5-2000

A Case Study of Effective Teaching Techniques for Diverse College Populations: Generation Xers and Baby Boomers

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A CASE STUDY OF EFFECTIVE TEACHING TECHNIQUES FOR DIVERSE COLLEGE POPULATIONS: GENERATION XERS AND BABY BOOMERS

A Dissertation

Presented to

the Faculty of the

Department of Educational Leadership and Policy Analysis

East Tennessee State University

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Education

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by

Karen O. Fritz

May 2000

APPROVAL

This is to certify that the Graduate Committee of

Karen O. Fritz

met on the

7th day of March, 2000.

The committee read and examined her dissertation, supervised her defense of it in an oral examination, and decided to recommend that her study be submitted to the Graduate Council, in partial fulfillment of the requirements for the degree Doctor of Education.

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Chairman, Graduate Committee

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Signed on behalf of
The Graduate Council

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Dean, School of Graduate Studies

ABSTRACT

A CASE STUDY OF EFFECTIVE TEACHING TECHNIQUES FOR DIVERSE COLLEGE POPULATIONS: GENERATION XERS AND BABY BOOMERS

by

Karen O. Fritz

The purpose of this study was to identify teaching techniques that could be used in college classrooms for effectively teaching two different age cohorts: Baby Boomers and Generation X students. Baby Boomers are those people born between 1946 and 1964. The subsequent generation, known as Generation X, was born between 1965 and 1981.

A multi-case qualitative study was designed to include interviews with faculty, focus groups with students, and classroom observations at three different community colleges in east Tennessee. Thirty-one faculty, ranging in age from 29 to 65, comprised the faculty panel. There were 48 student participants. Half of the 24 female students were Generation Xers. Of 22 male participants, 16 were Generation Xers. Classroom observations of nine different sections were conducted. These observations included traditional lecture classes, lab classes, and a couple of multimedia classrooms.

Interviews with the faculty panel revealed almost diametrically opposite classroom behaviors between Baby Boomers and Generation X students. While older students are generally more motivated, focused, and come to class prepared to learn; younger students were reported to exhibit behaviors that are antithetical to these. Some younger students indicated that they preferred to work on teams with older students for these reasons.

Additionally, effective teaching techniques for the two age cohorts were also discovered to be different. While both Boomers and Xers preferred real world examples to illustrate classroom theories, what was a relevant example for one generation was not always relevant for the other. Therefore, many instructors need to ascertain what is relevant in the Xers' world as constituted by the media, the Internet, and popular culture.

The modern classroom needs a variety of teaching techniques to cater to different types of learners. Perhaps a model whereby older students mentor professional behavior for the younger, and the younger teach older students how to use computer technologies would be a better learning environment. Additionally, a third of the instructors interviewed have found that they need to be entertaining to hold the shorter attention

spans of the younger student. Some type of visual component is becoming the norm in most classrooms, but there was not always agreement on which visuals were most effective for the two age groups. Baby Boomers generally preferred the board for transparency viewing or note taking in outline form. Conversely, while some young students liked these methods, a greater number preferred watching videos. However, the videos had to be engaging and usually no longer than 20 minutes to be effective.

Furthermore, 43% of the younger students value individual attention from their instructors, indicating that it can often make the difference between passing and failing a course. A third of the faculty also noted the younger students' hunger for attention. For instance, the eldest faculty member indicated, "So many Generation Xers are needy in terms of needing lots and lots of attention [because] a lot of my Generation X students are separated from their families."

Whatever the reasons, today's college instructors have a difficult task in assimilating the many learning styles and generational differences of age cohorts present in their classrooms. Not only do they have to stay informed in their academic domains and adapt their courses to multimedia and distance learning technologies, but they have to be entertaining for younger students to make the class interesting.

DEDICATION

I dedicate this manuscript to

all the Generation X students

who motivated me to pursue this degree,

and especially to one Xer,

Todd Kimbrough,

whose kind gesture of giving me an article about

the *Sesame Street Syndrome* inspired the topic

for this study many years later.

ACKNOWLEDGMENTS

I am profoundly grateful to my dissertation chair, Dr. Hal Knight, for his perceptive guidance and constant encouragement throughout the dissertation process. I am also thankful to my other doctoral committee members: Dr. Nancy Dishner, Dr. Ed Stead, and Dr. Russ West, as well as Dr. Donn Gresso, who retired prior to the completion of this manuscript.

I would also like to express my gratitude to Dr. Richard Wisniewski and his teaching assistant, Carol Marchel, at the University of Tennessee for challenging me to conceptualize my proposed study in the early stages, and for their assistance in conducting a mock study and bracketing interviews as preparation for beginning the formal study.

In addition, I would like to express my gratitude to all the educators at colleges X, Y, and Z, whose cooperation and willingness to share their teaching experiences made this a rich, qualitative study. And to all the students, whose insights will hopefully enlighten faculty to the needs of both age cohorts, I appreciate your participation in my study.

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CHAPTER 1

INTRODUCTION

Coupland (1990) first coined the term Generation X in his book describing the lives of three young people who sought their fortunes on the west coast by working at "McJobs" (p. 5) in the fast food industry. Coupland, a native of British Columbia, derived the term from the word "Xers," "a name first used by and about British Boomer-punkers" (Strauss & Howe, 1992, p. 2). Others have adopted the term to the extent that it has become commonplace to refer to young people in their 20s by this label. While this may be a demographic term used to describe a certain generational cohort, the differences between Generation Xers and previous generations go deeper than demographic categories.

Strauss and Howe (1991) described what they referred to as peer personalities of different generations:

> Every generation includes all kinds of people. Yet, as we explain in Part I, you and your peers share the same "age location" in history, and your generation's collective mind-set cannot help but influence you - whether you agree with it or spend a lifetime battling against it.
>
> . . .You may therefore resist our contention that other living generations are intrinsically different. But make no mistake: G.I.s have a distinct character, . . . , and the boundaries separating G.I.s from the Lost and Silent are among the most compelling in American history (p. 9).

Coincidentally, there are distinct differences among two other adjoining chronological generations referred to as Baby Boomers and Generation X. The term Baby Boom generation refers to the 78 million Americans born following World War II, between the years 1946 and 1964 (Zill & Robinson, 1995). Because Baby Boomers were born during a period of economic prosperity following the war, they were exposed to certain cultural, political, and social influences peculiar to their particular age cohort. Similarly, Generation Xers who followed the Baby Boomers, were exposed to other unique macro-environmental factors present during their lifetimes.

Generation Xers, also referred to as the "Lost Generation, . . . had to grow up fast to survive in a world of parental self-immersion or even neglect" (Strauss & Howe, 1991, pp. 11-12). Unlike the Boomers, who grew up with Captain Kangaroo, Barbie dolls, and tinker toys, Generation Xers watched Sesame Street and played computer video games for entertainment. Muro (1991) described them as the children of divorced, dysfunctional families or "classic victims of the two-income, latch-key family syndrome" (p. 2). Because this younger generation failed to behave in ways that Boomers expected, the elder generation has found it hard to suppress feelings of disappointment in their successors whom they view as "an army of aging Bart Simpsons, possibly armed and dangerous" (Strauss & Howe, 1991, p. 317). Unfortunately, Strauss and Howe (1991) argued that these cross-generational conflicts are unavoidable because people of different ages expect others to behave in ways similar to their own peer subcultures.

Statement of the Problem

Generational conflicts between Baby Boomer college teachers and Generation X students are being realized in classrooms on campuses across America, as evidenced by recent television documentaries, books, and articles in educational journals (Baker, 1998; Barna, 1994; Frishberg & Levin, 1997; McNamara, 1995; Sacks, 1996; Schneider, 1998; Strauss & Howe, 1991; Wagschal, 1995; Zill & Robinson, 1995). The differences are not limited to the capacity for processing visual versus printed information, but rather they also focus on important educational issues such as critical thinking (Wagschal, 1995), and varying expectations between instructors and students (Sacks, 1996; Schneider, 1998).

Unlike their Baby Boom predecessors, Generation X students do not appear to possess the same work ethic concerning their education, nor do they accept responsibility for low grades, according to Sacks (1996). Sacks coined the phrase postmodern students to describe Generation X college students. He further elaborated: "Like McDonald's customers expecting neatly packaged $1.99 Big Macs, these postmodernists harbored a strong sense of being entitled to easy success and good grades, even though they were unwilling to work for them" (1996, p. xiii).

Not only are there emerging conflicts between college professors and students of different generations, but there is also a growing awareness of lack of cooperation among students of different age cohorts, according to Baker (1998). Based on extensive research of community college enrollments, Baker discovered, "We have the baby boomers (about age 45), the 'X' generation (18-30), and parents of the boomers (now about 65) all - regardless of their psychological needs - often placed in the same classroom" (p. 12).

The dilemma facing college administrators and educators will be to facilitate a learning environment that will lead to greater satisfaction for all constituencies, regardless of age (Baker, 1998).

Purpose of the Investigation

By investigating the perceptions and experiences of selected East Tennessee community college students and instructors, I attempted to shed light on the changes that need to take place in the classroom to lead to more effective teaching methods for Generation X students, in addition to those used for the Baby Boomer cohort. A realization of the generational differences between Baby Boomers and Generation X students should, in turn, lead to differences in the treatments in ways that students are taught, depending on the learning styles of various age cohorts. The objective is to identify the most effective teaching techniques that may then be taught in faculty development workshops to improve teaching effectiveness and learning outcomes.

Significance of the Study

Mitchell (1997) contended that "Over half of young adults go to college. . . . However, only about one in four aged 25 to 34 has a college degree" (p. 38). Of those students attending college, most are under age 25, but one-fourth are between the ages of 25 and 34. In terms of raw numbers, the fall 1997 enrollments in United States post-secondary institutions totaled 15,436,000, representing 36.9% of all 18 to 24-year-old high school graduates (The Chronicle of Higher Education Almanac, 1999). Regardless

of which age segment one examines, a substantial majority of college students fall into the Generation X cohort, whose members ranged in age from 19 to 35 in 2000. Until the youngest Generation Xers turn 34 in 15 more years, they will continue to comprise a sizable segment of college enrollments, especially on community college campuses where "the majority of students are older, part time, adult, and career oriented" (Baker, 1998, p. 10).

Macunovich (1997) predicted as much as a 30% increase in the demand for higher education among 18 to 24-year-olds over the next decade, from about 8.8 million in 1994 to 11.4 million in 2004. In her detailed study of cohort size and effect, Macunovich concluded that "For the first time since World War II, . . . , absolute cohort size will be increasing dramatically" (p. 44), as the latter half of Generation X enters college. If these forecasts materialize, then educators will need to continue to teach this cohort in the most effective and efficient ways.

If college professors and instructors are to be effective in teaching the Generation X students, then they must understand and adapt their teaching strategies to this cohort. Of course, each educator has his or her viewpoint about the younger generation of college students at institutions of higher learning, but growing concern and frustration has been voiced among faculty concerning the Generation X students in college classrooms (Baker, 1998; Frishberg & Levin, 1997; McNamara, 1995; Sacks, 1996; Schneider, 1998; Wagschal, 1995). By observing several college classrooms and interviewing a variety of students and instructors from three community colleges in East Tennessee, information was collected and analyzed for common themes and techniques that practitioners have

discovered that work better for teaching this new generation of college students, in addition to the non-traditional Baby Boomer students.

Limitations of the Study

The inability to generalize research findings to larger populations is an inherent weakness of qualitative research. This study is qualitative in nature and, therefore, generalization to other populations is not appropriate. The participants in this study were purposely selected from three community colleges within a 100-mile radius in East Tennessee, due to travel and time constraints. The three institutions chosen were: Northeast State Technical Community College in Blountville, Pellissippi State Technical Community College in Knoxville, and Walters State Community College in Morristown.

These three institutions were not randomly selected and no attempt was made to compare their students' characteristics with those of students at other institutions in East Tennessee. Therefore, it is inappropriate to generalize findings from this study to other populations. It also would be unrealistic to assume that these participants were representative of other college populations elsewhere in East Tennessee because they represented such a small percentage of the entire student bodies or faculties at the three colleges from which they were drawn.

Definitions of Terms

Terminology found in the literature for the label Generation X varied. The term broadly defined by demographers is referred to as the generational cohort born between 1965 and 1981 (Strauss & Howe, 1991; Zill & Robinson, 1995). Other synonyms for this generational cohort included: "Gen X," "baby busters," "the Lost generation," "the thirteenth generation," "Thirteeners," "Twentysomethings," or just "Xers" (Morrison, 1994, p.18; Strauss & Howe, 1991, pp. 320-321).

Barna, in his book entitled Baby Busters: The Disillusioned Generation (1994), defined this age cohort as being born between 1965 and 1983. Interestingly, he has already named the next generation "the Millennials," those born between 1984 and 2002 (pp. 72-74). Slight variations in the cut-off years encompassed by the generation labeled "X" occurred in the literature. However, for the purposes of this study, I chose the mid-range estimate of 1981 offered by Strauss and Howe, because their work was cited more frequently in the literature than any other work. This date also fell midway between Hornblower's 1977 cut-off year and Barna's 1983 cut-off year for the youngest Xers.

Based on United States census vital statistics, the estimated live births for years 1965 through 1981 were 58,538,000 (U. S. Bureau of the Census, 1997). However, this estimate was based on a 50-percent sample of births per 1,000 population, so it should be viewed strictly as an estimate for the population of Generation X.

For the purpose of this study, the term learning style was defined as a person's habitual approach to problem solving, thinking, organizing, processing, and remembering information, based on definitions offered by Messick (1976) and Tennant (1997).

Instructional or teaching methods were defined using Messick's (1976) array of synonyms: "the ways in which teachers teach" (p. 35), "mediating strategies for social reinforcement" (p. 36), and "educational treatments" (p. 36). The best practices for effective instruction were defined as those that created "optimal relationships . . . between teacher and student in terms of match in cognitive styles . . . that will maximize individual development and creativity" (Wapner, 1976, p. 77).

When describing small-group learning situations, techniques of cooperative and collaborative learning were included. The distinction between cooperative and collaborative learning occurs in terms of how group activities are facilitated. In cooperative learning, the group assignments tend to be structured and monitored more by the instructor. Whereas in collaborative learning, the instructor takes more of a passive role and expects students to negotiate their own memberships, roles, and norms (Matthews, Cooper, Davidson, & Hawkes, 1995).

Research Issues to be Investigated

During this study of the different learning styles and teaching methods that were discovered for effectively teaching Generation X, college instructors were asked in general terms about their experiences and impressions of the two generational cohorts present at most college campuses. A list of open-ended questions, which appear later in Chapter 3, was the basis for investigating the following key issues:

(1) What are the observable differences in the learning styles of different age cohorts of college students, specifically between the Baby Boomers and Generation Xers?

(2) Do Baby Boomers and Xers relate to their instructors? If so, in what ways do they relate? How does each age cohort relate toward each other while working on group classroom projects?

(3) What are the teaching methods that appear to work better with the younger Generation X students versus the older Baby Boomers, or methods that work equally well with both?

Organization of the Study

The remainder of this report was organized as follows: Chapter 2, "Review of the Literature"; Chapter 3, "Methodology"; Chapter 4, "Presentation and Analysis of the Data"; Chapter 5, "Conclusions & Interpretations of Findings."

Chapter 2 is an overview of recent educational concerns about Generation X college students, and it also included several sources dating back to the 1970s and 1980s, where the origins of learning differences occurred during the childhood years of Generation X. Chapter 3 outlines the research methods used to investigate selected community college students, including the case method, interviews, focus groups, and observations.

The data are presented and analyzed in Chapter 4, beginning with a composite profile of educators interviewed at the selected community colleges. They were chosen from a variety of teaching disciplines at three colleges in eastern Tennessee: Northeast State Technical Community College, Pellissippi State Technical Community College, and Walters State Community College. Secondly, numerous interviews, focus groups, and

classroom observations at the three colleges were discussed. A qualitative software package was used to code common themes found in the interviews.

Chapter 5 concluded with recommendations for educators. Through the triangulation process of interpreting findings from the interviews, focus groups, classroom observations and other sources of data at each institution, the most effective teaching methods for generational cohorts were discussed. These recommendations would serve as the basis for improving teaching effectiveness in post-secondary institutions where Generation X students would continue to enroll for the next 10 to 15 years.

CHAPTER 2

REVIEW OF THE LITERATURE

During the past decade a proliferation of print and broadcast media exploited, labeled, and criticized the generation that has come to be known as Generation X. Stories about "Xers" have graced the covers of major periodicals such as Time and Newsweek, assigning numerous labels to this group of young people. Other popular names for Generation X are: "Baby Busters, Slackers, Flyers, 13th Generation, Twenty-somethings, Grungers, Cocoes, . . ." (Morrison, 1994, p. 18). Some may dye their hair different colors and others may wear their baseball caps backwards, but are today's youth really that different from the hippies of the 1960s or the beatniks of the 1950s?

Demographic Definition of Generation X

According to Zill and Robinson (1995) in American Demographics:

> Sweeping generalizations about any generation are bound to be incorrect. But so, too, is the notion that there is nothing different or noteworthy about today's young adults. . . . Within a family, generations are easy to understand. Each successive step in the descent from a common ancestor is a generation. . . . There is another kind of generation, however, made up of peers in the same age group. This has become a common way to group Americans. Two 20- year-olds may belong to different generations within their

> family, but belong to the same age cohort. There is no generally accepted formula for setting the boundaries of an age-defined generation, although a general consensus has emerged for several groups -- most notably, baby boomers as the group born between 1946 and 1964 (p. 24, pp. 32-33).

Similarly, a general consensus existed that the X generation succeeded the Baby Boom generation. However, journalists, historians, and demographers did not appear to agree on the exact classification of the time span attributed to the birth years of Generation X. Because the preceding postwar Baby Boom generation spanned the birth years from 1946-1964 (Zill & Robinson, 1995), the beginning birth year of Generation X was 1965. However, some variation was discovered when defining the ending birth year of Generation X.

Hornblower in Time (1997) described the 45 million Xers as being born between 1965 and 1977. However, many sources extend the cut-off date to 1981 and beyond. Apparently, the 1981 date was derived from a "landmark work by William Strauss and Nell Howe entitled Generations: The History of America's Future, 1584 to 2069" (Wagschal, 1995, pp. 24-25). In this book, Strauss and Howe (1991) defined the 13th generation born since the United States won its independence in 1776, as being born up until the year 1981. If this time frame was accepted to extend to 1981, then the population of Generation X would exceed the aforementioned 45 million, in the Hornblower (1997) article.

Emerging Differences Between Boomers and Generation Xers

As one explored the demographic definitions of generational cohorts, the question still remained: Were Generation Xers different from the youth of previous generations? Kennedy (1996) stated that Baby Boomers and Generation Xers clashed in the work force because of differences stemming from child-rearing philosophies. While Boomers were raised to be cooperative and competitive in a crowded generation of 78 million peers, the Xers' playmates were often computers and video games. As a result, Xers had fewer opportunities to learn to interact and communicate with other children. Consequently, they worked better alone and were not automatically team players, according to Kennedy (1996).

Other researchers echoed Kennedy's sentiments regarding the effects of computers and video games during the Xers' childhood years. A longitudinal study done by Turkle in the 1970s and 1980s of children raised with the first video game technology identified some early trends about isolation. Turkle stated that:

> Unlike most ethnographies, I was studying a moving target. When I began my work, personal computers had just come on the market. As this book goes to press, computer toys are commonplace in toddler playrooms and college freshmen arrive on campus with computers rather than electric typewriters (1984, p. 18).

In her ethnography, The Second Self (1984), Turkle explored the impact that computers and video games had on children growing up in the seventies, and discussed the myth of "mindless" addiction to video games. In the early 1970s, children graduated

from Pac Man's hand-eye coordination challenge to the fantasy, adventure-like labyrinths of Dungeons and Dragons. Although Turkle stated that this computer/video game, which soon became the bestseller among sixth and seventh graders, was anything but a "mindless" game, she nevertheless concluded that children's involvement with simulated worlds affected their relationships with the real world. "Unlike the real world, the computer-game universe conformed to sets of programmed rules; whereas the real world had rules that were often less clear and constantly changing" (pp. 80-81).

