior: A New Approach to Discipline*. Dubuque: Wm. C. Brown Company Publishers.

Ellis, H.J. And Others. (1996). Positive classroom management. (ERIC Document Reproduction Service No. ED 417515, 4 pages.)

Fitzsimmons, M.K. (1998). School-wide behavioral management systems. (ERIC Document Reproduction Service No. ED 417515, 4 pages).

Kohn, A. (1996). *Beyond Discipline: From Compliance to Community*. Alexandria: Association for Supervision and Curriculum Development.

Do Current Philosophies in Social Studies Pedagogy Have a Life in the Classroom?

by

Lisa L. Yamaoka

with

John Litcher

Wake Forest University

Department of Education

December 1998

Introduction

Postmodern philosophy is not merely the abstract construction of philosophers but a reflection of the underlying nature of and changing assumptions about our culture and society. Questions about the nature or existence of *progress*, understanding our increasingly plural society, and the mythologies of our national identity are not only the realm of academics. The most progressive, new theoretical pedagogies recognize a dissonance which exists within our society and seek to empower students to learn to deal with and value diversity, critically evaluate issues, and understand the forces which shape government and society. The hope is that students will be better citizens, invested with critical understanding rather than superficial knowledge.

Several questions immediately present themselves when thinking about how a "critical pedagogy" might express itself in today's classroom. Are students taught to read for bias? Is history presented considering differing viewpoints? Are science-technology-and-society issues discussed, integrated, or applied? How are multicultural perspectives used in the curriculum? Are they meaningful and sincere or superficial and piecemeal? Is/How is a democratic environment created and fostered in the classroom? Problem Statement: How are current curriculum trends, designed outside modernist and positivistic models, encountered by students.

Review of Literature

A review of the literature, concerning citizenship education and social studies curricula, reveals a growing awareness of the skills students will need as citizens in a postmodern world.

Citizenship education has been the core of the reformed social studies curriculum (Barth, 1993; Leming, 1989; Remy, 1990). Conflict, based on political ideology, exists among social scientists about what constitutes citizenship and how it ought to be taught. Most insist that we

must teach them to think critically but disagree on how this critical thinking ought to be embodied (Webster, 1997). Currently, the progressive trend is towards critical thinking and assessing the nature of politics, power, and democracy in hopes of educating a critical and active citizenry who could enable the creation of a "radical democratic society" (Giroux, 1996). Several curriculum innovations and reforms are being applied to this end: multicultural themes, curricula and pedagogy (Giroux, 1996; Grelle & Metzger, 1996; Ochoa, 1991); science-technology-society approaches (Bybee, et al., 1991; Fleury, 1997; Heath, 1990; Marker, 1993; Remy, 1990; Rosenthal, 1989; Shim. 1996); and new analytical interdisciplinary approaches, incorporating economics, politics, sociology, history, geography, and anthropology. (Bain, 1997; Helfman, 1997; Hitchens, 1997; Mills, 1996; Rader, 1996; Stavrianos, 1997; Stoltman, 1990).

Methods

Extensive field notes were collected from participant observation in the classrooms of four master teachers in four different Forsyth County high schools. The observer was present for a minimum of twelve hours of actual class time in each classroom over a period of three weeks with each teacher. As much as possible, different lessons were observed. The observer also considered the informal interaction with the master teachers as a part of the research process. In addition the textbook for each class was evaluated to add breadth to the short time period for observation. No formalized method of note taking was used. Field notes, interviews, and textbook reviews will be analyzed as part of the continuing observation process as well as conducted holistically at the conclusion of the observations.

Discussion

Some new theoretical insights are making their way into the classroom. This does not mean that the teachers I observed are familiar with the current literature regarding curriculum renewal. This point is really not relevant in the context of this study. We live in a world where the concepts of progress and truth are increasingly questionable. This creates a dilemma for social studies' teachers who are charged with teaching content standards with character and citizenship education, in increasingly plural communities. History as moral myth, which formerly served as an effective citizenship-building tool, has lost much of its legitimacy.

In the short three months I spent observing several trends emerged.

(1) Covering the material was the primary limiting factor in engaging students analytically with the material.

(2) In courses without end of course tests, teachers engaged their students in considerably more critical analysis.

(3) Activities, which seemed on the surface to be student centered (group work and student presentations) were actually teacher driven.

(4) Controversial issues are generally bypassed.

(5) Analysis was frequently used to understand the interaction of history, politics, economics, geography and sociology, within a traditional framework.

On paper the North Carolina curriculum standards are progressive in many ways, including many of the issues and skills found in the current literature: multicultural infusion, interdisciplinary work, STS issues, and judging and interpreting activities. Because of end of course testing, coverage is the driving force behind the classroom curriculum. This does not encourage teachers or students to explore alternative interpretations of history or to explore issues comparatively. The desire to encourage critical thinking and evaluation, which is the foundation of most of the new curriculum reforms, cannot be effectively evaluated by a multiple-choice test. History generally has more nuances and is more qualified than this type of testing allows.