Based on her field study which encompassed many thousands of hours of interviews and observations across the United States, Turkle contended that computers played an integral role in the development of personality, identity, and even sexuality of the children who played computer and video games. She concluded:

> In all this, something is missing, something that is abundantly present in open-ended role playing that children offer each other when one says: "You be the Mommy and I'll be the Daddy." . . . "You be Roy Rogers and I'll be Dale Evans." "You be Superman and I'll be Lois Lane." In this kind of play children have to learn to put themselves in the place of another person, to imagine what is going on inside someone else's head. There are no rules, there is empathy. There are no dice to roll; there is understanding, recognition, negotiation, and confrontation with others (1984, p. 83).

She observed that children who were being raised with video games, rather than open-ended role playing, developed a certain personality style. "In this case, there is good

reason to think that a generation develops a style" (p. 83). She cited case after case of children who, because of time constraints and one activity precluding another, chose to play video games over make-believe role playing with other children in classroom settings. In essence, she concluded that video technology performed a babysitting function for parents and teachers.

Similarly, the babysitting effect of television began in the early 1970s, when Xers were preschoolers, according to LeShan (1972). In an article appropriately titled "The Sesame Street Syndrome," LeShan attacked the behaviorist approach to preschool learning promoted by television shows such as Sesame Street and Romper Room. The criticism of the "Sesame Street" approach to learning was that:

> It teaches children that there are right answers to many questions, that facts themselves are valuable, that children's questions are irrelevant -- since grownups are willing to do all the asking and answering--, that thinking is irrelevant, because there's no time for it, that making mistakes is bad, and that failing should be avoided at all costs (LeShan, 1972, pp. 9-10).

Postman (1985) concurred with LeShan's criticisms of Sesame Street, describing the television show as embodying "the idea of [children] being taught by a series of commercials" (p. 142). In addition, he felt the show's colorful puppets and short-vignette format ". . . relieved [parents] of the responsibility of teaching their pre-school children how to read" (p. 142). Although teachers initially approved of the "Sesame Street" approach to learning, Postman concluded that they later felt that it conditioned students to like school only if it was like the television show.

To the contrary, school was not like Sesame Street, and therefore the television show "undermined what the traditional idea of schooling represented" (1985, p. 143), according to Postman. He elaborated on the differences between school and television:

> Whereas a classroom is a place of social interaction, the space in front of a television set is a private preserve. Whereas in a classroom, one may ask a teacher questions, one can ask nothing of a television screen. . . . Whereas attending school is a legal requirement, watching television is an act of choice. Whereas in school, one fails to attend to the teacher at risk of punishment, no penalties exist for failing to attend to the television screen. Whereas to behave oneself in school means to observe rules of public decorum, television watching requires no such observances, has no concept of public decorum. Whereas in a classroom, fun is never more than a means to an end, on television it is the end in itself (1985, p. 143).

Postman also criticized other television shows of the 1970s and 1980s, such as The Electric Company, Nova, National Geographic, and the MTV channel for entertaining rather than educating children. The dangers of television programming and computer imaging, and their effects on the first computer-raised generation of children, were just beginning to be researched ten to twenty years ago. By the late 1990s, there was more conclusive evidence to suggest that the early findings were correct.

Studies in the 1990s about Technology's Effects on Development

Recent findings have continued to warn parents and teachers of the negative effects that overexposure to video games and television has on childhood development. In a television documentary entitled "Growing Up on Fast Forward" (1997), writer Frishberg and professor Levin claimed that the media and computers have performed the function of being creative for children to the point where there is nothing left for the children to create or to imagine for themselves. Children therefore lack spontaneity, cannot initiate games on their own, are confused about what to do, and expect adults to think of ideas for them. Their addiction to levels of mastery on video games and too much time spent on computers and watching television has created more isolation for children. The program also indicated that the fast pace of television made teaching harder because parents and educators have to increase children's attention spans to compete with television, in addition to thinking of creative ideas for children who cannot think for themselves (Frishberg & Levin, 1997).

Research cited by Healy (1990, 1998) also demonstrated that too much computer exposure, especially in young children, stifled intellectual and social development. Using her term connecting to refer to computer-application learning, she stated: "Connecting alone has yet to demonstrate academic value, and some of the most popular 'educational' software may even be damaging to creativity, attention, and motivation" (1998, p. 20). In a grant-funded research study of computer usage in an elementary school setting during the 1980s, Healy reported that at the end of three years there were no measurable statistically significant outcomes associated with computer use, based on "reliable pre-

and post-tests of math and visual-spatial reasoning" (1998, p. 25).

Even more serious, perhaps, were Healy's findings concerning relationships between computer use among young children and a disorder she labeled "social-emotional learning disability (SELD)" (1998, p. 172). The symptoms of SELD included an inability to relate to other children on a social maturity level commensurate with the child's chronological age, a general "[disinterest] in reading or in most other school activities, and [reactions] to emotional stress [like those of] a much younger child" (1998, p. 172). While these studies were not written about Generation Xers, there may be cause to wonder if the effects of their exposure to computers were manifested in symptoms that were similar to SELD.

Not only did Healy base these findings on interviews and observations in educational settings, but her research extended to consultations with pediatric neurologists. Their reports to Healy indicated extremely detrimental consequences of substituting computer time for "personal contact and for other activities in so many households. Language, social skills, the ability to play imaginatively -- they're all suffering" (1998, p. 173). Two neurologists that Healy interviewed even indicated that computer use in some of their patients was being manifested in "autistic-like" (p. 173) symptoms. Although these findings dealt with younger children who are not Generation Xers, one must ask: What effects did computers, video games, and overexposure to television have on the first generation of children raised with these technologies?

Implications of Teaching Generation X for Higher Education

If indeed the observations made by the aforementioned demographers, sociologists, and educators regarding the socio-cultural factors impacting Generation X's childhood development were correct, then the next step in the investigation was to explore the manifestations of these phenomena on Generation X in college. What noticeable effects did the childhood socialization tools used by the media and computer technologies have on Generation X college students?

Recognition of Generational Differences. Educators in higher education began studying this question in the 1990s. Wagschal, Vice President of Research at National University, stated:

> Observe a Thirteener trying to explain an episode of "The Simpsons" or "Ren and Stimpy" to a Boomer, and you'll see that the difference goes to more educationally important matters like critical thinking abilities and capacity for processing visual vs. printed information. As we approach the Third Millennium, the American business community has the rare opportunity to make a significant impact on the education of its own work force. . . . If that chance is not to be missed, it will be important for all of us who work with adults in the training and education arenas to pay careful attention, not only to the age of our students, but to their generational identities and to the technologies that have shaped their views of the world in which they live (1995, pp. 25-26).

McNamara (1995), who had taught at different colleges in the United States and England during his 25-year teaching career, stated that he had numerous books on his bookshelves that painted pictures of "those dismal 'Generation X' stereotypes -- bored, disoriented, futureless, and so on . . ." (1995, p. 13). Although he did not necessarily think that they apply to all young people, he agreed that "our media-dominated culture indeed inhibits long conversations in favor of thirty-second-sound-bite opinions and invites audience passivity. University students don't walk into their classrooms immunized from these influences" (pp. 13-14).

McNamara continued by comparing the learning differences between "young Americans of college age" and a third of his students that he labeled as "age thirty-plus 'returners' [who] are not inherently passive" like the twenty-year-olds (p. 15). In the remainder of his article, "All is Not Lost: Teaching Generation X," McNamara offered effective ways of engaging Xers in classroom strategies that prompted intellectual curiosity. Among the strategies that he suggested were using learning communities, multicultural issues, and cooperative learning.

Perhaps the most thorough study of Generation Xers in a college setting was conducted by Sacks (1996), appropriately titled Generation X Goes to College. Sacks, a former journalist turned college instructor, wrote a case study about a western community college where the students refused to read their assignments, expected to be "spoon-fed" by the instructors, and accepted no responsibility for their own learning (p. 9). At first, Sacks felt that the problems in his classroom were due to his inexperience as an educator. However, after a few semesters he concluded:

> I was a good teacher, that it wasn't me who was the problem but a culture of young people who were born and bred to sit back and enjoy the spectacle that engulfed them. They seemed to resent that I obviously couldn't measure up to the standards of amusement that they learned on *Sesame Street* in their formative years, standards later reinforced by *Beverly Hills 90210*, Nirvana, and Pearl Jam. What's more, they were conditioned by an overly nurturing, hand-holding educational system not to take responsibility for their own actions (pp. 9-10).

From talking to faculty at other colleges, Sacks learned that his experiences were not confined to community college students. A colleague at a large state university in California indicated to Sacks that a fundamental "qualitative shift" took place between 1985 and 1988. He characterized the shift by saying that "students are less prepared, have more of a sense of entitlement, and they're not very deferential. . . . Some are outright hustlers and try to brow-beat professors into giving good grades" (p. 29).

To ensure that he would get tenure, Sacks implemented an interesting experiment that he called "The Sandbox." In this experiment, he treated the college students as kindergartners by letting them have their own way in order to placate them and get good student evaluations for tenure purposes. According to Sacks, the experiment worked, and eventually he became a tenured instructor at the institution he fondly referred to as "The College," located in a middle-class suburb somewhere in the western United States (1996, pp. 104-105).

Educators such as Sacks (1996), Wagschal (1995), and McNamara (1995) were among the first to specifically address problems with teaching Generation X. Recognition by professors of the challenges peculiar to this new generation of college students was in its infancy, but it had begun to emerge as a prominent concern in higher education by the late 1990s. For example, one of the main themes of the 1997 conference of the Association of Collegiate Business Schools and Programs (ACBSP) was "Mission Possible: Learning Strategies for Generation X" (ACBSP Conference Proceedings, 1997). The ACBSP was one of the two national accrediting organizations for business colleges, with memberships of more than 600 schools.

Diversity. According to Baker (1998), Distinguished Professor of Community College Leadership at North Carolina State University, one of the most significant challenges facing community colleges of the 21st century would be to create an atmosphere of cooperation among diverse generations present on the 1600 campuses across America. "Analysis suggests that community college leaders need to accommodate a large set of psychological and social differences brought to the college by a diverse student clientele" (Baker, 1998, p. 13). In the concluding remarks of his article, Baker asserted:

> One trend is very clear. Organizations that do not learn to work together will not be competitive in the 21st century. For students, this means opportunities to work together in the courses they take. The most critical aspect of the student-centered classroom is the idea of

> collaborative learning. We must quickly remove barriers to cooperation within the college . . . for all groups of students (1998, p.16).

Motivation. Coupled with the need to remove barriers to cooperation among student groups, was the equally important issue of motivation. According to Lantos (1998), a marketing professor at Stonehill College, the major problem facing educators was how to motivate Generation X. He stated:

> The vast majority of students seek not to learn but rather to earn good grades or gain credentials to help them land well-paying jobs. The goal is not learning for its intrinsic value. . . . They want a degree or a ticket to success, not an education. . . . College students often seem more interested in actually minimizing the benefit/cost ratio (i.e., to get as little as possible in return for their investment in a course.) Thus, they skip classes, let studying slide, skimp on preparation for classes, hand in hastily written and superficially researched papers, . . . , and get annoyed if you let the class run over an extra two minutes (p. 3).

Market Segmentation and Recruiting. Solving the motivational dilemma would perhaps be a classroom issue, once students had enrolled. However, targeting prospective students for college could also be complicated by the fact that Generation X members were so diverse. Benezra (1995) described them as "a complex mix of contrasts" (p. 32). Using psychographic segmentation, which is a method of

subdividing populations using lifestyle components, Benezra identified four heterogeneous Generation X segments:

(1) "Yup & Comers"- (28%) mainly older Xers, juggling family and careers for material gains, (2) "Bystanders"- (37%) struggling minority Xers, mainly females of Hispanic and African American races, (3) " Playboys"- (19%) hedonistic white males seeking thrills and possessions, and (4) "Drifters"- (16%) predominantly Southerners and the least educated of the four segments (Benezra, 1995, pp. 32-33).

Although Benezra was informing advertisers how to successfully target Generation X in the business sector, educators could also benefit from her observations. Specifically, community colleges would need to be aware of the cultural and economic diversity among the four subgroups and tailor recruiting efforts and educational programs accordingly. This would especially be true of the single mother "bystanders" or the "drifters" who might be targeted for a college education as a way to improve their socioeconomic status. At the institutional level, this could entail special programs and support services for the Generation X students. At the classroom level, this diversity would necessitate instructors adapting their teaching strategies to reach a variety of Generation X and Baby Boomer students with different learning styles.

Overview of Learning Styles

Researchers have realized the importance of understanding differences in cognitive styles for several decades. Sternberg and Grigorenko (1997) agreed that

Allport was credited with being the first researcher to use the word "style" as a construct for individual differences in learning in the 1930s. Since then, other researchers have elaborated on learning style as a concept. According to Tennant (1997), "'cognitive style', 'learning style' and 'conceptual style' are related terms which refer to an individual's characteristic and consistent approach to organising [sic] and processing information" (p. 80).

Messick (1976) defined cognitive styles as "stable attitudes, preferences, or habitual strategies determining a person's typical modes of perceiving, remembering, thinking, and problem solving" (p. 5). He also provided an early typology of cognitive abilities that identified 19 types of learning styles stemming from three formal bases for conceptualizing: "relational conceptualizing, analytic-descriptive conceptualizing, and categorical-inferential conceptualizing" (pp. 14-15).

Kolb (1984) developed one of the first learning models that has been widely accepted and that has served as a foundation for replication by other researchers (Rayner, 1997). He introduced four distinct styles that were measured on scales of active-reflective processes and concrete-abstract thinking on a "two-dimensional-learning-style map" (Kolb, 1984, p. 76). These four styles were identified as:

(1) *convergent*- relies primarily on the dominant learning abilities of abstract conceptualization and active experimentation,

(2) *divergent*- emphasizes concrete experience and reflective observation,

(3) *assimilative*- the dominant learning abilities are abstract conceptualization

and reflective observation, and

(4) *accommodative*- emphasizes concrete experience and active experimentation (Kolb, 1984, pp. 77-78).

Research not only identified different learning styles that influenced the way students learned, but learning styles were also believed to influence the way teachers taught, according to Messick (1976). Specifically, he indicated that learning styles impacted the choice of preferred teaching methods or strategies. Regardless of which styles were selected, Messick said that "higher education should actively foster individual fulfillment and hence should adapt to, and perhaps even capitalize on and extend, these essential human differences to promote greater learning and creativity" (p. 1). How does one accomplish this?

Best Practice for Effective Teaching

In theory, Messick (1976) endorsed a match of cognitive styles between students and teachers to foster a mutually beneficial learning environment. He stated:

> Teachers and students who are similar in cognitive style, for instance, tend to view each other with greater mutual esteem than those who are dissimilar; they also tend to communicate more effectively with one another, as if they were on the same wavelength (p. 36).

While Messick (1976) advocated style matching, Wapner (1976) disputed the value of matching student learning styles with teaching styles. He raised the question concerning what constitutes the optimal learning environment. In essence, he argued

that the types of effective educational treatments that promoted "individual development and creativity varied based on the goals of the educational situation, the institution, the department, and the student" (p. 78). In spite of his opposition to matching cognitive styles, Wapner ultimately agreed that "effective methods of selection and training . . . will help create a synergistic relationship of people in educational environments that will actualize the goals of higher education" (1976, p. 78).

In a similar vein, Kolb (1984) agreed that "If the central mission of the university is learning in the broadest sense, . . . , then it seems reasonable to hypothesize that different styles are the focal points for variations among disciplines" (p. 121). He further elaborated by stating:

> Different styles of learning manifest themselves in variations among the primary tasks, technologies, and products of disciplines -- criteria for academic excellence and productivity, teaching methods, research methods, methods for recording and portraying knowledge -- and in other patterns of cultural variation -- differences in faculty and student demographics, personality and aptitudes, values and group norms (1984, p. 121).

Although there may be variations in teaching styles across disciplines and variations among faculty and students, there was general agreement on those characteristics associated with effective teaching. Based on extensive research of students' evaluations of professors across a broad array of subject areas, Ramsden

(1988) concluded:

> Factor analytic studies of students' ratings of instructors and of departmental environments have identified dimensions of good teaching, such as skills in lecturing, choice of content and method, reasonable workload, clear goals, and a recurring factor variously labeled 'student-centeredness,' 'respect for students,' or 'individual guidance.' The latter probably reflects the teacher's capacity to feel and demonstrate empathy. . . . Especially important in defining good teaching was help with students' learning problems (p. 166).

Furthermore, researchers generally agreed that the larger the repertoire of instructional methods teachers possessed, the more successful they would be in the classroom (Joyce & Hodges, 1966; Renzulli & Smith, 1978). According to Renzulli and Smith (1978), student learning styles correspond to a range of different teaching methods that include: projects, recitation drills, peer coaching, discussion, independent study, programmed instruction, lecture, and computer simulations. Therefore, it appeared that the wider array of teaching methods an instructor employed, the greater likelihood of success there would be in matching the corresponding array of learning styles present in college classrooms.

Recent Research on Learning Styles and Motivational Techniques

Research by Sternberg and Grigorenko (1997) identified different forms of self-motivation and self-government found in learning styles. The style that they labeled as

the "anarchic [style] characterizes individuals who do not like to be tied down to systems, rules, or particular approaches to problems" (p. 707). The description of this style appeared similar to the description of the Generation X work style identified by Muchnick (1996). In his "Naked Model" of management, which was based on more than 1,000 interviews with Xers and their supervisors, Muchnick contrasted Boomers and Generation Xers in the following way:

> Most X'ers [sic] would rather quit, or are in the process of quitting, jobs where their managers use an autocratic, top-down, "jump-when-I-say-jump" supervisory style. . . . Non-X'ers [sic], on the other hand, are more apt to find a way to accept (or at least endure) authoritarian, controlling, power-wielding, and insensitive managers (1996, pp. xv-xvi).

In addressing the diverse needs of the two generations in the work place, Muchnick (1996) developed a model taking into account the different needs of the age cohorts. His model stressed the need for supervisors to adapt their managerial styles to the two different cohorts, taking into consideration that different motivators and techniques are applied for Generation Xers than for Boomers.

Multimedia Learning. A similar approach addressing the need to adapt to the diverse clientele on modern-day college campuses has been suggested through the use of multimedia classrooms. Multimedia learning occurs when students are presented with the same material using more than one delivery channel or medium of communication, such as verbal and visual stimuli simultaneously. Studies by Schnotz

and Kulhavy (1994) revealed that graphics added to verbal presentations greatly enhanced learning and recall of information. A more recent research project undertaken by Mayer (1997), revealed that "Students who received coordinated presentation of explanations in verbal and visual format generated a median of over 75% more creative solutions on problem-solving transfer tests than did students who received verbal explanations alone" (p. 1).

In the conclusion of his study, Mayer (1997) stressed the need for greater use of computer-based multimedia aids in college classrooms:

> In particular, the visual-based power of computer technology represents a grossly underutilized source of potential educational innovation. In computer-based multimedia learning environments, students have the opportunity to work easily with both visual and verbal representations of complex systems, but to fruitfully develop these potential educational opportunities, research is needed in how people learn with multimedia (p. 17).

Part of the focus of the current investigation was to explore the effectiveness of multimedia teaching in college classrooms at the selected community college sites in this study. Some classrooms at all three campus sites had been or were in the process of being converted to multimedia classrooms and learning labs. Some instructors who had opportunities to teach in multimedia classrooms were included as participants in this investigation to determine if this approach was more effective in teaching Generation X than other instructional methods.

Biglan's Categories for Academic Disciplines

In addition to interviewing instructors to investigate a variety of teaching methods, techniques used in a variety of disciplines were also included as part of the study. To assure that an organized approach for identifying academic disciplines was used, the Biglan (1973) model for grouping subject matter was employed. In his multidimensional model, Biglan classified subject areas based on combinations of three scales: (a) Hard versus Soft, (b) Pure versus Applied, and (c) Life versus Non-Life disciplines. For example, the most prominent hard-soft dimension ". . . distinguishes hard sciences, engineering, and agriculture from [the soft] social sciences, education and humanities" (Biglan, 1973, p. 201).

Further, the pure-applied dimension separates the applied subjects with practical applications such as engineering and business disciplines from the pure disciplines of mathematics, physical sciences, social sciences, languages, and humanities. Finally, the life-nonlife dichotomy is rather self-explanatory in that the Life subjects deal with organic studies such as anatomy, physiology, behavioral sciences, and education. Whereas, the Non-life subjects are those concerning inanimate objects: astronomy, chemistry, physics, languages, history, engineering disciplines, and business administration, to name a few (Biglan, 1973). So these categories will be used to classify the techniques found effective by academic disciplines.

Conclusions

In summary, colleges of the 21st century will need to be responsive to the unique problems present in teaching a variety of cohorts: Baby Boomers, Generation X students, and occasionally senior citizens (Baker, 1998). Perhaps multimedia learning will be an effective approach for teaching Generation X, since it was raised on video games and computer technology, which are forms of multimedia learning. Other equally effective teaching techniques might be used to motivate and teach this new generation of twenty-something college students, in addition to the non-traditional Baby Boomers. The proposed study attempted to investigate those methods.

CHAPTER 3

METHODOLOGY

Introduction

As a Baby Boomer community college instructor who had taught at both two-year and four-year colleges since 1980, I had observed two different generations entering college as young adults in the 18 to 24 age bracket at two different points in time over a 20-year span. Based on personal observations at five different colleges in four states, and numerous discussions with faculty at those colleges, I maintained the etic perspective that there were noticeable differences in motivation levels and learning styles between young college students of the 1980s and the late 1990s. Discussions with senior faculty members of colleges also revealed a perceptible shift in student philosophies that occurred between 10 and 15 years ago (Crawford, personal communication, June 9, 1997; Smith, personal communication, October 31, 1997). This perceived change in student philosophies would have coincided with the first Generation Xers entering institutions of higher learning in the late 1980s.

In an attempt to formally research the post-secondary educational component of Generation X, I occupied the perspective of ecological psychology, that human behavior is significantly influenced by the context in which it occurs (Baker, 1968). I therefore chose qualitative techniques such as naturalistic observation (Gall, Borg & Gall, 1996), interviews, and unobtrusive measurement (Webb, 1966), that would interrupt the normal occurrence of events as little as possible.

Theorists recommending these methods warned that traditional quantitative research methods often overlaid prestructure data collection and imposed irrelevant categories on analysis (Bruyn, 1966; Glasser & Strauss, 1967). They urged the use of techniques that are sensitive to the culture of the setting being studied and that can lead the researcher to more relevant categories of observation than quantitative methods allow. Historically, researchers such as Jackson (1968), Sarason (1971), and Smith and Geoffrey (1969), stressed the value of qualitative research when studying school settings.

Yin (1994), and more recently, Gall et al. (1996) endorsed "fieldwork in which the researcher interacts with the study participants in their own natural settings" (p. 547). They concurred that case study research was especially appropriate for "understanding a complex phenomenon as experienced by its participants [from their] emic perspective" (p. 548).

The Case Study

The model for case study outlined in Merriam's book, Case Study Research in Education: A Qualitative Approach (1988), was chosen for collection and analysis of data. Merriam defined the qualitative case study as "an intensive, holistic description and analysis of a bounded phenomenon such as a program, an institution, a person, a process, or a social unit" (p. xiv). "Case studies . . . are concerned with understanding and describing process more than behavioral outcomes" (p. 31). Therefore, the case study was an appropriate method to investigate the processes that instructors used to teach college students at post-secondary institutions because it included the most

comprehensive means of investigating learning styles, teaching methods, student-teacher interactions, and classroom observations of the phenomena to be investigated: effective teaching techniques for Baby Boomers versus Generation Xers.

Rationale for Using the Case Study Method

Unlike quantitative research, which might confine the investigator to the pitfalls of prestructured and irrelevant categories mentioned earlier, the case study method would allow the freedom and flexibility to investigate a complex set of interrelated processes, persons, and social interactions in their natural settings. In this study, I selected a multi-case study approach, endorsed by Maxwell (1996) to avoid the problem of key informant bias that often occurs in the selection of a single setting alone:

> Qualitative researchers sometimes rely on a small number of participants for a major part of the data, and even when these informants are purposefully selected and the data themselves seem valid, there is no guarantee that these informants' views are typical (Maxwell, 1996, p. 73).

By choosing three campus sites instead of a single case study site, I hoped to minimize the occurrence of key informant bias and thereby establish comparisons between Generation X and Baby Boomer populations in different settings. In addition, for in-depth case studies, Fowler (1993) recommended focus group discussions "with people who are in the study population about the issues to be studied" (p. 95) and "cognitive laboratory interviews . . . of volunteers who have a willingness . . . to help the researcher" (p. 97). Therefore, based on these recommendations from qualitative

researchers, the vehicles that I selected for each of the three case study sites included: (1) interviews with faculty, (2) focus groups with student cohorts, and (3) classroom observations.

Selection of the Campus Sites

A realistic assessment of time and geographic constraints influenced my choice of methods to sites and participants at colleges in East Tennessee. Faculty at Northeast State Technical College, Pellissippi State Community College, and Walters State Community College were selected for interviews and observations during the Spring and Summer 1999 terms. These campuses were chosen for four reasons: (1) their close physical proximity to each other, (2) to provide a diversified faculty from two-year public institutions, (3) to provide a good mix between colleges located in metropolitan settings versus a rural community college setting, and (4) the demographics of their student bodies. In order to ensure that the colleges chosen did, in fact, have a substantial population of 18 to 33-year-old Generation Xers, and 34 to 52 year-old Baby Boomers, demographic information was gathered from available institutional documents. (See Table 1.)

Protecting Site and Participant Identities

To maintain confidentiality and anonymity of the participants and the identity of the precise institutions where they taught, I assured them from the outset that identities would be held in strictest confidence. I asked participants to select pseudonyms

Table 1

Institutional Enrollment Summaries for Fall 1998

	Enrollments		
Institution	Pellissippi State	Walters State	Northeast State
Headcount	8058	5900	3961
FTE	5257	3668	2513
Gender: Male	3657 (45.4%)	2154 (36.5%)	2034 (51.4%)
Female	4401 (54.6%)	3764 (63.5%)	492 (48.6%)
Ethnicity: White	7246 (89.9%)	5622 (95.2%)	3826 (96.5%)
Black	522 (6.5%)	196 (3.7%)	82 (2.1%)
Asian	164 (2.0%)	31 (0.37%)	18 (0.5%)
Other	126 (1.5%)	51 (0.71%)	35 (0.8%)
Age			
< 18	107 (1.3%)	393 (7.0%)	42 (1.0%)
18 - 20	2648 (32.8%)	1871 (32.0%)	1136 (28.6%)
21 - 24	2185 (27.1%)	961 (16.0%)	900 (22.7%)
25 - 34	1808 (22.4%)	1408 (24.0%)	1053 (26.5%)
35 - 64	1301 (16.1%)	1245 (21.0%)	826 (20.8%)
> 65	9 (0.1%)	22 (0.0%)	4 (0.1%)
Average age	26.8 years old	27.1 years old	29.6 years old

Note. Adapted from printouts by D. Batson, 1998, Pellissippi State Technical Community College- Fall 1998 enrollment summary; by J. Harr, 1998, Northeast State Technical Community College- Fall 1998 enrollment summary; by G. Skolits, 1998, Walters State Community College- Fall enrollment summary.

to conceal their identities prior to the interview. In addition, they were informed that the specific names of the colleges where they worked would be labeled as either college X, college Y, or college Z in the research findings of the published dissertation. If they happened to teach at more than one branch campus location, these were referred to as campus one, two, or three.

Selection of Participants for the Case Study

Merriam also stated that ". . . nonprobability sampling is the method of choice in qualitative case studies . . . since generalization in a statistical sense is not a goal of qualitative research" (1988, p. 47). Instead of selecting a probability sample, one engages in "purposeful sampling" (p. 48) or what Le Compte and Preissle (1993) referred to as purposeful "criterion-based" (p. 69) sampling when conducting qualitative research. This means that particular persons or settings are selected deliberately in order to provide important information that cannot be derived from other sources.

Specifically, Weiss (1994) argued in favor of panels as one form of purposeful sampling. Panels are "people who are uniquely able to be informative because they are expert in an area or were privileged witnesses to an event" (Weiss, 1994, p. 17). Maxwell (1996) agreed that "selecting those times, settings, and individuals that can provide you with the information that you need in order to answer your research questions is the most important consideration in qualitative sampling decisions" (p. 70).

According to Maxwell (1996), purposeful sampling accomplishes four goals

crucial to the success of a qualitative study: (1) achieving relatively typical college settings, (2) capturing heterogeneity among different campus populations, (3) examining cases that are critical in explaining theories to be investigated, and (4) establishing comparisons of similarities and differences between different college settings.

Selection Criteria of Faculty Panel

In consideration of the reasons stated above, I therefore chose purposeful sampling by intentionally interviewing college instructors who had taught students of both age cohorts. These educators served as the unique panel of experts who had observed and taught the current generation of college students referred to as Generation X, as well as Baby Boomer students. Initially, a panel consisting of 30 seasoned, full-time faculty members from the three colleges was selected for in-depth interviews, but this selection decision was later modified to include several much younger instructors.

Merriam (1988) explained that in qualitative research "the crucial factor is not the number of participants, but rather the potential of each person to contribute to the development of insight and understanding of the phenomenon" (p. 77). I therefore discarded the notion that only veteran faculty members could provide me with the insights and perspectives needed. In an attempt to expose possible Boomer bias on the part of senior faculty members, I also included younger faculty members who would be classified as Generation Xers themselves, in the panel of interview participants. I believed that they could bring additional insights to the study that might be overlooked by Baby Boomer participants such as myself.

Faculty Demographics. Based on the faculty demographics at the three sites, the majority of faculty participants were middle-aged, and a few were nearing retirement age. However, I was able to solicit interviews from seven Generation X faculty members who ranged in age from 29 to 33. Based on referrals by their colleagues, five minority faculty members were among those selected for interviews. Whenever possible, equal numbers of male and female instructors were chosen from departments to remove any possible gender bias. The only exceptions to this selection were in the fields of computer science and engineering, where more instructors were male.

Coverage of Biglan's Academic Areas. In addition, the panel of instructors was stratified among different departments and subject areas to remove biases from the sample that might be indicative of certain college majors. The teaching disciplines included: allied health care, business, computer science, drama, economics, English/literature, engineering, foreign language, history, humanities, math, natural sciences, remedial reading, and social sciences. For the purposes of this study, Biglan's (1973) classifications of academic areas were used to categorize subject areas of the faculty participants.

Based on curricula at the three colleges, the participants taught in six out of eight of Biglan's categories, excluding only the Applied Life, Hard and Soft subject areas. This means that the Hard, Applied, Life disciplines like agronomy and agricultural economics were omitted, as well as the Soft, Applied, Life fields of educational administration and special education programs.

Classroom Observations

Furthermore, permission to observe classroom interactions was obtained from some of these instructors, based on availability and teaching schedules. Arrangements were made with selected faculty to observe a few morning, late afternoon, and evening classes at each campus during the Spring semester of 1999. The following classes were observed: an Anatomy lab, a Computer Science class, an Economics class, an evening Freshman Experience class, a Physics lab, a Sociology class, and three sections of Principles of Marketing using different delivery methods. For example, one section was predominantly lecture, the second was taught in a multimedia classroom, and the third section used a combination of group work and guest lecture.

During each classroom observation, notes were recorded regarding student behavior and participation, interactions between faculty and students, and interactions between students. After the conclusion of each class, I conferred with the instructor to determine the approximate ages of the students in the classroom to distinguish any noticeable differences between the behaviors exhibited by Generation X students and those of Baby Boomers.

Interviewing the Participants

The Interviews

Researchers interview participants with the intent of uncovering feelings, perceptions, beliefs, experiences, and attitudes, as well as descriptions of individuals and their actions and interactions. In attempting to discover these issues regarding how

college professors teach Generation X, I took a nonstructured approach so that interview questions were phrased rather broadly and could be modified or phrased differently, according to the responses of each participant. Based on feedback from a bracketing interview experience, the questions were phrased to remove potential biases by not labeling students either "Baby Boomers" or "Generation Xers," unless the participants used these terms voluntarily.

The Initial List of Interview Questions

At least a week prior to the pre-scheduled interviews, participants were furnished with the following tentative questions, although some additional clarifying questions were asked during the interviews.

1. Please tell me a little about your teaching background: the types of subjects that you teach, how many years you have taught, etc.
2. Could you describe demographically the different types of students in your classrooms? Demographic characteristics are those variables such as age, gender, occupation, race, or ethnic origin.
3. Please describe the differences in behaviors that you have observed among the two age groups: students over 35 years old versus younger students between 18 and 30. Do they relate to you? If so, please elaborate how students relate, and on observable tendencies that students have exhibited during classroom activities and office hours.
4. Describe the different teaching techniques that you have used or currently use in your classes or labs. What, if any, differences have you noticed in the learning styles of

different age cohorts? For example, do some students respond better to visual representations such as transparencies, power point slides, or videos? Do other students learn better by doing, such as using hands-on projects?

5. Are there any teaching methods that appear to work best with the younger college students or with the older non-traditional students, or equally well with both? If so, please elaborate.

6. Have you noticed any other trends regarding the ways in which students of various ages learn or relate in class or while working on projects together?

7. Do you have any other parting comments that you would like to make?

The Bracketing Interview

Prior to conducting a mock study, I conducted a bracketing interview with Carol Marchel, a Ph.D. student and graduate teaching assistant in the College of Education at the University of Tennessee. Marchel, a former school psychologist, was experienced in phenomenological interview and analysis techniques. A major theme that emerged from that interview process was the apparent generational bias in the original set of interview questions. As a result, some preliminary questions were either reworded or eliminated so as not to predispose participants to certain inherent connotations found in words originally selected such as "Baby Boomer" or "Generation X."

A Mock Study

To test and enhance the clarity of proposed interview questions, a mock study was conducted during November of 1997. I conducted taped interviews of three college instructors. Transcripts of the audio taped interviews were critiqued by Dr. Richard Wisniewski and his teaching assistant, Carol Marchel, at the University of Tennessee in Knoxville. Dr. Wisniewski offered helpful feedback and affirmed that satisfactory interview techniques were used.

Issues of Validity and Reliability

Because qualitative studies are often criticized due to responses from a few subjects, rather than the larger, randomly-selected samples found in quantitative studies, questions concerning the reliability and validity of this study need to be addressed. In addition, I acknowledged my possible Baby Boomer bias as a middle-aged faculty member, prior to selecting interview participants and interpreting the research findings, in hopes of alerting the reader its existence.

Validity

The selection of a small number of subjects may not be viewed as achieving representativeness of the population in the same way as a larger, random sample. However, a purposeful sample, "systematically selected for typicality and relative homogeneity provides far more confidence that the conclusions adequately represent the average members of the population than does a sample of the small size that

incorporates substantial random or accidental variation" (Maxwell, 1996, p. 71).

In addition to purposeful sampling, triangulated findings also help assess and increase the validity of qualitative research (Glesne & Peshkin, 1992). Multiple sources can corroborate researchers' theories and often provide additional insights. Triangulation therefore "reduces the risk that your conclusions will reflect only the systematic biases or limitations of a specific method, and it allows you to gain a better assessment of the validity and generality of the explanations you develop" (Maxwell, 1996, pp. 75-76). The triangulation process of analyzing observations and transcripts of taped interviews and focus group discussions, in addition to collecting artifacts, should afford a greater degree of validity than single sources alone.

In case studies, one observes subjects' constructions of reality in how they relate to their world; therefore, one is actually observing people's perceptions of reality (Merriam, 1988). In recording these perceptions, it becomes important to verify the researcher's interpretations. One way of doing this is by conducting what Merriam referred to as a "member check -- taking data and interpretations back to the people from whom they were derived and asking them if the results were plausible" (p. 169). At points during the interviews, I used the reflective technique to paraphrase and reflect back to the participants what I thought they had said as a check for accuracy.

In other instances, I also followed up the interviews with electronic mail messages or telephone calls to clarify parts of transcribed interviews for verification of spellings and content accuracy, especially concerning terminology outside of my academic domain. I also paused periodically during each focus group session to

paraphrase what I thought that I had heard the participants say. In these respects, by rechecking results, possible misinterpretations and false assumptions could be clarified and therefore avoided.

So in addition to multiple data-gathering techniques commonly used in triangulation: interviews, participant observations of classrooms, and collection of documents (e-mails and student comments), I also chose to incorporate multiple sources and theoretical perspectives from both faculty and students. By not only interviewing instructors, but by including comments derived from students, I believed that embracing their different perspectives would strengthen my research findings.

Another way the researcher can remove false assumptions and bias prior to conducting the interviews is by conducting a bracketing interview, such as the one that I conducted with Ph.D. student Carol Marchel in the fall of 1997. In addition, the mock study done under the guidance of Dr. Richard Wisniewski at the University of Tennessee served to further enhance clarification and reveal any hidden biases in the proposed study.

Upon consideration of my doctoral committee's suggestion, I also modified the initial faculty selection criteria to include seven Generation X-aged faculty members among the 31 that were chosen for interviews. While this action was not intended to completely eliminate the Boomer bias on the part of older faculty members, it was offered as a way to mitigate its impact in the study and to provide the more balanced perspectives that a mix of older and younger faculty could hopefully provide.

Reliability

Unlike quantitative research, qualitative research is difficult to replicate because it seeks to interpret a few subjects' perceptions of their world, based on unique sets of circumstances. However, the reliability of the information reported can be strengthened by using several techniques: audio taping interviews, qualitative data analysis software, transcription of interviews, and audit checks of subjects interviewed (Wisniewski, personal communication, November 24, 1997). Therefore, I employed Qualitative Research and Solutions (hereafter referred to as QSR) NUD*IST software for analyzing the themes found in the interviews, and had professional secretarial students transcribe the tape-recorded interviews from the three campus sites. After all 31 interviews were transcribed, a random sample was spot-checked for accuracy and to edit punctuation. The transcripts on disk were also converted to ASCII generic Word Perfect files, so that they could be imported into the QSR NUD*IST program.

Audio taping Interviews. Interviews in qualitative studies are most commonly recorded using tape recorders. Although videotaping may reveal additional nonverbal communication through body language and voice intonation, Merriam (1988) cautioned against using videotapes because subjects could feel intimidated by the camera. On occasion, Merriam said it was also permissible for the investigator to take brief notes during the interviews for points of clarification, unless this proved to be too distracting. Thus, I chose to audiotape the interviews of preselected participants who agreed, in advance, to be audio taped in their offices or nearby locations at the three different

campus sites. These recordings were transcribed by secretarial student interns who worked in the Center for Advanced Office Systems at Pellissippi State Technical Community College.

The transcribed interviews were then analyzed for recurrence of common themes by QSR NUD*IST software. Because the structure of the QSR software requires respondents' answers to the same questions to be coded at identical nodes, I had to occasionally shift and reformat transcribed sections of text to the appropriate node location for consistency. This program then enabled me to create nodes and links that aided in coding, contrasting, and comparing the collected data from all participants.

Video Taping Focus Groups. At each campus site, two focus groups of six to 10 students were planned based on voluntary participation: one with Baby Boomer students over 35 years old, the other with younger 18 to 29-year-olds. Selections of student participants were determined with the help of faculty that had been interviewed who could assist in identifying student volunteers. I also personally solicited student volunteers from a couple of the classes that I observed at colleges X, Y, and Z.

Of special interest were some displaced garment workers who had returned to school for retraining after 15 to 20 year absences from the classroom. Because a substantial number of these garment workers were enrolled at two of the case study sites, I was able to arrange a focus group outside of class with eight of them. Six of them had been taking introductory classes together at some point during their freshman

year, and two other participants were friends of these classmates who were invited by word-of-mouth to join the focus group.

The different focus group sessions were video taped using a camcorder that I had reserved through a campus media center. The camera was placed on a tripod facing the students, while I sat out of sight, behind the tripod. The two-foot extension arm on the tripod allowed me the flexibility of shifting the camera a slight distance or panning from one student to the next, if necessary. The students were grouped around a table or behind desks, depending on the available classroom configuration used.

Prior to the focus group interviews, I briefly explained the nature and purpose of the study to the student volunteers. I asked members of each group to sign a general consent form stating the voluntary nature of the study. I also asked if there were any questions before the taping commenced. Students were instructed not to mention any particular instructors' names or specific college names to protect faculty identities. However, they were encouraged to give examples of effective faculty members by using nondescript phrases like "an English instructor that I had last semester" or "this particular math teacher" did thus and so.

Once the videotaping commenced, questions were asked regarding the ways in which the students felt that they learned best, and they were asked to give examples of learning situations or classes in which they felt the teaching techniques were most effective. Initially, I took turns going around the circle or table to each participant to ask him or her how he or she learned best. However, in most instances, discussions often ensued where one person would build on the comments of another, without my

solicitation. Frequently, there would be agreement among several participants, who would then proceed to share similar examples or give contrary examples in some cases.