The US history teachers used group work and primary materials in an attempt to be more fully engaged with the material. The follow-up discussions were primarily directed to teacher-conceived goals, and students were not asked higher order questions regarding what they read. However, there were some instances where students were involved in interpreting primary sources by being asked to put themselves in the position of the writer/speaker. This activity allowed the students an experience of history and politics as the collection of various viewpoints. Generally, however, any concept of historiography was absent.

The coverage issue also contributes to the lack of democratization in the classroom. In order to effectively and efficiently cover material, lessons become teacher driven. Even in class discussions, teachers repeat students' answers, re-enforcing "right" answers and the teacher's authority over information. Remarkably in courses without end of course tests, teachers allowed considerably more student direction and engagement in the learning process. This included allowing students to choose discussion topics; encouraging students to decide which specific information to learn; allowing student presentations to define and interpret the "important"

information; having student questions direct discussion; and allowing students to respond directly to each other rather than to the teacher.

Controversial subjects were often bypassed or quickly resolved by the teacher. Sometimes students raised issues. Other times they were raised directly and indirectly by teachers. The class expanded upon some of these issues but most were too easily dismissed. It is by examining controversy that students will test their values, reasoning abilities and critical interpretation (Ochoa, 1991; Soley, 1996). Also indicative of the influence of the coverage issue, controversial issues based on revisionism are largely absent from textbooks and the classroom. In principle, all of the teachers displayed, in one way or another, that "there are always at least two sides to every story." While this may encourage students to look for alternative interpretations, it does not offer them the tools to succeed in creating their own. The relative nature of historical inquiry is lost in the need to cover material.

All of the teachers did an excellent job of incorporating political, economic, and geographic analysis into their lessons. Demonstrating to students the interdisciplinary nature of society and the way these tools can be used to interpret and analysis historical events.

The questioning of issues of legitimacy, reading for bias, interpreting controversy and actually democratizing the classroom are still quite foreign to classroom practice and, as we have seen, are limited primarily by need/desire to cover material for end of course testing. Future study on this issue needs to be more focused. The short duration of observation with each teacher limits this study. Ideally this qualitative study might have been a process lasting a year or longer. Questions raised include clarifying some of my assumptions. Is my portrayal of students' world view correct? How do teachers' world views compare to students' views, do they reflect modernist or post modernist values and sensibilities? What are teachers' philosophical underpinnings and how knowledgeable are they about the current theoretical literature.

References

Bain, R.B. (1997). Building an essential world history tool: teaching comparative history. In H. Roupp (Ed.), Teaching world history: A resource book (pp. 29-33). New York: ME Sharpe.

Barth, J.L. (1993). Social studies: There is a history, there is a body, but is it worth saving? Social Education, 57, 56-57.

Bybee, R.W., Powell, J.C., Ellis, J.D., Giese, J.R., Parisi, L. & Singleton, L. (1991). Integrating the history and nature of science and technology in science and social studies curriculum. Science Education, 75, 143-55.

Fleury, S.C. (1997). Science in social studies: reclaiming science for social knowledge. In E.W. Ross (Ed.), The social studies curriculum: Purposes, problems, and possibilities (pp. 165-182). Albany: SUNY Press.

Giroux, H.A., Lankshear, C. McLean, P. & Peters, M. (1996). Counternarratives: Cultural studies and critical pedagogies in postmodern spaces. New York & London: Routledge.

Grelle, B. & Metzger, D. (1996). Beyond socialization and multiculturalism: Rethinking the task of citizenship education in a pluralistic society. Social Education, 60, 147-151.

Heath, P.A. (1990). Integrating science and technology instruction into the social studies: Basic elements. Social Education, 54, 207-209.

Helfand, J. (1997). Using "The uprising of '34" to link the classroom to the community. OAH Magazine of History, 11 (3), 40-42.

Hitchens, M. (1997). World history as a course of study: Rationale, goals, and formulations. In H. Roupp (Ed.), Teaching world history (pp. 10-19). New York: ME Sharpe.

Leming, J.S. (1989). The two cultures of social studies education. Social Education, 53, 404-408.

Marker, G.W. (1993). The diffusion and adoption of STS in the social studies: Some observations. ERIC.

Mills, R.K. (1996). What U.S. political history reveals for social studies education. Social Education, 60, 159-161.

Ochoa, A. (1991). Informed and reasoning citizens: An interdisciplinary matter. ERIC.

Rader, W. (1996). Toward a philosophy of economics education. Social Studies, 87, 4-6.

Remy, R.C. (1990). The need for science/technology/society in the social studies. Social Education, 54, 203-207.

Rosenthal, D.B. (1989) Two approaches to science-technology-society (STS) education. Science Education, 73, 581-589.

Shim, M-H. (1996). Teaching about the history of science and technology in history classrooms: A new direction in STS education. ERIC.

Soley, M. (1996, Jan). If it's controversial, why teach it? Social Education, 60(1), 9-14.

Stavrianos, L.S. (1997). A global perspective in the organization of world history. In H. Roupp (Ed.), Teaching world history (pp. 8-9). New York: ME Sharpe.

Stoltman, J.P. (1990). Geography education for citizenship. ERIC.

Webster, Y.O. (1997). Against the multicultural agenda: A critical thinking alternative. Westport, CN: Praeger.

BEST COPY AVAILABLE