I then replayed and analyzed the videotaped sessions for common themes and responses that emerged between cohort participants at each site, and among the three campus sites. Again, as with the faculty interviews, I attempted to code common themes that emerged from the focus group videotapes. Ultimately, comparisons between faculty comments and those of student participants were made to see if any common ground existed between the two.

Final Adherence to Published Human Subjects Guidelines

After the prospectus was approved by the dissertation committee, and prior to beginning the interviews, formal approval was sought and granted by the Internal Review Board (IRB) at East Tennessee State University for studies involving human participants. The IRB reviewed the proposed study and determined that it qualified for an exemption under the federal guidelines for the protection of human subjects. (See Appendix A.) Subjects were asked to sign confidentiality agreements. (See Appendix B.) These agreements and audiotapes of the interviews were stored in a locked filing cabinet in my office at Pellissippi State Technical Community College in Knoxville during spring and summer semesters. They were later stored in filing cabinets in my home study upon moving out of state.

I also informed the instructors being interviewed that any paid transcriptionist would be required to maintain the same standards of confidentiality that I would use.

A few instructors chose to use their real names, rather than select a pseudonym, because they apparently were not concerned with concealing their true identities. However, I later assigned pseudonyms to these instructors to maintain anonymity for all participants.

Summary of Proposed Methodology

In summary, by using the case study qualitative research method to investigate the experiences of East Tennessee community college instructors/professors with Generation X and Baby Boomer students, I hoped to discover the most effective teaching methods for motivating these college students in the classroom. The ultimate goal was to use the information gathered to help other college instructors improve their teaching effectiveness with the newest segment of the college population, Generation X students from ages 18 to 33, in addition to the previous Baby Boomer generation still prevalent on community college campuses.

CHAPTER 4

PRESENTATION AND ANALYSIS OF THE DATA

This chapter includes a composite profile of the faculty panel and findings obtained from the tape-recorded interviews of faculty participants, videotapes of student focus groups, structured classroom observations, and review of artifacts.

Faculty Panel Profile

A profile of faculty participants reveals that they came from a variety of academic disciplines with varying career spans in education. (See Table 2.) Thirty full-time instructors and one adjunct instructor were interviewed. Each interview lasted approximately one hour, depending on the instructor's schedule and degree of loquaciousness. The panel consisted of 15 female faculty and 16 male faculty. There were four African-Americans and one Asian on the panel. There were six department heads from different subject areas and one vice president who had formerly served as a department head. Because he was Vice President over Information Technology at college Z, his comments on the newer technological forms of classroom delivery were extremely useful.

The faculty members interviewed for this study ranged in age from 29 to 65. The range of years of teaching experience varied from as few as one year up to 40 years on the part of a veteran who had just retired but was still serving as an adjunct at two of the colleges. Thirteen faculty members had previously taught at colleges other

Table 2

Profiles of Faculty Participants

Participant Pseudonym	College	Gender	Subject(s) Taught	Total Years in Education
Angie*	X	F	Sociology	3
Betty	Z	F	Anatomy	14
Bobbie*	Z	F	Drama	8
Carla	Z	F	Business	9
David*	Y	M	Computers	1
Dawn	X	F	Economics	17
Dick, dh	Z	M	Allied Health	14
Donald	Z	M	Math/Physics	29
Dorothy, dh	X	F	Foreign Language	30
Eddie	Y	M	English/Literature	20
El Gato	Z	M	Computers	20
Fred	Y	M	Industrial Technology	25
Gretchen	Y	F	English/Literature	20
James	X	M	Math	35
Jessie	Y	M	Hospitality	5
Jim, dh	X	M	Anatomy	25

Note. * denotes Generation X faculty member; dh=department head

(table continues)

Table 2- continued

Participant Pseudonym	College	Gender	Subject(s) Taught	Total Years in Education
John Doe	Z	M	Information Technology	13
John Wayne, dh	X	M	Engineering	28
Keith*	X	M	English/Literature	5
Maria	X	F	Marketing	21
Mary	Z	F	Humanities	30
Myrtle*	Z	F	Anatomy Laboratory	7
Queenie, dh	Y	F	Computers	3
Rex	Y	M	Computers	13
Rhonda*	Z	F	Physics	6
Shane*	X	M	Sociology	5
Singie	X & Y	F	English/Sociology	40
Sue, dh	X	F	Math	26
Mr. T	Y	M	Remedial English	10
Toni	X	F	History/Sociology	12
Professor Z	Y	M	Business	20

Note. * denotes Generation X faculty member; dh=department head

than the three institutions selected for the study.

Five instructors had come to the teaching profession directly from the corporate sector. Three participants from college Z had begun their teaching careers in the public schools, as had one teacher from each of colleges X and Y, respectively. Seven participants were age 33 or younger, thereby classifying them as Generation Xers. Five of the seven had started teaching directly out of graduate school, and three were still pursuing advanced degrees while teaching at the community colleges.

Coverage of Biglan's Academic Disciplines

Based on Biglan's (1973) subject classifications, four instructors taught predominantly in the Hard, Pure, Nonlife (HPN) disciplines of math and physics. Three participants taught in the Hard, Pure, Life (HPL) subject areas of anatomy and physiology. Eight panel members taught the Soft, Pure, Nonlife (SPN) subjects of English, history, drama, and foreign languages. Three of the participants interviewed were teaching sociology and humanities courses considered to be Soft, Pure, Life (SPL) disciplines. Eight faculty members were classified under the Hard, Applied, Nonlife (HAN) category; all except one were in some type of computer science or engineering field. The sole exception was the Department Head of Allied Health at college Z. The remaining five instructors taught the Soft, Applied, Nonlife (SAN) subjects of business administration, economics, marketing, or management.

The six department heads supervised faculty in four out of the six different subject areas from which the faculty panel was selected. The only two exceptions were

in the Soft, Applied, Nonlife and Soft, Pure, Life categories. However, shortly after these interviews were completed, and prior to the commencement of the Fall 1999 semester, the participant known as Shane was promoted to Department Head over the Soft, Pure, Life disciplines at his institution.

Overview of Teaching Techniques Used

Teaching techniques used by the faculty interviewed at the three colleges varied tremendously. They spanned the gamut from the traditional lecture method to newer, technologically innovative methods involving multimedia stations networked with Internet capabilities. In Table 3, displayed on the following page, techniques have been arranged in broader categories: lecture method, cooperative/collaborative learning, techniques using technology, experiential learning techniques, visual aids, and a couple of special techniques mentioned only by a few instructors. Within each of these six major categories, several subcategories were displayed. For example, within the experiential category, techniques included: field trips, guest speakers, hands-on projects, problem solving, and presentations.

As might be expected, certain disciplines used particular techniques more than did others. For instance, all math instructors interviewed used the graphing calculator. Some techniques such as video tapes or collaborative learning in groups of three to five students were not reported to be used in the Hard, Applied, discipline of computer science. Occasionally, a technique was used at one college but not at the others due to lack of equipment. One college, for example, could not use the experiential

Table 3

Teaching Techniques Used

Teaching Technique	No. of Faculty Using Technique	Biglan Subject Areas Using	No. of Gen X Faculty Using
Lecture Method			
Traditional delivery	5	HPL, SAN, SPL	--
Power point delivery	4	HAN, SAN	--
Cooperative/Collaborative learning			
With one partner	3	SPL, SPN, HAN	1
With groups of 3 to 5	9	All except HAN	2
Special projects	5	SPN, HAN, SAN	2
Using Technology			
Computer-aided	7	HPL, HPN, HAN	2
Internet/WWW	4	SPN, HAN, SAN	2
Graphing calculator	3	HPN	--
Distance learning	3	HPL, SPN	1
Experiential learning			
Field trips	2	SPN, HAN	--
Guest speakers	3	SPN, SPL, SAN	1

(table continues)

Table 3-continued

Teaching Technique	No. of Faculty Using Technique	Biglan Subject Areas Using	No. of Gen X Faculty Using
Experiential learning			
Hands-on projects	9	All except Math	3
Problem solving	9	HPN, HAN, SAN	2
Presentations	3	SPN, SAN	1
Others (role plays, practicum, ride-along)	5	SPL, HAN, SAN	2
Visual aids			
Transparencies	27	All disciplines	6
Videos/films	11	All except Comp. Sci.	3
CD ROM Players	2	SPN, SPL	--
Concept mapping	3	HPL, HAN	--
Variety of Techniques	18	All disciplines	3
Special techniques			
Conferencing	2	SPN (English only)	--
Reading in class	5	SPN, SAN	--

technique of dissection in anatomy classes because it did not have a cadaver.

Most Commonly Used Teaching Techniques

Cooperative/Collaborative Learning. Seventeen of the 31 instructors used some form of cooperative or collaborative learning. In science labs, it was common to have at least one lab partner, or as many as four depending on the type and size of lab stations. Faculty interviewed in the allied health classes and some computer classes said they generally did not use cooperative learning, due to the nature of both disciplines. Dick indicated that his Allied Health students were trained to work alone, because they would often be the only professional in a first-responder medical emergency situation. John Doe indicated that some of his students formed study groups outside of class but that he never used group work in his computer classes. However, another computer science instructor (Rex) did allow collaborative learning to take place in his classrooms.

The Soft, Applied, Nonlife instructors appeared to be among the strongest advocates of team work on case problems and special class projects, such as investigating local businesses. It was also common for foreign language students to be paired to practice conversational French or Spanish with each other, rather than have each student individually recite or converse with the instructor, as was commonly done ten years ago. However, Department Head Dorothy noted that for cooperative learning to be effective, it was often necessary to persuade students to switch partners to allow them to work with a variety of people in the class.

For the most part, instructors had positive experiences using collaborative learning, with the exception of a history professor, Toni. In a pilot program, Toni and another colleague tried jig-sawing, a technique of breaking the material into pieces and giving groups of students individual pieces to share with each other. Toni reported, "It failed, and I'm not sure whether the cause [was] that students [were not] responsible, or they [did not] understand the text to teach. I think it was a combination."

Transparencies. The majority of faculty interviewed relied on the use of overhead transparencies in the classroom. Of the 27 faculty who reported using overheads, all but two used those supplied by publishers to accompany the textbooks. Those two faculty members preferred to make their own transparencies, or as in the case of math instructors, work problems on clear acetate transparencies. The only discipline where instructors did not report strong usage of transparencies was computer science, because those instructors had a special overhead projection system to show their computer screens on a monitor, as they programmed problems at their terminals.

Variety. Another of the most frequently mentioned responses to my question asking the faculty participants to describe their teaching techniques was "I use a variety of teaching techniques," or "I try a mix or combination of different techniques." Ten participants used the words variety or mix in their answers. Eight additional faculty did not specifically use these words. However, their descriptions of what they did fit. (If they mentioned at least four different categories of teaching techniques, I classified

them as using a variety.) For example, Bobbie reported using: video clips of plays, hands-on stage make up demonstrations, huge colored pictures of stage lighting and costumes, collaborative learning, play writing projects, and discussion.

Even within the Hard, Pure, Nonlife discipline of math, which may have been limited to a couple of problem-solving techniques in the past, Donald commented that students now ". . . have a multitude of strategies. They can look at a table to get the values of [variables] X and Y. The [graphing] calculator is just heaven-sent for a variety of learning styles." Math Department Head Sue agreed with Donald that many techniques were available in Math classes for solving problems (a) algebraically, (b) graphically, (c) numerically, (d) verbally, and (e) visually.

Eight of the 18 instructors who used a variety of teaching techniques said they did so because of their recognition of different learning styles among students. A text search revealed that these eight participants used a combination of the terms learning style or strings of words such as visual learner or tactile learner or kinesthetic learner in their descriptions of teaching techniques used. Sue, for example, stated: "I myself am a visual learner. For the visual learners, the graphing calculator works well. I'm very aware that there are different types of learners. There are auditory learners. I try to present materials for all learners."

Videos and Films. Another major teaching technique preferred by a third of the faculty panel was the use of videos or films. Eleven participants used them on a regular basis. Several instructors reported using a short video to introduce a new topic to the

class. Bobbie said that she showed three or four entire plays on video every semester, in addition to clips of bits and pieces of other plays. Four business administration instructors used company case videos supplied by textbook publishers. Engineering professors reported using industrial training videos ordered from different sources. In Rhonda's astronomy class, the students watched the movie All The Right Stuff.

Student Information Derived from Faculty Interviews

Student Demographics

To verify that student demographics in participants' classrooms did indeed agree with those from institutional enrollment summaries, I asked instructors to briefly describe the age, gender, and racial compositions of their student bodies.

Age Composition. Faculty participants confirmed the student demographic statistics that were reported from enrollment data summarized in Table 1. As a whole, the colleges had a cross-section of different students ranging in age from late teens to senior citizens who were usually classified as non-degree seeking students. The oldest student was reported to be 84 by Eddie at college Y. For the instructors teaching predominantly transfer students, a typical response was like the one given by Dorothy, Department Head of Foreign Languages: "About 90% are transfer students. . . . A large majority of them are right out of high school. Some are in their early 20s who have worked for a couple of years and come back to school."

In the Hard, Applied, Nonlife disciplines faculty tended to report a greater proportion of older students. Rex, a computer science teacher, stated, "[Age] seems to fluctuate primarily in the career-technical area. It is late 20s to early 30s, but I have three ladies in their 50s now, a couple of people in their 40s, all the way down to 19." This was also true of allied health professionals taking courses in paramedic training at college Z. For licensure reasons, the state will not allow enrollment of anyone less than 18 years of age. However, according to Dick, Department Head over Allied Health, "Most of the professionals going into higher level training are probably Baby Boomers that are in their early to mid 30s that are farther along in their work experiences . . . in the latter part of discipline training."

Gender Composition. The majority of the 31 faculty interviewed agreed the ratio of female to male students approximated the national average. They reported a range of 55% to 60% for the proportion of female students for the colleges' overall enrollments. However, enrollment in specific programs varied for some disciplines. Faculty in the Hard, Applied Nonlife subjects reported a much stronger concentration of male students than in any other discipline. The computer science instructors reported that male students comprised anywhere from 75% to 80% of enrollments, depending on the college. Concentration of males was highest in engineering fields, with approximately a 90% to 10% ratio of men to women reported by faculty at two of the colleges. This also used to be the case in the allied health professions at college Z in the mid 1980s, when the program originated. However, the Department Head over

Allied Health commented, ". . . but now we are probably 60% male, 40% female. So we have seen a significant increase in female participation."

Race Composition. Faculty participants at all three colleges corroborated that the racial composition was predominantly White at each institution. A typical response from most instructors mirrored Betty's: "Our enrollment is predominantly Caucasian. We have a few Blacks. We have one Oriental this semester, one American Indian, and we have a Greek Lady. . . . That's representative of east Tennessee."

In a few academic disciplines, instructors observed some concentrations of minority students usually not found in other disciplines. For instance, Asian students tended to gravitate toward computer science, based on comments from the computer science faculty. An informative comment made by one of them, Rex, indicated:

> We don't have as many minority students as we would probably like, especially African American students. They tend to not last very long. It's perhaps environmental or cultural, but the ones who stick it out are very successful. We generally don't have that many in the introductory courses. Oriental students generally do extremely well. Arabic students, we hardly ever have any of those.

Mention of the Terms Baby Boomer and Generation X. Interestingly, several instructors were familiar with the demographic terms for the Baby Boom and X generations. A QSR*NUDIST text search of the 1,081 coded text units (paragraphs)

from faculty interviews revealed that five faculty voluntarily used the term Baby Boomer or Boomer in their responses. Of these five instructors, four also mentioned the term Generation X or Xer. In addition to those four, four other instructors voluntarily made some reference to Generation X, yielding a total of eight faculty who at some point referred to the younger students by that demographic term.

Not surprisingly, four of the eight instructors who were familiar with these demographic terms were from the Soft, Applied, Nonlife disciplines. As a business administration instructor, I can attest that this terminology has been used commonly in business periodicals and textbooks for years, especially during the last decade when Generation X has become a major economic force in the marketplace and work force.

Of the eight faculty mentioning the term Generation X, a 33-year-old English teacher named Keith, was the only member of that generational cohort. Although he used the term twice, he also referred to them as "Generation Whatever," which may have been a reflection of his feelings toward the term used to describe his generation.

In one instance, a Baby Boomer economics professor appeared to use the term with a negative connotation attached to it. Dawn stated, "I hate to use the word for Generation X that many people use, but they are the slackers. Many of them feel if they show up, they deserve to get a grade."

Reported Older Student Behaviors

The purpose of Question 3 was to have faculty describe the behavioral differences they had noticed between the older and younger cohorts. In this section, I

address faculty observations of the behaviors of older students.

Motivation. Fifty-five percent of faculty participants characterized the older students as being more motivated or more focused in their studies than the younger students. Gretchen described them thus:

> For the older students, motivation seems to be a key thing. They work harder. They try harder. In some cases, they may not be as intellectually gifted as others, but they learn because they are willing to put in the sweat and effort.

Another English professor, Eddie, concurred by saying, "The Boomers are those students who are returning. I know my colleagues say in private that we're glad to have those students in class because they are generally motivated."

These comments appeared across all disciplines and among both Baby Boom and Generation X faculty members. Rhonda, a 32-year-old physics instructor stated, "The main thing I noticed, as far as the age group goes, is that the older students tend to be more serious about what they're doing here and why they are taking classes. They are usually the more motivated." To illustrate this point, a few faculty gave examples of the extent of motivation and dedication displayed on the part of their older students. Jim, Department Head of Natural Sciences at college X offered this example:

> In about my fourth year of teaching at college X, we had a student from the adjacent county and this student had four children under the age of 10, and she drove over 30 miles to this county to take all of her classes

> five days a week. Some days she looked like she had been beaten with a stick. She was successful and after her degree, she went on in the health profession and is a very successful health professional in her field.

Preparedness. By the same token, older students were reported as being more prepared than younger students when they came to class, according to eight panel members. Mr. T, who taught a remedial English class of predominantly older students spring semester commented:

> In that group . . . I have some of the older students you mentioned. I have some in retraining for their employer. . . . [They] are much more dedicated and reliable to attend and the most dependable having done the homework. Even if it was so difficult to understand, they have at least attempted it.

Dorothy said of her foreign language students, "The older students are very prepared. They are right on target. They study very hard and always come to class prepared." Similar comments offered by Dawn indicated, "They are also very prompt. They never come to class late. If they ever miss a class, they come to class the very next day . . . and ask me is there any homework, so they don' get behind." To sum up her description of the older students, Sue told this story:

> [She] is a Boomer, I think. She is married with one child and has informed me that she would like to take the final exam early in order to prepare for the birth of her second child. She's planning ahead to work

her classes around the delivery. She's let me know that from day one. So there's more preparation on the part of the mature students.

Anxiety About Their Ability. Interviews with eight faculty revealed a sense of anxiety among the older age cohort regarding their academic abilities. Eddie commented, "Boomers are almost always insecure about not knowing as much as the kids at first, but they quickly disposed of that notion after a short period of time." Maria observed that "Boomers . . . won't respond to you unless they know the answer. If you call on them, they will say they don't know. They will appear to be embarrassed by the fact that they don't know." Because of their lack of confidence about returning to school, they appear to need more advising, according to Queenie, Department Head of Computer Science at college Y. Queenie noted, "A very common expression is 'I've been out of school for so long. I am not sure if I can do it.' "

This anxiety among older students was reported by four instructors who teach computer-oriented applications. Although David had only been teaching computer classes for one year, he noticed this anxiety with computers was common among older learners. Whenever they prefaced a question he indicated they said, 'I don't know if this is right,' or 'This may be really stupid, but . . .' As a result, David has made a conscious effort to combat their negative reinforcement of this anxiety by saying, "No, that's a good question." He further commented that the older students' questions usually were relevant because "They are actually paying more attention than the younger people."

Slowness With Technology. This anxiety of older students was often mentioned in association with their slowness in operating computers or the graphing calculator. Of the seven instructors who mentioned that older students were slow with technology, three were computer science faculty. Two instructors taught anatomy classes that relied on a software program named ADAM. Betty, who no longer taught the lab portion of the class that used the software, commented, "The older students have to be led through that because [of] their lack of exposure to computers."

When Betty suggested that I talk with Myrtle, who now taught the lab sections, I received some additional insights. Myrtle, a 29-year-old instructor, offered this feedback regarding her observations of students using the ADAM software:

> Older students or non-traditional students will tend to sit there and actually want you to go through the tutorial with them. . . . They tend to work it on their own later, if they choose to, but maybe only 25% of the older students use the computer on a regular basis. Seventy-five percent choose not to because they don't want to take the time to learn the program. . . . I have noticed on heterogeneous teams some abrasion for the younger students with the older students not understanding the concepts and getting frustrated with them.

Purpose of College is to Learn. Comments by six faculty indicated that they felt older students, in contrast to the younger ones, came to college to learn. As Betty described the agendas of different age cohorts, she said "Older students will very often

take time out to smell the roses so to speak. They will say 'Oh that's interesting. How does this relate to something else?'" Donald also reported the older students' tendency to ask more questions, but added ". . . they hesitate sometimes because the young people might resent them monopolizing my time. The older people come by my office after class more often to ask questions."

Not only were the older students reported to be more interested in learning, but a couple of English instructors noted that they were also more grateful for the opportunity to learn, and took the information to heart in order to improve their skills. Mr. T observed, "They take advantage of all the services you give. 'If you tell me to come to you for a conference, I'll be there. If you tell me after I finish this course, you will still help me, then I will be there.'"

In addition, Jim said that he had noticed some friction between older students who came to learn and those students who did not, especially on collaborative learning teams. He relayed this observation to me:

> If a person is not motivated, the older students will just kind of leave the younger ones behind. The older people are there and they've paid their money now and they're going ahead with the course. And if these other folks don't want to spend time with it, they are not real patient with them. I think a very small percentage of 18-year-olds come into the class saying I've got to learn this stuff. That just doesn't happen much.

Cognitive Abilities. Four instructors noted that older students were sequential thinkers in comparison to the younger students. Donald said, "When I ask for an assignment to be turned in, the older students are very articulate and like to write things down, step-by-step." Gretchen noted that in compositions of older students, ". . . even where there are grammatical errors, still there is coherence to their writing. There may be subject-verb disagreement, but it's organized and very often the content is good."

Maria, a business administration professor for 21 years, elaborated on her assessment of the thought patterns of older students. I have included her entire philosophy, even though it also offers her assessment of younger people's thought patterns, so as not to interrupt the context in which these remarks were made:

> The Boomer generation is much more structured. There is a beginning, a middle, and an end to their particular presentation, and their writing skills tend to be very well developed. There will be a logical flow between the beginning of the paragraph, the middle of the paragraph, and the end of the paragraph. They will also transition between ideas. . .
>
> With some of our younger students, the concern is that the students have not really programmed their brains to compartmentalize and store information for easy retrieval. Nor have they developed good linkage skills. Whereas an older student might remember something that they already knew, the younger students capture discrete facts and try to memorize them, and I see that in all my classes. . . . But the older student wants to know how this connects to the overall picture.

Reported Younger Student Behaviors

When asked to describe the behaviors of younger students, faculty responded with almost antithetical behaviors from those describing the older students. In fact, faculty offered more descriptions about younger students than those concerning Baby Boomers, and their answers were sometimes phrased in comparison to the behaviors of older students. For example, faculty might describe younger students in terms of being "less prepared than older students."

Apathy. Thirteen faculty participants commented on the lack of motivation or apathy level on the part of the younger students. Among the briefer descriptions were the following: (a)Betty- "They come to class and tune out."; (b) El Gato- "The young students, for the most part, are unmotivated. When I ask them why are [they] in class, the one [answer] across the board is for the money."; (c) James- "Students today are not embarrassed or mortified if they flunk a test. It's no big deal. . . . It used to be that they were here to learn, but now they are here to pass."; (d) Jessie- "For the younger student, I would use the range of descriptions from absenteeism to comatose, coming unprepared, with the majority of younger [students] being less motivated and serious that the older students."; (e) John Doe- "They don't want to show up and study. They just want good grades. They don't want to do homework."; (f) John Wayne- "I start out with about half the class at eight o'clock, and hopefully I get the other half in there in various stages. I have tried to talk to them about responsibility . . . and I don't think I have reached their motivating stage yet."; and (g) Rex- "Their academic apathy would

be where they are more interested in their part-time jobs than their academic life, maybe tied to their economic well-being, things like putting gas in their cars."

Other participants elaborated at length, often suppling examples of apathetic behavior. Dawn, mentioned earlier as the only instructor to refer to Generation X as slackers, stated:

> Many of them feel if they show up, they deserve to get a grade. Some of them won't even do that though. If they do show up, they sort of come strolling in ten minutes late. Of course this is generalizing, but I've never seen that kind of behavior, the tardiness and uh [sic] the just not really caring about their work; I can safely say that I've never seen that behavior in an older adult. . . . Most of the younger students when they do bad on an exam, they don't even come to me or talk about how can I do this better.

Similarly, Gretchen offered another lengthy example of younger student behavior to illustrate their apathy toward school work:

> I had a Comp II class last year with all young people. Every single one of them was probably between 18 and 22. I had a rough semester. I had trouble keeping their attention, and getting them to come to class. I had trouble getting them to turn in their work. And there was one day when I had given a test on poetry. Everyone did horribly, except a couple of students. I went back in and gave the tests back. I said these grades are really low and we need to go back over this material. . . . So

> let's set aside Friday to go back over this material again.
>
> And when I went to the room on Friday, absolutely no one was there. This was out of a class of about 24 students, and only four had passed the test. As far as they were concerned, it was a canceled class. It was very distressing. I walked out of that room just stunned. . . . So next week, I went in and read the riot act. Neither had any effect, and again the whole class was between 18 and 22, no older students.

These comments appeared in faculty interviews across all disciplines. Worth noting, however, may be the fact that of those 13 faculty, only one was a Generation X faculty member. Angie recounted to me what she referred to as ". . . a very frustrating experience that I have not run across in my three years of teaching." This experience concerned a take-home sociology exam that she had given in prior semesters. Because it was a take-home test, Angie mentioned that she had assigned a couple more essay questions that she would not have given, had the test been administered in class. The students had three days to work on this take-home test. Angie related the following:

> I had one student who happens not to be a social work major, by the way, but on the last question, which was a 28-point question, she did not answer it. So it was pretty significant in terms of grade. She made a note on that question -- 'I'm sorry, but I did not have time to answer it.' And so I made a notation back to her -- 'I'm sorry, I really believe you could have done well had you taken the time to answer it.'

Lack of Preparation. As one can note in some of the comments above, lack of motivation was sometimes mentioned in conjunction with lack of preparation. In coding interviews, it was often difficult to separate the two concepts. Gretchen expanded on this "trend of unpreparedness" in behaviors of younger students with behaviors such as ". . . not bringing their books or material with them." She continued, "Young students will sit there with a completely blank desk top, no paper, no pen or anything. They will not write anything down, when I use the board for things that come up. . . . " Mr. T, yet another English teacher, noted similar behaviors:

> The younger ones have generally done little if no preparation because when I do lecture, the books and pages are clean. They have not been marked in. They usually take longer to respond because they haven't read over the questions. Quite often their excuse was that [they weren't] there yesterday. Therefore, they didn't do the work because they didn't take the responsibility to call someone to get it.

English faculty were not the only ones who noticed the lack of preparation. Instructors in both the Hard and Soft, Applied Nonlife subject areas noticed it also. Engineering Department Head John Wayne told me, " They seem to feel-- Here I am. Pour it in, with no effort." Additionally, another department head from the Hard, Pure, Nonlife disciplines commented, "They want good grades with minimal effort. They have a poor work ethic as far as doing homework and turning it in on time."

Although faculty from several disciplines noted this concern, I realized that all eight faculty were from the Baby Boomer generation. Professor Z's comment about

the lack of work ethic concerning class work and preparation duly noted this as a possible generational difference:

> Maybe there is too much of a generation gap here, but they are not hard workers like the students were, when I was in school. They are satisfied to do just enough to get by. They come to class late, and use up all the allowable absences permitted by my college's attendance policy. It's as if they are content to be warm bodies sitting in class. I shudder to think what they will be like in the work force because they don't seem to have that good old Protestant work ethic that my generation was raised with.

Lack of Focus. Closely associated with lack of motivation and preparation was the lack of focus among the younger student cohort. Here again, this characteristic was difficult to separate from the former two, but since almost half (14) of the interview participants mentioned it, I believe it warrants discussion. This observation was consistent across all disciplines, and noted by two Generation X faculty members, in addition to a dozen older professors.

The two Xers, Angie and Bobbie, defined the concept of focus in terms of the students' having goals or valid reasons for being in class other than "to impress or please other classmates." Bobbie commented, "Sometimes with the 19-year-olds you want to crack their heads in because they are silly and have a focus problem." Angie clarified her response about the students lacking focus by adding, "I don't want to stereotype them, because I do have a few younger students who are focused . . . the

ones who know what they generally want to major in and [who] have long-terms goals to get a masters degree."

Most of the Baby Boomer comments regarding their younger students' lack of focus also related to the students not appearing to have well-defined goals or not really knowing why they were attending college. Several male faculty members from more technically-oriented career fields within the Hard, Applied, Nonlife disciplines commented that they have actually asked the younger students why they were there. Jessie noted, "If you ask the younger generation where they want to be 10 years from now, they haven't thought 10 years from now. They don't know where they want to be 10 minutes from now." When Dick asked his students why they were in college, the common response he reported getting was "Just because Mom and Dad said I had to."

In fact, parental pressure to attend college was mentioned by five faculty members as being a strong determinant of why many young students were attending college, even though they personally may not have wished to be there. Thirty-year teaching veteran Mary phrased the reason candidly:

> They are here because it's either that or Mama said to go get a job slinging hamburgers at McDonald's. So school seems the lesser of the two evils. But they are obviously here because somebody wanted them to be here, not because they wanted to be here.

Social Interactions. More than a third of the faculty interviewed were disturbed by the social behaviors exhibited by the younger students during class. Basically, their

concern was that the younger students wanted to talk to each other about their social lives, while the professors were trying to conduct class. Three of 11 faculty who mentioned this were themselves Generation Xers, so these comments were not solely confined to Baby Boom professors. Bobbie stated, "They're spending more time talking about what they did last Friday night than the class." Another Xer, David, described them as having "more of high-schoolish type behavior, especially in the Intro classes-- talking, you know giggling. . . . What I've seen with some of the younger ones is that they are not paying any attention to me." He added that this was not something that he thought he should have to deal within college.

After observing Carla's business class at college Z, she commented, "The girls in the back of the room . . . who were talking about tattoos and jewelry . . . are the typical 18 to 19-year-olds who would rather be some place else and who sit far back from the board." I might interject, that as a participant observer in Carla's classroom, I overheard this conversation about the tattoos, and later discussed it with Carla in her office. This student conversation was in no way related to the lecture.

Lack of Interaction. One observation that I found peculiar only among a couple of computer science instructors and one physics instructor was the inability or lack of desire of the younger students to relate to their instructors. Computer Science Department Head Queenie noted, "Younger students, in general, are not very communicative. There is not much interaction between the teacher and students in the classroom. Younger students don't ask as many questions as older students do."

David's observations of his younger computer science students paralleled those of Queenie: "They are afraid to ask questions. . . . I've had some people failing miserably that I've never talked to or had come talk to me."

Rhonda, the only physics instructor interviewed from the Hard, Pure, Nonlife area, noticed a similar lack of interaction among her physics students; although, she did not necessarily think it was confined to the younger age cohort. She stated:

> The students who are not technology majors, but who are university-parallel going on to other science degrees tend to work the least well with others. They tend to be very solitary. They don't want to communicate with others. They want to do it on their own. . . . The other instructor and I have noticed this because we tend to be kind of individualists and isolationists, and we don't want to work with others.

Poor Reading Skills. A crucial concern voiced by six of the Soft, Pure, Nonlife faculty was the observation that Generation X students could not or would not read. Toni indicated that it was a combination of: (a) students not taking responsibility to read their textbooks and (b) students not understanding the texts. She referred to the younger students as being "dysfunctionally illiterate- They can read People magazine and to some extent, the newspaper. I mean functionally literate in that they cannot read college level texts, as defined by reading specialists at grade level 13 and above."

Several faculty commented that they felt the younger students did not read their texts because they relied on their instructors to tell them what they needed to know. In

fact, one department head over mathematics told me that, after years of reading student evaluation comments of faculty in her department, one comment she saw repeatedly was: "This person is a very good teacher because I don't have to open my book because she explains things so well." In her capacity as supervisor, she had arrived at the conclusion that ". . . if they have to put forth an effort and have to open their books, then the person will not be considered a good teacher" by the younger students.

Keith, a Generation X English instructor, offered the most insightful reason why he felt younger students did not have a great appreciation for reading:

> I'm finding an increasing amount of distance between our students and the way our students get information; and they learn from conversations and television and the sequences they see on the movie screen. The way they learn is on the computer and World Wide Web. Of course the latter weren't around when my students were kids. What was around when they were kids, was a whole lot of television and a whole lot of video tapes. Plus a whole lot of mobility in cars at a much younger age, such as going to day cares and places outside the home, where they [were] not stationary for a time. So the concept of them sitting down with a book for any length of time, it is not modeled for them anywhere, I don't think anymore. Of course that is a generalization about these kids. Certainly there are students who are avid readers, intelligent students thirsty for learning, but this is not the norm anymore.

Similarly, a veteran English professor of 20 years, Eddie, had discovered the

same phenomenon. He especially found it difficult to teach creative writing to his younger students because of their lack of appreciation for text. They blatantly tell him, 'I don't want to have to read,' or let him know it is an "imposition" to have to learn about native Tennessee writers, as in the case of one student who "let [him] know that she didn't care about James Agee, or want to know who he was."

Because of their aversion to reading, Eddie admitted that he has tried to find ways to circumvent exposing them to text. He also refused to teach about some famous authors anymore because he did not "want those authors trivialized by silly discussions or criticized by students with extremely limited knowledge with a great deal of attitude." Rather, he used what he referred to as his "backdoor approach to expose them to texts," by showing movies about literary works. Additionally, he favored a great deal of reading out loud in class as another way of exposing them to texts.

Adeptness With Technology. While several instructors noted that the older students were slow with technology and perhaps had anxiety about using it, the same participants were equally cognizant that younger students felt more comfortable with it. This was especially noticed by computer science instructors and math instructors. When Sue commented that the graphing calculator was "heaven-sent for a variety of learning styles," she also indicated, "Of course, I think the younger students are more adept at using it, at punching in the equations, and they probably have more of an aptitude for the technology than the older students."

Another math instructor, Donald, said of the younger folks, "The generation we

are working with now are the most intelligent generation I've taught. They can do things that were unheard of 30 years ago: using computers, the Internet, and [finding] answers to questions with less difficulty." John Doe, Vice President over Information Technology, explained, "They don't feel the pressure of staring at a computer and interfacing with it. The younger ones are not as afraid of computers because they have used them in public schools or [played] with them at a friend's house."

Interest in Getting a Grade Only. Although older students were reported to be attending college to learn, younger students were reported to have a philosophy of just memorizing things for the test. John Doe compared how young students' philosophies toward learning had changed during the thirteen years he had taught:

> When I first started teaching, . . . , they were more serious about the course and put more study time in. Now, it seems like the students are less interested in the course, and more interested in the grade. 'I don't care if I don't show up for classes, just give me an *A* or a *B* and I'll be out of here.' Now that's an attitude problem. . . . It seems like we're in a situation now where they come to college with this attitude of: 'Hey, here I am. I show up every day and I deserve a passing grade.'

John Doe was not the only instructor who voiced this opinion. Eight faculty participants from five of the six subject areas echoed similar sentiments. The only exception was the Soft, Pure, Life academic area. Betty reported, "The younger ones want it fast. 'Just give me the answers. Don't give me details. Give me a checklist.

If I don't need to know this, then just tell me and I won't bother with it.'" Even when instructors do give them a study guide or checklist, as Eddie reported, "[They] still want to know if [they] have to know this . . . or if on the test, will [the instructor] actually give them the list." Rex agreed, "They are the ones in the [computer] lab situation that want you to tell them what the right answer is. Their position is that I can memorize the answer."

Cognitive Abilities. Inasmuch as the older students were reported to display more sequential, organized thought patterns in their studies, younger students were felt to have difficulty synthesizing information due to fragmented thought patterns, according to four professors. I have already offered Maria's philosophy regarding the way she perceived that older students processed information. She contrasted the younger generation as thinking in "sound-bite ideas, . . . , short two line quips and phrases not linked together by anything that remotely resembles a transitional clause, sentence, or paragraph." In addition to these comments, she had this to say about younger students:

> There's another thing about Generation Xers. They have trouble discriminating between relevant information in an activity and irrelevant information. . . . For example, I did a group exercise where they determined how long it would take to cook a meal. At one time in the lead in paragraph, it mentioned something about leaving a ball game and going to the opera after dinner. Some of the younger students were upset that information was not used. . . .

> I've also noticed a very small tendency among younger students who have difficulty interpreting questions properly, and by that I mean if you give them a three-part question, you'd better say, (a), (b), and (c). Otherwise, they are going to answer (a) or (b) or (c), not all three.

Maria was not the only instructor to notice this occurrence among younger students. Angie, a younger instructor who had only been teaching for three years, also noticed that on a test question with multiple parts, many younger students failed to answer all of the parts. Even though she had given the same test questions for three years, with multiple parts being answered with no difficulty in the past, she commented that this year, the younger students failed to answer the second part of the question by giving examples. When I asked her what was different about this year compared to previous classes, she realized, "They're younger, much younger. I hadn't thought of that, but [most] of them were right out of high school, maybe 18 or 19 years old."

Gretchen also noticed the lack of coherence in the younger students' writing samples. Because their writing is so incomprehensible, she has had to develop her own set of markings. She discovered, "There is no Harbrace marking in the world to address the problem. You can't put a 21 or 15 in the margin. . . . It's completely incoherent." So she reported using a question mark (?) symbol quite frequently to mean that she does not understand what the student meant or that she is confused.

Discipline Problems. Nine of the 31 faculty participants from every academic discipline except Hard, Pure, Life, voiced concern over discipline or behavior problems

with the younger students. Seven were Baby Boomer instructors and two were Generation X instructors. Five of seven Baby Boomers indicated that discipline problems had increased among younger students in recent years. Both of the Generation X faculty, Bobbie and David said that the younger students were "not like that just a few years ago when [they] were in college." David also added, "But then I went to a four-year college, so maybe that's different [from a community college]."

Most of the discipline problems were described as younger students talking out of turn, while either the instructor was lecturing or other students were discussing class-related issues. Additionally, Bobbie and Sue indicated that younger students were more demanding about how fast the teachers graded their papers or argumentative of how the teacher assigned points.

Professor Z and Fred noted how "disrespectful"the younger students had become in their 20 years in the teaching profession, especially during the last five years. Fred elaborated:

> What I don't see is a huge number of the younger age group, even though in the last five years I have seen more younger age groups from 18 to 25 come to college in my area. . . . And discipline problems are usually with the younger age group, since I've been here. They don't accept authority well. It can be a real problem in classes when you have to yell at them in class. We also take plant tours. I have found that in public, younger students act up just like they do in the classroom. They have no respect for authority or companies on plant tours. . . . So the

lack of respect is for any adult authority figure, not just the teacher.

Two of the oldest professors, who each had been in education for 30 years or more, also noted how the older students perceived the behaviors of the younger students. James commented, "I know in one of my evening classes, a comment by one of my older students was that she liked the fact that I didn't put up with any of the trash from the kids in the class." Mary, who had served on several evaluation committees for promotion and tenure of other faculty, similarly observed from reading students' comments that "Evaluations will often say of a younger faculty member [who] is hesitant to discipline, the older students will complain terribly that I did not come here and spend money for this, the way Mama or Daddy are paying for some."

Most Effective Teaching Techniques Reported by Faculty

During the latter half of each interview, faculty members discussed the teaching techniques that they said were: (a) more effective for the older students, (b) more effective for the younger students, and (c) finally those in which a degree of overlap existed that were effective for both age cohorts. One will notice that the panel participants did not offer as much information concerning the older students. However, in view of the fact that approximately 80% of enrollments were of students younger than the Generation X cut-off age of 34, and the remaining 20% were older students over age 34 (See Table 1), this did not appear unusual.

Most Effective Techniques for Baby Boomers.

Faculty participants offered four major techniques that they believe are more effective for the older students: the traditional lecture method, real world applications related to adult learners' job situations, class discussions, and younger students assisting the older ones to successfully operate computers.

Traditional Lecture. Six instructors from five different academic areas (all except Hard, Pure, Nonlife) admitted using predominantly the lecture method for their Introductory courses, and reported that the older students favored this method. All but one were older instructors, meaning either Baby Boomers or from the preceding generation. Dick stated, "The Baby Boomers seem to be more textbook-oriented with the addition of audio visuals. The lecture format works well with that group, but not with Generation X." Similarly, Dawn indicated:

> The older students tend to respond better to what I call the traditional mode of teaching--I mean where the professor stands up in front of the room and lectures and the students sit there very quietly and take notes and very rarely interact in the classroom.

Part of the reason they may prefer this in the Introductory courses is because of the massive degree of new terminology often found in freshman year Intro classes. For example, in the first week of an anatomy class, Jim indicated that there were 109 new vocabulary words to learn. So he admitted relying on the "old-school" method of lecturing and referring to the text book a great deal. Sue noted that "older learners are

more verbal, . . . ask more questions, . . . [and] are sequential thinkers who want to know what's the next step." She felt that because they were taught algebra in the traditional, sequential way, that they preferred the routine methods of teaching in other math classes.

Only one Generation X instructor, Shane, alluded to the lecture method for older students, but clarified it by saying, "For the older group, they may find lecture with realistic real world scenarios more effective because they think: I can apply it to my place of employment . . . to give me better understanding."

Real World Applications. Shane was not the only instructor to observe that older students preferred practical job-related applications. Four of the Soft, Applied, Nonlife educators who came from the corporate sector noted that because older, non-traditional students were already working in careers, they better understood role plays, case scenarios, or management simulations. Jessie said although "the non-traditional students know what's going on," they add a lot to class discussions or critiques of real world applications. Additionally, the computer science and engineering instructors stressed that hands-on applications were especially beneficial to the older students because they tend to "learn by doing," according to El Gato and John Wayne.

Class Discussions. Three instructors, two from Soft, Pure, Life disciplines and one from computer science, said that older students liked discussion-oriented classes. Queenie said, "For evening classes of older students, more discussion is involved since

the older students are more participative." Mary, who taught large sections of 40 students noted that since younger students were often "more intimidated by larger classes," older students carried discussions better. Finally, Generation X sociology instructor, Angie, also observed during her three years of teaching that the older students " . . . tend to be more genuine about what they are talking about [because they are] not looking to impress or please other classmates [like] the younger students are."

Xers Helping Boomers with Technology. Because I had discovered many older students were often anxious about newer technologies such as computers, I was not surprised when four instructors offered the suggestion for allowing younger students to help the older ones with these newer technologies. Donald, James, Myrtle, and Rex had observed this occurring naturally in a lab setting or collaborative learning experience. Myrtle said that even though the older students often assumed leadership roles and delegated tasks to younger students in her anatomy labs, "[she had] noticed a role reversal on helping older students understand the material. Younger students tend to understand the material a little bit faster." She was referring to the ADAM software package, mentioned earlier, that was available in her science lab.

Most Effective Techniques for Generation X

Faculty offered seven teaching techniques that they found to be effective for the younger students. The two most popular techniques, were visual aids and individual attention. Additionally, real world applications, collaborative learning, entertainment,

and computer-oriented instruction were mentioned by 25% of the faculty. However, instructors noted different real world scenarios from the ones that they said Baby Boomers liked. Finally, five instructors noted that younger students preferred to participate in classroom choices.

Visual Aids. Eleven members of the faculty panel, across all disciplines, stressed the need for a visual component for younger students. This visual component may not necessarily have been the same for every discipline. The recommended visual aids included videos or films, CD-ROM software, power point slides, and in three cases, concept mapping, which was used by one anatomy and two computer science instructors. So the term visual could have as many meanings as there were instructors.

Keith, the only Generation X faculty member of the 11 instructors to stress that visuals were important for the younger students stated, "I think it is very important to have a visual component to teaching, and by that I do not mean Power Point. . . . By visual, I mean that you have to make the class engaging." Keith does this in a variety of ways. In addition to showing clips of full-length films from Generation X's childhood such as Star Wars, Keith records many commercials on television using his VCR. He admits doing this, not only because he feels that Xers split their time between the Internet and television, but also because he thinks advertising is what ties our "consumer culture" together.

For example, the week that I interviewed him, Keith had shown the seven-times martial arts champion Billy Blank's "Tae Bo" commercial as a way of teaching English

Composition II classes the different writing perspectives between the testimonial, the celebrity authority and the pro endorsement. A few days prior, Keith had shown his class a five-minute clip of a conversation between Luke Skywalker and Obewankenobi from Star Wars. He indicated, "I use stuff they grew up with. I use this as a way of introducing the concept we are talking about, not as a way of replacing literature."

Also in the Soft, Pure, Life and Nonlife academic areas, a humanities instructor and a history professor from two different colleges had purchased special CD-ROM software packages on western civilization that integrated photographs from history, artwork, and maps that their younger students seemed to enjoy. In fact, Toni commented that she had not noticed the same favorable reaction with other software and videos that she used. She felt the difference was because each segment on the CD-ROM software was about 20 minutes long, which was the ideal length. She had observed that when she used a 45 to 50 minute video, younger students ". . . doodled, flipped through their notes, chatted with each other, or they put their heads down."

Comments by faculty in the Soft, Applied, Nonlife disciplines corroborated the belief that shorter videos were preferred by younger students to much longer ones. Professor Z also indicated that "Humorous ones seem to grab their attention better than serious ones." Dawn noted, ". . . if you have videos that are boring, and I have had that experience too, where you kind of have talking head videos, you'll lose them real quickly because that's like lecture to them. . . . That head goes down on the desk . . ."

Videos were even used by math professors, not necessarily in class, but as an optional learning aid that could be viewed by students in the math lab. However,

Donald did report beginning some of his classes with a video from a series prepared by the State University System of New York. Yet, because the videos were somewhat dated, he indicated that the younger students did not appreciate or enjoy them as much as older students did, since the videos did not include the latest technology.

James, another math professor who was one of the original faculty members to teach at the first community college in Columbia, South Carolina, also noted how important visuals have become for teaching the younger generation. That is why he strongly endorsed the graphing calculator as a tool for displaying the visual image of the equation of a line. Although James had returned to the classroom in 1997, after a 20-year absence, he emphasized the changes that he has made in his teaching style to ". . . a more visual, hands-on approach than what [he] had used in the past. Also, shorter bites because [he] thinks that is the way this group of younger students gets their information today." Additionally, James does more writing on the board and uses more transparencies than he did in the past to enhance the visual part of his instruction.

Finally, I mention the technique of concept mapping, a visual diagram showing data flow paths or linkages between related parts. Apparently, this was popular with at least two computer science instructors as a visual technique in the classroom, where they could use the white boards to draw relationships between CPU's and arithmetic units and memory in computer systems. One teacher reported buying a big selection of colored markers, probably as much as $20 worth a semester. A Science Department Head at college X was also a strong advocate of concept mapping as a visual means of portraying how parts of the human body fit together in his anatomy and biology classes.

Computer-oriented Instruction. Sometimes, as in the case of Fred, instructors expressed that visual presentations were enhanced by computer technology, such as power point slides. I have included this as a separate category from the previous one because seven instructors commented on computer-aided instruction as another technique, even though it does have a visual component. Fred, an industrial technology instructor, commented:

> I found with the younger age group, as well as the older age group, but more so with the younger age group, that you could do more visuals. All my lectures are on power point. All my tests are on computers and I have found that my students like that much better. . . . So if I can flash it on the screen, let them look at it and explain it to them, they will listen much better. . . . The younger generation is more hyper and instantaneous about wanting things right now. So if you can give them something to look at and put their hands on, they seem to adapt to it better. I've had some of my younger students, when I didn't have power point, to ask why it wasn't there.

Dawn, an economics instructor, had also used power point presentations for three years, but not in a multimedia classroom format until this year. Prior to that, she had produced power point slides on her computer, then printed each slide off as an overhead transparency. Although the actual slides were no different from the transparencies that she had used in the past, she indicated that the slight difference in delivery has had a huge impact on her students. She articulated:

> So it is not that much different, but it's amazing how differently they react to that-- just that subtle change that it is not an overhead transparency anymore. It is actually being shown to me on a television monitor like a video. . . . I've thought and wondered about it all semester. I think having a classroom that is networked and we can actually get on the Internet in class and just having the equipment there offered to them, where other classes don't, makes them feel special. . . .
>
> I think it definitely has more of an impact on the younger students, well just because they mention it to me more that they like that format than the older students. And for those classes where I do power point presentations, I run off copies of all the slides I use in class and put them in a notebook on reserve in the library, so they can go see the exact slides they saw in class.

Also, the Department Head of Allied Health Programs at college Z, had realized the need to adapt his classes to the younger generation's adeptness for computer technology. Dick remarked:

> For the Generation X, if it's not computer-based or computer-oriented instruction, or if we go back to the old-fashioned teaching methods, there is no understanding and no comprehension. So for the Generation X, we have attempted to do some kind of computer-based instruction to try to address these specific needs and to set up additional lab time for those students to participate in computer-oriented learning. For [Xers],

we have to have more interactive feedback to keep them enthused and motivated and awakened.

Furthermore, both the youngest and eldest educator on the panel agreed that computer-oriented instruction was far more effective with younger students. While Myrtle (age 29) reported that only about 25% of her older students attempted to use the ADAM software, she commented, "If you show younger students the ADAM software, younger students will tend to go ahead and take the initiative to boot the program up and attack it." Likewise, Singie (age 65) agreed, "The younger students tend to work better on computers. They have more stick-to-itiveness with computers and more patience, but the older students don't bother the computer that much."

Individual Attention. A third of the faculty indicated that they have observed a great need for attention on the part of their Generation X students. I offer what I believe to be a somewhat profound commentary voiced by the oldest faculty member of the panel, Singie. Singie had taught in the Tennessee community college system for a combined total of 13 years at both colleges X and Y, in addition to public schools and a major university in Tennessee. Although she retired from full-time teaching this past year, she had spent 40 years in education and was still serving as an adjunct faculty member for area colleges. In describing the behaviors of her younger students, Singie noticed that a great many of them have been separated from their families, often living in single family dwellings. She hypothesized:

They seem to lack the family side of getting attention from the extended

family. One boy talked to me last week who is 19 years old and he said his dad was a marine, so they lived all over the world. He's alone here. His mom and stepfather live in Hawaii. His dad lives in Michigan. He hasn't seen his grandparents in 11 years. So I asked him where he lives, and he said he lives with his girlfriend and her parents. And he pays them rent, so this is his family. So this is what I mean when I say he lacks the sense of family where you get attention and love from the family, and the extended family.

I can best sum up how today's students behave by saying that so many of Generation X are needy in terms of needing lots and lots of attention. I hadn't thought about it, but maybe some of their negative behaviors and negative attitudes are a result of their seeking attention. There are some who talk back, some who yell out in class, and they just want attention. They follow me around. I never have a free moment, when I'm not in class. They will wait until I can get to them for whatever attention I can give. This attention seems to motivate them.

Apparently 10 of the 31 faculty panelists had discovered Singie's supposition that individual attention may be the key to reaching Generation X, although the attention given was not always positive attention. With the exception of two English instructors and one math department head, this technique was endorsed predominantly by seven educators from the Hard, Applied, Nonlife disciplines. I personally suspect the fact that they had come from the private sector and appeared to be trying to instill

some degree of professionalism in their students may have a great deal to do with their favoring this approach.

Although Dick described his Health Services Paramedic Program as having some fairly rigorous components of "a military-type environment," he indicated that those were the keys to success and retention of Generation X. Not only do these students wear uniforms to class, but they have strict reporting and ending times, as well as a mandatory 80% minimal passing average to stay in the program. His philosophy was simply:

> We are trying to instill in that individual that you should take some pride in your personal insights and professional goals. The Baby Boomers have that goal in sight, and we hope to potentially mold the Generation X in this particular profession. It may not work for the generic student who is outside this profession, but we are starting to see some sort of enthusiasm about 'Maybe my faculty do care about who I am. Maybe I do want to come to school just because, just because my faculty do care about me as an individual versus a number.'

In a similar fashion, John Wayne, Department Head of Engineering at college X, also strongly advocated the personal approach as a retention tool for Generation X. They have tried to make freshmen feel like part of the "Engineering Technology family" from the outset. They talk to them individually and encourage memberships in student chapters of professional associations such as the Society of Mechanical Engineers and the Institute of Electrical and Electronic Engineers (IEEE). Using words that

paralleled Dick's philosophy, John Wayne noted, "If you can get them to feel like they are more than just a number at college X, you've got a better chance of reaching these people with academic knowledge. If I had to choose one thing, that would be it."

Sometimes, this individual attention might not always be perceived as positive attention by Xers. Jessie advocated the use of negative reinforcements or "punishments associated with not being prepared" for the younger students who do not participate. He indicated, "I call them by name. . . . If they don't answer, I will call on them again to the point of embarrassing them-- not out of malice, but to let them know to come prepared. They learn eventually." Sue and Mr. T also used a similar technique to give younger individuals special recognition in class, especially for those talking to their neighbors. Sue's approach has been to stop during her lecture, and ". . . remind them where we are and ask them if they have something to say because [she] does not want to be discourteous to [them]." She then tells them to go ahead and finish their conversation, and let her know when they are done. Although that strategy might work one day, she also recognized that it usually happened again the next class period.

Cooperative/Collaborative Learning. Recalling from Table 3 that 17 faculty reported using some form of cooperative or collaborative learning, it was important to determine how well students of different ages worked together on teams. Several instructors, including Myrtle, reported that given the choice to select their own groups, "Many younger students tend to associate with their peers." However, eight older faculty members voiced problems with allowing them to do so. Although both Dorothy

and Maria, for example, reported that the younger students liked group work, they also indicated that they had ". . . trouble with the younger students not staying on task." Therefore, these eight faculty members stipulated that group work was effective, if team members were rotated periodically to include some older, more focused students.

In the true spirit of cooperative learning, faculty often had to resort to assigning teams to ensure better focus and balance among membership roles. Therefore, faculty suggested a variety of methods they used to select teams. Jessie, in the vein of teaching casino management, let students draw numbers. John Wayne kept the same teams, but rotated project leaders. Mr. T had his students count off by rows or selected members based on personality types. He indicated, "I try to get one Expressive, One Driver, and a relative mix of behaviors." Rhonda reassigned groups after each physics test, based on academic standing. In a group of three, she put one top student, one average student, and one lower student. She said, "That gives them a chance to work with new people and also they have access to people who know what's going on."

A faculty member reported that younger students voluntarily chose to work with older people in only one instance. This was in industrial technology, where Fred told me:

> A typical group most of the time self selects. . . . I found that the younger and older students group together naturally on their own. They achieve a good mix because the younger students will get with some older students to have some stability on their teams. I feel like they have stability doing this.

Additionally, four instructors: Dorothy, Fred, Jessie, and Sue, often rewarded team efforts with a few extra-credit points, which were added to a quiz score. Dorothy commented that the younger students especially seemed "to get excited about those team competitions and liked the two extra points." Fred felt that, "The students out of high school wanted to do more extra-credit because they [did not] do as well in class. They [were] used to doing extra-credit in high school, so they expected it in college."

Entertainment. Eight of 31 participants from five academic areas, with the exception of the Soft, Pure, Life disciplines, indicated that they felt they had to entertain Generation Xers to be effective. Of the eight, Bobbie stated, "The younger students like to be entertained. On days where maybe the information is not so exciting, ... they would get very frustrated if I could not tap dance on the table, as I like to say." Anatomy instructor Betty called it using "dancing bears." When I asked her to explain, she said she dramatized parts of the human body, such as portraying a steroid hormone by coming into her class acting like a bully. Eddie actually does dance for them in his English classes. Although he emphatically stated that all learning should not center on entertainment, he admitted, "Well, I'm funny in class. . . . I even mimic Sesame Street. I do 'Conjunction Junction' in class. I get up and do the dance for them." I might add also that both Betty and Eddie have been winners of the Excellence in Teaching Awards voted on by students at their respective colleges.

Carla related teaching to the Postman (1985) premise that school had to be like television for the generation raised by this medium:

You've got to do it all-- the whistles and bells. . . . We are not just

> teaching; we are entertaining. We've got to keep at it. It is sad, but it's the market today of young people. They have got to be entertained. If they are not entertained, they are going to turn you off or tune you out like a TV or radio. They will change the channel or sit back there and talk about tattoos because they are bored with what I'm talking about.

Donald found himself having to work much harder now to reach the younger students, than 15 years ago. He elaborated, "I find myself working many more hours to accomplish the same tasks. Part of this is keeping up with the technology and just preparing a class that is entertaining." At three different points in his interview, he iterated the need to work harder and be entertaining for the younger students.

Applications Related to Pop Culture. Eight faculty, six from the Hard and Soft, Applied, Nonlife disciplines and two from the Soft, Pure, Life disciplines, indicated that the younger students benefited from examples or "hands-on" applications to illustrate theoretical material. While older adults preferred practical applications that they could relate to their jobs, these same examples or applications did not seem to appeal to younger students, perhaps because they had fewer work experiences. Therefore, faculty indicated that the scenarios that worked best with the younger students had to relate to their popular culture.

The faculty that seemed to have the best grasp on pop culture were, of course, the Xers: Bobbie, David, Keith, and Shane. All four agreed that being close in age to younger students was a definite advantage in being able to relate to them. Bobbie said

that she has always liked being closer to their age. "It surprises them that I listen to the music they listen to- popular music," Bobbie added. David had created a Web page "designed more for younger people because it's . . . flashy with a Celtic design . . . [and] has sort of a Gothic look." Keith, who I have already mentioned records contemporary commercials on his VCR, also exposes himself to Xer's cult heros and role playing games on the Internet. He shared his strategy with me, "So instead of using the World Wide Web to search for things that might relate to your subject, I use it to find stuff of interest to them to understand how their brains work."

Shane also shared his secrets with me for keeping in touch with pop culture. Although he admitted that he may not have listened to a particular type of music or seen every popular movie, he kept up with the pop media through a great deal of reading and listening to radio programs. He said that sometimes the young students did not relate to the older instructors because the older teachers did not relate examples in class that showed ". . . some knowledge of the students' livelihood or what they enjoy." Shane also made a point in his sociology and criminal justice classes to talk in the current lingo used by young people. For example, he related this scenario to me:

> So I may say [that] Johnny goes to a particular establishment and partakes of his beverage-of-choice, instead of saying alcohol. That sort of catches their attention. I say he has so-and-so in his car who is partaking of herb-of-choice. . . . Then I say they were involved in an auto accident, and they cause these damages. . . . They may know somebody who that has happened to, so they can relate to who partook

of beverage-of-choice and herb-of-choice.

Participatory Choices. Five faculty also indicated that letting the younger students participate in classroom decisions was effective for this cohort. Here again, three faculty who strongly suggested this technique were the younger ones: Bobbie, David, and Keith. David allowed them the freedom to choose their own topics for personal web sites; Bobbie let them choose their own subject matters to write scripts in drama class; Keith let his students generate and vote on ideas for their research papers in English 1020. The two older instructors who also embraced this participatory teaching style were Mary from humanities and Mr. T from English. So this may be a technique that is more strongly aligned with the Soft, Pure Life and Nonlife disciplines.

Most Effective Techniques for Both Age Cohorts

There did not seem to be a great deal of overlap between which techniques were reported to be effective for the younger students versus the older students. However, there were four techniques, when asked which were effective for both cohorts, that several instructors reported. The four categories discussed below were reported by anywhere from 8 to 14 participants. These will be rank-ordered, beginning with the most frequently mentioned first.

Older Student Parenting, Modeling, and Mentoring. Forty-five percent of the faculty panel had observed that having older students in the classroom to serve as role

models was a definite advantage. Although they said the pattern of older students modeling good behavior for younger students was effective for both age cohorts, this response may indeed be more effective for the younger students and faculty themselves, but not actually beneficial for the older students. Other than the role reversal situations mentioned by a few instructors, whereby younger students teach computer techniques to older students, this may have been a somewhat erroneous response to my question.

Nevertheless, this was reported to be an effective technique for both cohorts by faculty across all disciplines and by four Generation X panel members and 10 older faculty members. Like Dorothy and Maria, who had earlier advocated having mixed teams of both older and younger students, Bobbie had also discovered that "Generally if there's a non-traditional student in the group, they will keep [the younger ones] focused." Mr. T agreed that in groups, ". . . the older [student] is trying to keep them on track, but the younger ones are talking about something that happened yesterday." Other faculty described older students as assuming leadership roles or being initiators on teams.

Several faculty described the older students as being "good role models for younger students because they talk about studying for tests." Professor Z and Sue indicated that older students often "policed" younger students' behaviors. Sue stated, "Generally if there's moaning and groaning about the assignment, older students will say that it's not too bad. Especially in groups, they will be mediating between what I'm demanding . . . and what they are complaining about." Fred reported, "They will see the older students extracting what the professor is saying, so they will naturally ask

them how do we do this. . . . Sometimes they will listen to the older students better than to the professor."

Gretchen indicated, "Older students help set a tone in the classroom." When asked to elaborate on what she meant by this, she articulated:

> I'm talking in terms of classroom dynamics. When you have older students in the room, they will set higher standards of preparedness. You know you've got some people you can count on who have done the reading. And they will disapprovingly respond to younger students. They will look at them disapprovingly, so I feel like I have an ally in the classroom who appreciates the seriousness of what we're doing.

Three female faculty and one male instructor described the older female students as being "motherly" or "grand motherly" types who "took the younger ones under their wings" and advised them or encouraged them. Bobbie, even commented that because of the age difference with some of her students, that she too had received some "motherly advice" from the older ones, when her grandfather died.

Four faculty described older students in terms of being mentors, meaning that in a professional capacity, these older working adults could shed light on career aspects of classroom applications or give professional advice in their fields of employment. For instance, Jim and Sue mentioned examples in which a licensed practical nurse in their classes related the necessity of knowing something about the length of a femur bone in a clinical situation, thereby adding credibility to what the teachers were saying. Jessie noted that because his older students were already working in the hospitality field, they

could often help the younger students get entry-level jobs.

Applications. Eleven faculty, or 35% of those interviewed, said that applications of textbook theories were effective for both age cohorts. This was especially true among Hard, Applied, Nonlife disciplines in which engineering assignments and computer programming, by necessity, used a great number of hands-on projects. Additionally, hands-on work was popular among all disciplines. From demonstrations and lab work in astronomy and physics classes, to dissections in anatomy, to play writing in drama classes, and case scenarios in sociology and business classes, most instructors favored using relevant applications to illustrate theoretical concepts for all ages of students.

However, some applications that might be effective with one age cohort, might not be effective with the other. As mentioned earlier, examples and applications of pop culture seemed to grab the attention better of younger students. On the other hand, realistic career-oriented scenarios seemed to have more impact on older students. Generation X faculty member Shane could discern a difference between the age cohorts when he used two popular exercises: (a) the leggo man exercise and (b) the hollow-square exercise. Both were consensus-building team exercises that involved assembling a man from leggo pieces, or a puzzle with a hollow square in the middle. Shane commented that these exercises were ". . . especially effective for younger students [because] it's something they can better grasp right now. Whereas older students, . . . , are used to working with team members and have already experienced them."

Videos/Visuals. Ten faculty, or 32%, endorsed using visual aids, especially videos for both age groups. While videos were reportedly used by all disciplines except computer science, the Soft, Applied, Nonlife disciplines reported extensive use. Many business administration faculty reported showing videos daily, either to introduce a new topic, or to conclude the class with a company case video provided by textbook publishers. Maria often used what she referred to as the "bookend technique" in which she often began and ended class with short 5 to 10 minute videos.

Several faculty clarified the types of videos that were more effective than others. Dawn stated, "I think videos have an impact on all age groups. I don't really see a difference between older and younger students." However, she stipulated that there needed to be ". . . variety in the format of the video and something interesting beyond the intellectual part that grabs their hearts." Some engineers from Hard, Applied, Nonlife subjects reported that they preferred training videos from industry, rather than use publishers' video tapes. Fred stated, "As far as videos, both like them, . . .[as long as] they are optimally only 20 to 24 minutes long." Jessie preferred shorter videos that were 15 to 18 minutes in length. Several instructors also noted that videos were a good way to add entertainment value to the class, especially for the younger students. As a Generation X drama instructor described her own age cohort, "If it's not entertaining and I cannot show them a video, then they're not happy."

Variety. Although 18 faculty reported or described using a variety of teaching techniques, only eight actually said that using a variety was effective for both age

cohorts when specifically asked to pinpoint the most effective techniques for both groups. This difference could be the discrepancy between perceptions of behavioral intentions and actual classroom behaviors. Perhaps it could also be attributed to the fact that the instructors did not consciously think of using a variety of techniques, until forced to do so during the interview. Bobbie realized during her interview:

> I would agree that the key to success is using a variety of techniques. I guess the interesting part was . . . I never thought of doing different things with [different] ages because I view all students the same. But I've noticed things, now that I think about it.

Similarly, another young instructor, besides Bobbie, to indicate that variety was most effective, had not consciously considered that before the interview either. Rhonda, noting that different types of learners were present in her classes, concluded:

> I don't know that I consciously sit down and plan it, but I try to have a variety of things to break up the monotony. And yes, different things will reach people in different ways. . . . We try to approach it from a bunch of different angles to try to get an idea of what makes the connection for each individual student. Usually an individual will find one of these things that makes sense.

Worth noting also is the observation that these same eight faculty who specifically said that variety was the key to success, were the ones who also specifically mentioned an awareness of different learning styles among their students. For example, Rex from computer science indicated:

> You absolutely have to use a variety of techniques in the classroom because there are different kinds of learners. If two students in lecture or lab ask a question, I may answer it differently. I may start out with one explanation and shift over to present the topic another way.

This cross-section of eight faculty members, who mentioned an awareness of learning styles, came from all six subject areas covered by the study. Furthermore, six of them were Baby Boomers and two were Generation X instructors.

To review the most effective teaching techniques recommended by faculty, I have provided a summary table. (See Table 4.) By visually comparing recommended techniques for Generation Xers versus those for Boomers, in addition to those techniques reported by faculty to be effective for both, the reader may be better able to see the degree of overlap among the three responses.

Student Information Derived from Focus Groups

Composite Profile of Focus Group Participants

Forty-eight student volunteers participated in a total of seven focus groups among the three campus sites. Two focus groups were arranged at colleges Y and Z, respectively; three were held at college X. There were 18 Baby Boomers and 28 Generation X students from a variety of majors. During the informal discussions that preceded the commencement of videotaping, I was able to ascertain that approximately half of the students planned to transfer to a university and pursue a four-year degree.

Table 4

Effective Teaching Techniques Recommended by Faculty

Teaching Technique	Number of Faculty Recommending Technique For Boomers	For Xers	For Both	From Biglan Areas
Older Student Mentoring	-	-	14	ALL
Real World Applications*	5	8	11	ALL
Videos/Visual Aids	-	11	10	ALL
Individual Attention	3	10	-	HAN, SPN
Variety	-	-	8	ALL
Collaborative Learning	4	8	-	ALL
Entertainment	-	8	-	ALL but SPL
Computer-oriented	-	7	-	HPN, HPL, HAN
Traditional Lecture	6	-	-	ALL but HPN
Participatory Choices	-	5	-	SPL, SPN
Class Discussions	3	-	-	SPL, HAN

Note. HPN=Hard, Pure, Nonlife; HPL=Hard, Pure, Life; SPN=Soft, Pure, Nonlife; SPL=Soft, Pure, Life; HAN=Hard, Applied, Nonlife; SAN=Soft, Applied, Nonlife.

*Real-world applications for Xers may not be the same as those for Boomers.

Responses for age cohorts were mutually exclusive, and therefore not cumulative.

The other student participants were pursuing two-year degrees, usually in the technical fields found in either the Hard or Soft, Applied, Nonlife disciplines.

Based on volunteers' schedules and availability, the focus groups were videotaped during day and evening hours, so volunteers included both day and evening students. For example, eight female Baby Boomers from college X were displaced garment workers returning to college as full-time day students on an educational benefits program sponsored by their former employer. Both focus groups arranged at college Y involved part-time evening students. Additionally, these took place during the summer term, which could account for the slightly lower participation rates among volunteers at college Y than the other two colleges. A summary table of the numbers of student volunteers at each location is displayed in Table 5.

For purposes of reporting information, respondents will be identified by cohort, gender, and a number. For instance, participants will be referred to as Baby Boomer Female #3 or Xer Male #12, when quoting responses from specific student volunteers.

Most Effective Techniques Reported by Baby Boomers

Although there were only 18 Baby Boomers who volunteered to participate in the focus groups, they were specific in their responses to my questions. The majority who participated told me that they were at college for knowledge and career reasons. Some were engaged in job retraining after being displaced from one profession. Others were getting a degree to enhance job advancement opportunities. Three admitted already having baccalaureate degrees in other fields but were returning to college

Table 5

Number of Student Participants by Cohort and Gender

	College			
Gender	X	Y	Z	Total
		Baby Boomers		
Females	8	3	1	12
Males	-	2	4	6
		Generation Xers		
Females	4	5	3	12
Males	7	2	7	16
		Both Age Cohorts		
Females	12	8	4	24
Males	7	4	11	22

because they did not like their chosen professions.

Based on open-ended responses to my question regarding which teaching techniques were most effective for them, they generated 11 different responses. (See Table 6.) I will discuss the top six choices in order of descending popularity, followed by a brief discussion of the remaining five categories which generated three or fewer responses per category.

Hands-on Applications. Fifty percent, or nine, of the Baby Boomers said that hands-on projects or exercises worked best for them. Several gave examples of classes, such as Baby Boomer Male #2 who stated, "For me, hands-on is the best way, like in my photography classes that I took years ago in the darkroom." Baby Boomer Male #5 recalled hands-on activities from his high school days, when his health teacher took students on field trips to the city jail or county health department. Still others related hands-on group projects to their jobs, such as Baby Boomer Female #11 who summarized:

> This is really how it is in the workplace: interactive meetings with our coworkers, not regurgitating canned responses. And guest speakers would be like attending conferences and hearing speakers there. These kinds of interactive techniques prepare you for jobs outside.

Several of the business administration students at all three colleges mentioned case problems or special projects as good examples of hands-on work. One Baby Boomer female stated, "As far as projects go, the one that stands out in my mind was Job Fair Week. . . . It was a hands-on type experience that proved to you how much you knew." This project involved student teams that planned and coordinated an entire college-wide career fair in which over 50 companies participated. The students interacted with various college personnel, including the placement director and took five weeks to plan and execute the special event.

Table 6

Effective Teaching Techniques Preferred by Students

	Generation Xers		Baby Boomers		Total	
Teaching Technique	n_x	%	n_b	%	N	%
Real Life Examples	15	54	5	28	20	43
Hands-on Applications	10	36	9	50	19	41
Individual Attention	12	43	3	17	15	37
Small Groups	9	32	3	17	12	26
Videos	7	25	3	17	10	22
Board Notes	3	11	6	33	9	20
Transparencies	3	11	6	33	9	20
Discussion	3	11	4	22	7	15
Teacher Enthusiasm	3	11	4	22	7	15
Study Guide for Test	2	7	2	11	4	9
Humor	3	11	-	-	3	7
Power Point	2	7	-	-	2	4
Grade Adjustment	2	7	-	-	2	4
Computers	1	4	1	6	2	4

Note. n_x is out of 28 Xers; n_b is out of 18 Boomers; N is out of 46 total participants.

Board Notes and Overhead Transparencies. Both of these techniques generated six votes each from Baby Boomers. These types of visual aids were important in their ability to take good notes, which many expressed as being crucial to studying effectively. Some students made a distinction between the two, as in the case of Baby Boomer Female #4 who emphasized, "I don't really care for overheads. I prefer writing on the board, as [the instructor] is doing the lecture . . ." Other participants mentioned the two in conjunction. Baby Boomer Female #12 stated, "Taking lots of notes helps me remember. Overheads work best and when the teacher writes stuff on the board at the same time. I don't like power point because it's hard to see."

Another response from a Baby Boomer was, "I like the overhead projector or black board, an organized written style, an outline form." This comment agreed with some earlier opinions of faculty who indicated that older students appeared to be more organized or sequential in their thought patterns than younger students. It also dated the student because, to my knowledge, all three colleges no longer had black boards, but had replaced them with white boards.

Real Life Examples. Five Baby Boomers used the terms real life or real world to describe effective examples that they could relate to theoretical concepts. Baby Boomer Female #6 indicated, "Real life examples help me retain stuff and see relationships." Baby Boomer Female #5 gave examples of her algebra teacher using school buses to illustrate math problems. Although the student said this example was too "elementary" for her in the beginning, she concluded after a couple of classes, "I

was glad for the school buses because I remembered what they stood for." Two Baby Boomer males indicated that current events from newspapers and professional journals were effective real life examples for them.

Discussions. Four Baby Boomers indicated that class discussions or group discussions were beneficial to them. One evening student, Baby Boomer Male #6, said discussions helped break up the monotony of three-hour night classes. He indicated, "I do better with interactive classes where the teacher asks questions and pulls it out of you, not straight lecture because I fade in and out, if I'm not forced to pay attention." A Boomer female in the same focus group also added that it was helpful for instructors to call students by name to involve them in discussions.

Instructor Enthusiasm. Four older students indicated that an enthusiastic professor was effective for a couple of reasons. First, the teacher's passion is often contagious, motivating the students to want to learn. Secondly, ". . . it generates class discussions and comments from others," according to Baby Boomer Female #9. If winning a teaching award for enthusiasm is any indication that this technique is successful, then Betty at college Z is proof. One of Betty's former students, Baby Boomer Male #4, offered this comment about his instructor, who was later confirmed to be one of the faculty participants: "My Biology teacher was happy. She scared our class by jumping up and down about a picture of an amoeba. Another teacher had no energy for learning, but this teacher was entertaining because she was energetic."

Other Techniques. The remaining responses were made by three or fewer students. Three Baby Boomers mentioned that they liked small groups, videos, and individual attention from instructors. Two older students said that they found study guides were helpful in preparation for tests. One Baby Boomer male found his computer class effective because ". . . the teacher is doing her computer programming on the monitor at the same time I am."

Most Effective Techniques Reported by Generation Xers

The 28 Generation X students provided a list of 14 effective teaching techniques or combinations thereof. (Refer back to Table 6, showing preferences by numbers of students in each age cohort and percentages of students in that age cohort.)

Real Life Examples. Over half of the Generation X participants stressed the importance of "real world" or "real life" examples that they could relate to subject theories or concepts. Some students mentioned that current events or examples from current movies were good. Even if the instructor was teaching history, using a more current example was helpful, as Xer Male #6 alluded to in this statement: "One of my driest classes was Western Literature, but when the teacher made a point to make it more modern, like showing how history repeats itself every 500 years, by showing current examples, it made it more alive."

Members of the predominantly male Generation X focus group at college Z offered popular examples such as cars (Mercedes Benz) or beverages that they liked.

Similarly, a Generation X female from college Y said that she had a favorite algebra professor who would work practical math problems related to car payments. So the use of effective examples from Generation X's world was the most frequently mentioned technique by the younger cohort. In her words, Xer Female #2 stated:

> What really helps is giving examples people can really relate to. You know, maybe like I have to see it because I don't always read the book, but . . . I will like, you know, pick up on it or something and relate to what the teacher will say and you know like totally understand it.

Hands-on Applications. Like their Baby Boomer counterparts, Generation X participants also enjoyed hands-on projects. Xer Female #9 stated that ". . . if you are able to go through all the steps of putting things together, you will learn more." For Xer Female #11, a hospitality major at college Y hoping to break into a tourism career in east Tennessee, hands-on work took the form of simulated class projects dealing with parks and recreation department budgets and activities. Additionally, she said that doing an internship was beneficial because it gave her work experience, confidence, and employer contacts in her chosen field. A second young female at college Y also indicated that her pediatric nursing internship was instrumental in helping her to decide whether she really wanted to work in the medical field.

Individual Attention. A dozen Xers, or 43 %, indicated that receiving individual attention was an effective teaching technique. This attention manifested

itself in a variety of forms that ranged from the instructor calling on individuals by name to returning phone calls and electronic mail messages from students. Two Generation X males described their "really good" teachers as the ones who " took extra time to help [them] through [their] college careers." Xer Male #2 even went so far as to describe some instructors as "friends" because they were the ones that he could go to for advice about problems he was having in school, but not necessarily in their classes.

Three Generation X students conveyed the thought that when they could tell that their instructors cared about them, it motivated them to want to learn. In the words of Xer Male #10: "If you have an instructor that gives a crap [sic] about you, that helps you give a crap [sic] about the class." The following comment by Xer Male #4 demonstrated one of his most memorable instructor's attention toward students:

> I took a Graphic Design Communications course about three years ago when the new technology was coming out, and the instructor was really excited about it. He loved every second of it and he would jump in and show you every step of the different options and how to do them. He'd be there for you and had lots of time to spend with each student. . . . and the more you sought him out, the more time he spent with you.

Similarly, Xer Female #7 related another example of how an instructor's attention made a difference in her successful completion of a course:

> I had a calculus teacher my second semester, and I made an *A*, but in my first semester of calculus, I made a *C*. Making the *A* all had to do with my teacher. She offered a lot of outside help. Anytime we needed her,

> we could call her. It was no problem to her to spend a little extra time, and that makes a big difference knowing the teacher is concerned with how you are doing in class.

Small Groups. Nine Generation X participants shared favorable comments regarding group work, if the groups met during class. Seven indicated that they did not like group assignments that required outside-of-class meetings. Positive experiences with small group activities included discussions, projects, debates, and presentations. When asked to talk about her favorite small group activity, Xer Female #4 told me:

> Like in one of our classes, we divided up into groups and had to debate things that you discussed in smaller groups, then like get up and discuss it in front of the whole class. It's interesting to learn what other people have to say.

Small Group Membership Preferences. Closely related to group work is the topic of membership selection. When I asked focus group participants how they felt about working on teams with different ages of students, I received mixed reactions from both age cohorts. Four Generation X students said that they preferred to work with students their own age. They indicated that older students were often inflexible and critical. Twenty-three-year-old Generation X Male #3 remarked:

> I like groups with people more my age because in past classes, the students more my age think along the same lines and get along better.

> It's harder to work with someone 10 years older, maybe because I feel they don't respect me. . . . They are more close-minded as they get older. The younger generation has more of an open mind than people 10 to 15 years older. They think we are wrong all the time.

However, seven Generation X students stated they preferred groups with older adults because of their maturity and desire to work harder for good grades. One 19-year-old female blurted out, "I'd rather work with older people because young people suck." Similarly, Xer Female #10 stated, "I'd almost rather work with older students because they are there to learn, but a lot of people my own age, they don't really care about the class." A 22-year-old male said of his peers, "Young people are just there. They don't contribute and are pretty much quiet. The younger people usually drop out. . . . [They] don't want to be there. They come because their parents make them."

Interestingly, four Baby Boomers said they liked working with younger people because of their creativity and willingness to help them with computer technology. Yet, twice as many Baby Boomers clearly identified problems with younger students that made group work difficult. Like Baby Boomer faculty members, eight older students had also recognized the younger students' lack of motivation and focus, tardiness to classes, and competing social agendas that conflicted with school work. Three Baby Boomer females described their behaviors in terms of little children who needed constant "hand-holding" and who could not stay focused on any one idea. Baby Boomer Female #2 said, "Their minds want to go in a thousand different ways . . . like a little child saying to them, 'Get away from that,' until they come back again."

The Baby Boomer men were not as kind in their remarks regarding the younger students. Three older men described them as having "bad attitudes," getting "bored very quickly even with their own ideas," and being "pushed to come to school [by] parents and other high school buddies." Baby Boomer Male #3 stated, "The younger students offer ideas, but there is often no connection to the project, no relationship. I prefer older students even though this is not parallel to what's in the workforce population."

The worst experience between different cohorts working on a group project was voiced by Baby Boomer Male #2, who was assigned to a team with all young students:

> I had this English class project where my group was unreal. They went off on tangents about all this stuff they were going to have to do. I said, 'This is the structure. Here are the ten guidelines. What is the problem?' I went to the teacher and told her I suspected they came from Mars. The teacher asked me what I wanted to do, and I said it would be better if I could do the project by myself. She said, 'Fine. Go do your own project and come back to class next week.' I found out later, when I came back to class, that this group was still arguing about how to do the assignment. The younger students cared more about grooming and their dress and how to fit the project into their planned party. The party time was already set and interfering with class time. Partying was more beneficial to them than class.

Videos/Visual Aids. One-fourth of the Generation X students said that videos were effective. A couple of male Xers used the phrases "watching TV, " or "watching movies." Another three preferred that instructors ". . . write things on the board." Still another three Generation Xers stated that they specifically liked overhead transparencies, just as some Boomers had preferred. So, a total of 13 young students mentioned that visual aids were effective for their learning, responding in much the same way that Xer Female #8 did: "I learn better with some kind of visual aid, but not just writing from a transparency on the overhead projector."

Ironically, the majority of students who had been exposed to power point said they did not like it because it was too "flashy" or difficult to see. Xer Male #2 said, "It's almost too fancy to where it's overwhelming. I spend more time wondering why they put so much time into them and how did they come up with them."

Other Techniques. The remaining teaching techniques listed in Table 6 generated three or fewer responses each. Discussions, teacher enthusiasm, and humor were mentioned by three Generation X students as being effective. Two students referred to study guides and power point slides as favorable learning tools. Two students from college Y mentioned that they liked the practice where their math instructors allowed retests to replace low test grades. Finally, only one Generation X male student said that computers were the most effective technique for him, although several students in his focus group from college Z were computer science majors.

Techniques Disliked by Students. Unlike the Baby Boomer participants, Generation X students were bolder in volunteering information about which teaching techniques they did not like. Other than four Baby Boomers who complained about not liking power point slides, or another who detested professors lecturing "over their heads," the older students rarely complained.

On the other hand, there were 22 comments made by Generation X students regarding teaching techniques that they thought were unsatisfactory. Eight said that a monotone lecture was the worst technique. Six expressed qualms with power point lectures being either too difficult to see or too flashy. Three complained about professors who lectured "over there heads." Another three complained about instructors who read verbatim from the textbook or power point slides. Finally, two complained about foreign instructors whom they could not understand because they spoke broken English.

Classroom Observations

In an attempt to determine which teaching techniques students appeared to respond more favorably to in the classroom setting, I observed nine different classes. Using the technique of unobtrusive participant observation, I tried to sit unnoticed near the back of the classrooms. That way I could discreetly observe and record student-teacher interactions and interactions between students. These observations would, in turn, allow me to either corroborate or refute the faculty reports of students' behaviors and faculty and student responses concerning which teaching techniques they said were more effective for which age group(s).

Anatomy Lab

The afternoon that I spoke with Myrtle and observed the first portion of one lab section, 18 students arrived before the class started, and four came in anywhere from 5 to 15 minutes late. The four latecomers appeared to be younger students. There were three older students attending this section, according to the conversation that I had with the instructor before class. This was a very informal, hands-on class in which the students engaged in different activities: looking at slides under the microscope, asking the instructor questions, and using an anatomy software program.

I could not distinguish any differences in classroom interactions between the younger and older students. There were three or four students per lab station, and the instructor walked around the room between stations, helping students and answering questions. Students of both age cohorts seemed equally engaged in the classroom activities. I only witnessed one older student using the computer program, along with many younger students, but then there were only three older students in class. However, one observation may not have given a normal assessment of how often each student used the software, because the teacher informed me that it was an optional aid.

This classroom observation confirmed several findings: (a) faculty reports of younger students often arriving late to class, and (b) reports that hands-on, interactive classroom techniques were effective for both age cohorts, as evidenced by their interest and participation in lab exercises. Additionally, I observed the collaborative lab teams were mainly comprised of younger students, with the exception of one team with three older students and one young student. I further observed that younger students seemed

to enjoy the computer software technology, as faculty had indicated.

Computer Science Class

Again, as with the anatomy lab, this was a very hands-on type class. The classroom was equipped with a multimedia work station where the instructor could project what was on his computer screen onto two TV monitor screens, one positioned on each side of the classroom. Each student worked at his or her own computer, as the teacher occasionally demonstrated different programming techniques. Because the majority of the class was allotted for lab time, the instructor was busy walking around the room helping students with questions during the hour and a half period. He helped 10 younger students and three older students. The remaining students either did not ask for assistance, or they helped each other, because they were allowed to collaborate on the assignments.

Attendance was good the day that I had observed the class, as I noticed only two computers were vacant. Out of a class of 25 students, there were five Baby Boomer students enrolled, according to the instructor. Based on the class roll, 16 students were male and nine were females. I noticed three older female students, clustered on the same row together, who appeared to converse back and forth about how to do the assignment. Although, these three older students did not appear to relate to the younger students, another two older females on a different row did talk with the younger students adjacent to them. Two younger men appeared to be assisting the older females with the lab assignment.

So these observations confirmed that some younger students were more than willing to help their older classmates learn computer technology, and that this type of collaborative effort could work in a generationally diverse classroom, if the instructor permitted these interactions to occur. Again, the hands-on teaching methods, using practical real-life computer programming techniques, proved effective for all ages. Finally, the instructor's individual attention in helping 13 students appeared to also be beneficial and set the tone for a positive learning environment.

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Economics Class

Based on conversations with some Generation X students from one focus group, I decided to observe an instructor that they described as being one of the "worst teachers [they] had ever had." I will call this teacher Gertrude. She had a Ph.D., was in her sixties, and had taught at a major university prior to teaching in community colleges. Her main mode of delivery was a monotone lecture, with black and white transparencies. Occasionally, she tried to generate some discussion concerning the homework problems. However, out of 32 students, only three students responded to her questions: two were middle-aged women and the other was a young man on the front row. I suspect that the only reason this young man conversed with Professor Gertrude was because she knew his name and called on him repeatedly, when no one else would answer her questions.

Only three students appeared to be actively engaged in the class, enough to participate in discussions. The other students appeared bored, and several were engaged in other activities. Three young males on the row next to me were doing some

kind of math problem from another textbook. They seemed totally oblivious to the economics lecture. Two young females in the left back corner of the classroom were engaged in private conversations that did not appear to be class-related. I overheard parts of their communication regarding one of their boyfriends.

This observation confirmed what eight Generation X participants had said about a monotone lecture being the worst teaching technique. Because only three students tried to answer the professor's questions, this indicated that the traditional lecture method, accompanied by her attempts to generate discussions were futile. Therefore, the lecture method in this instance was confirmed to be ineffective for the younger age cohort, as were attempts at the discussion technique. Part of the failure could have also been because the professor failed to use relevant real-world examples to which the young people could relate, in my opinion.

Freshmen Experience Class

Although not all colleges offer a freshman seminar or freshman orientation course, college Y requires the one-hour course of all students who have not already attended another college. The purpose of the class is to enlighten students on necessary skills to navigate the college system, including good study habits and different services available on campus. The session that I attended was an evening class, and therefore had a disproportionately large number of non-traditional adult learners who were returning to school after a long absence. Approximately half of the students were over 30 years old, according to the instructor. Because the class was predominantly discussion-oriented, it was ideal to observe student interactions.

Out of approximately 20 students, two of whom arrived almost 30 minutes late, the discussion appeared to be dominated by five older women and two older male students. Although six younger students shared ideas, the older ones seemed to have more experiences, questions, or comments than did the younger ones. However, part of this may have been because the older students were returning to school after 12 years, 15 years, and in one case, a 20-plus year absence from high school. This factor prompted discussions of additional issues for the older students that did not exist or pertain to younger students. I felt that the instructor did a good job of trying to engage the less talkative, younger students by soliciting their comments or calling on them by name, although four younger students never participated in the class discussions.

Interactions in this discussion-based class confirmed that the older students appeared to like the discussion format better, as had been reported by 22% of Baby Boomer focus group participants and three faculty participants. By witnessing the instructor call on younger students by name and encourage them to participate, I observed that this form of individual attention did work with at least some of the younger crowd, as faculty had reported during interviews. Furthermore, from hearing the older and younger students' conversations, it was clear that the real life experiences of the two age cohorts were indeed different. Knowing this would probably mean that an instructor would need to use two different sets of "real world" or "real life" examples to effectively teach the two different age cohorts present in some classes.

Marketing Classes at College X

I had the privilege of observing two different marketing classes at college X. I observed one of Maria's sections in a traditional classroom with a whiteboard, and another in a multimedia classroom to compare any differences in teaching techniques based on classroom equipment. The traditional class consisted of 22 White students, most of whom were younger, with the exception of three or four students in their early 30s. The multimedia section was at a more racially diverse branch campus.

Traditional Classroom. The section in the traditional classroom engaged in two activities the hour that I attended. The first 20 minutes of class involved student teams working on some type of case exercise. The remaining 30 minutes were yielded to a guest speaker from a local retail company. Although the students appeared to engage in good discussions about their case problems, they appeared less interested in what the guest speaker had to say. Of the 22 students, only two young males interacted with the speaker by asking questions that showed interest in his topic. Some students continued quietly discussing their group cases with each other while the speaker was there.

I concluded from this classroom observation that the younger students enjoyed collaborating on the case exercise that simulated a real world scenario and that many preferred it to the guest speaker. This was obvious because a couple of the groups continued working on their cases while the guest speaker talked to the class. Whether this was because they wanted to finish it in class or because they did not think it rude to ignore the speaker is a matter of speculation.

Multimedia Classroom. The multimedia section, a nine o'clock marketing class, had only 13 students: seven females and six males. This section was ethnically diverse: four Blacks, one Asian, and eight Whites. Five of the 13 students arrived between 10 and 15 minutes late to class. Four of the five latecomers were younger students; here again seeming to confirm the tardiness of more Generation Xers compared to Baby Boomers. The other late arrival was an older Black male. Two older women with gray hair had arrived 10 minutes prior to class and were talking about being Girl Scout troop leaders. A young White male also arrived approximately 10 minutes early.

Because this classroom was equipped with a multimedia station, the instructor was able to play a CD-ROM dealing with the retail shopping chapter. The information from the CD-ROM was projected on two TV monitors, one on each side of the classroom. While it was playing, only two students were taking notes: one of the older Girl Scout troop leaders, and the young white male who had also arrived to class early. He was writing notes on a handout of the power point slide that the instructor had provided the students. The second older gray-haired woman had her textbook open and was highlighting corresponding readings with a yellow marker.

At 9:30 A.M., the older black male opened his notebook, but did not take any notes. He put his head down on his notebook while the last 20 minutes of the CD-ROM played. This last segment dealt with K-Mart's retail strategies. After the video concluded, the older Girl Scout lady was the main student who tried to answer the instructor's questions. Then during the last 10 minutes of class, the older black male seemed to perk up and started answering questions. Of the younger students, only one

young White female and one young Asian lady conversed with the instructor. They talked about purchasing compact discs in the music department at K-Mart and said that they preferred shopping at Walmart.

My assessment of the multimedia format was that although more students engaged in watching the video segment, few took notes or highlighted corresponding text passages. Two of the three students who did this were the middle-aged women. All three of the older students engaged in discussions with the instructor. However, only two young women out of the 10 younger students conversed with the instructor about their retail experiences. So the older students definitely appeared to be more interested and prepared to learn than most of their younger classmates.

Because the class dealt with contemporary retailing examples from K-Mart, which is a store that both generations can relate to, I was disappointed that the interactions of the younger students were not comparable to those of the three older students. In my opinion, the instructor showed and discussed examples that people of any age could understand and have experienced. So in my estimation, the multimedia format did not appear to generate any more enthusiasm among the younger students than the guest speaker did, and probably less enthusiasm than they showed for the collaborative case method. However, they did watch the CD-ROM presentation and not engage in other activities like the students had done with the guest speaker. So the multimedia presentation at least succeeded in holding the attention of most younger students (as well as older ones), where the other delivery method had failed.

Marketing Class at College Z

I also observed Carla's marketing class at another college. She was lecturing on the same retailing chapter from the identical textbook used at college X. Her classroom was a traditional one, and her teaching method was predominantly lecture accompanied by overhead transparencies. The class consisted of 11 females and three males. There was one older woman on the front row who was in her late 30s, and one 40-something year-old man. The rest of the students were in their late teens to early 20s, according to Carla. Most of the younger students sat in the back half of the room, away from the board. This seemed to indicate their detachment from the rest of the class and the learning experience in general.

During her lecture, Carla would pause periodically to ask questions or encourage students to give examples of certain types of retail stores. Of the 14 students present, only four were actively taking notes: three females, one of whom was the older woman, and the older male. These same note takers were also the students who tried to answer the instructor's questions. According to my count, the Baby Boomer woman answered five questions, and the two younger women answered four and three questions, respectively. When no one volunteered to respond to her questions, the instructor answered her own questions. This occurred six times.

Six younger students did not participate whatsoever. They were engaged in activities other than the lecture. Two students were passing notes back and forth to one another, as they kicked their chairs and ate potato chips. One young female asked which chapter the instructor was covering but did not have her textbook with her.

There were three girls in the back row, next to me, who were talking about their lipsticks, jewelry, tattoos, and clever ways to hide tattoos from their parents. Five minutes before the class period was supposed to end, these six uninvolved Generation Xers were packing up to leave.

This observation definitely confirmed that the lecture method and discussion technique were not effective for most younger students. Because two of the four people actively engaged in taking notes and discussions were middle-aged, it could also strengthen the claim of interviewees and focus group participants that older students are at college to learn, while many young people are not. Because 6 of 12 Generation X students were disengaged from classroom activities, this corroborated some of their social agendas reported by faculty and Baby Boomer students who had experienced these competing social agendas in group activities.

Physics Class

Because the physics class was a three-hour evening class, I did not observe the entire class period, but rather watched about 45 minutes of it. It appeared to be an interactive hands-on lab class, much like the anatomy lab. Three-fourths of the 20 students were male, which was not unusual because the instructor had informed me that it was a required class for most two-year manufacturing degrees. The instructor also informed me that most of the younger students were probably university-transfer students who needed a science elective to fulfill their articulation agreements.

The instructor gave a 10-minute demonstration/discussion and then let the

students work in groups at their lab stations. Most teams had a mixture of both younger and older non-traditional students, since this was an evening class. They collaborated on an exercise and filled out some type of corresponding worksheet. The instructor appeared very helpful and tried to divide her time among different groups of students with questions. She also visited lab stations with students who had not raised their hands to check on their progress or give them positive feedback. I did not observe any differences in the length or frequency of interactions that younger students had with the teacher, in comparison to the interactions she had with the older students.

Rhonda offered an important commentary regarding the differences that had occurred in the physics classes since she had moved to a new building three years ago. Prior to that, the classes were predominantly lecture. Moving into a newer lab-based classroom allowed her to shift to a more hands-on interactive approach. She stated:

> We use a pre-approach test in physics class, which measures how well they understand concepts, and when we made the transition from the old style of instruction to the new style, we saw a huge improvement as far as how much they understood the basic concepts.

So Rhonda confirmed that there was a measurable difference in students' comprehension generated by the newer hands-on approach versus the older lecture method. She also noted that there were more favorable student evaluation comments associated with the more interactive instructional method versus the standard lecture method.

Rhonda's assessment agrees with earlier statements by both students and

instructors that the interactive, hands-on approach to teaching was indeed effective for both age cohorts. My classroom observation confirmed this. The hands-on technique worked equally well for both ages of students, as did the mixed-age cooperative lab groupings. (Recall that this instructor reassigned memberships following each test, based on academic standing.) In addition, the instructor's giving individual attention to her students also proved to create a productive learning environment.

Sociology Class

Shane's nine o'clock sociology class was one of three classes that I observed taught by a Generation X faculty member who was a minority. Although his teaching style was a mix of lecture and discussion, his demeanor was unlike any other faculty member's style that I observed. During the entire class period, Shane paced back and forth across the front of the classroom holding a large coffee mug, from which he would occasionally take a sip. I found this pacing technique visually engaging, as did students who watched his movement back and forth across the width of the classroom. Once he asked a question, Shane was silent until someone spoke, thereby forcing a response from students in order to break the silence. Additionally, he always addressed his students as "Mr. or Miss" So-and-so, never using their first names.

The class was racially diverse: five Blacks, one Asian, and 13 Whites. Although 13 students were present when class began, five minority students and one White student arrived several minutes late. Based on my observations and conversation with Shane following class, all students were very young, except for one middle-aged Black

man with graying hair and reading glasses. Shane was skilled at generating lively class discussions by asking thought-provoking questions or using personalized scenarios involving specific students in the classroom. Even though only 10 students were active participants, and the other nine students never talked, the majority appeared to be paying attention because they laughed at the scenarios or were taking notes. Some scenarios sounded totally ridiculous, such as the discipline problem with the purple bunny, but the students appeared to respond to them.

Another interesting occurrence was that the discussions often encompassed students located on opposite sides of the room who would agree with each other, or challenge each others' opinions, almost in a debate-type format. The instructor seemed comfortable letting students converse across the room with each other for a few minutes before he would refocus the discussion. This interaction between non-adjacent students happened in three separate instances during the 1 hour 15 minute class period.

My observation was that Shane was more effective using lecture and discussion methods, unlike other faculty whom I had observed using this same combination of techniques. I think the reasons are threefold: (a) Shane's pacing technique added visual stimulation that faculty members had reported Xers need; (b) He used real life scenarios that were both entertaining and relevant to the younger age group; and (c) He allowed a greater degree of participatory classroom management by letting students guide their own discussions and interactions with each other.

In addition to these factors, he is a Generation Xer himself. So I speculate that his age may be an asset in teaching younger students. In my estimation, he was more

effective in using lecture and discussion than older instructors because he was able to better empathize with his own age cohort than some of the older faculty members that I had observed at all three case study sites.

Artifacts

Even before I formally began researching this case study, I observed and collected various correspondences from faculty and students. These writings and E-mails demonstrated a realization of Generation X student behaviors and generational differences between the two age cohorts that had been written about by other educators (Baker, 1998; Lantos, 1998; Sacks 1996). Because "triangulated findings . . . [involving] the use of multiple collection methods, sources, or theoretical perspectives contribute to credibility" (Glesne, 1999, p. 152) in qualitative research, I include these artifacts for that reason. These sample writings demonstrate the campus concerns prompted by the presence of this cohort that has already been expressed by educators in the literature review of Chapter 2. Additionally, reports by Baby Boomer students may clarify whether there were any strategies that clearly benefitted Boomers, as were reported by faculty.

Faculty E-mails

One of the first references expressing the need to adapt to the younger college population appeared in an electronic mail message shared by an English professor. Her response was in reference to the philosophy of the Vice President of Academic Affairs

for faculty to integrate collaborative learning and technology into the classroom. Professor Jones wrote, "The Generation X students are not like the ones we used to know, and we all struggle with a means to inspire a love of learning among them" (Pseudonym Jones, personal communication, October 31, 1997).

This excerpt appears to confirm an awareness on the part of the educator that faculty need to try different techniques ("means") to motivate Generation X students because they are not like the older students. Specifically, they are not at college to learn like their Baby Boomer counterparts-- a finding that was revealed in the faculty interviews. Her use of the word "struggle" indicates that it is more difficult to teach the younger cohort. This refection parallels Donald's observation that teaching young people has made his job more difficult than in the past.

Another more humorous, yet equally candid message, was shared by a young accounting instructor. The subject of the message was "If the disciples were college students." It referred to Jesus preaching the beatitudes from "The Sermon on the Mount," at the conclusion of which his disciples responded:

> And Simon Peter said, 'Do we have to write this down?' And Phillip said, 'Will this be on the test?' And John said, 'Would you repeat that?' And Andrew said, 'John the Baptist's disciples don't have to learn this stuff.' And Matthew said, 'Huh?' And Judas said, 'What's this got to do with real life?' Then one of the Pharisees, an expert in the law, said, 'I don't see any of this on your syllabus. Do you have a lesson plan?' Thomas, who had missed the sermon, came to Jesus privately and said,

'Did we do anything important today?' . . . And Jesus wept (Pseudonym Big 8, personal communication, March 24, 1999).

While these responses may seem humorous to some, they are indicative of the types of behaviors encountered in the classroom every day among the younger college students and appear similar to many of the student behaviors reported in the faculty interviews.

A more serious E-mail demonstrates discipline problems that were reported by nine faculty under the section on "Younger Student Behaviors." An English instructor at one of the case sites had a student tell her, "'You can't tell me what to do; I'm paying for this,' when asked to put away a project he was supposed to work on outside of class. Lately, a larger number of people have been expressing concern about discipline . . . " (Pseudonym Bookie, personal communication, October 25, 1999). I offer this E-mail to illustrate that discipline problems are a typical behavior of the Generation X cohort, and an ongoing concern for faculty who teach this age cohort.

Student Narratives

In addition to the dialogues included from some focus group participants who discussed generational clashes on collaborative/cooperative learning teams, I offer the following excerpts from student commentaries. They confirm some of the younger student behaviors already reported by both faculty and students and therefore supply additional insights on different-age student interactions afforded by triangulation of additional sources and student perspectives.

Further, although faculty indicated that "older students mentoring younger

students" was an effective technique for both cohorts, I think the truth may be that faculty use this as more of a coping technique for enlisting Baby Boomers' help in dealing with Generation X students. The following student experiences will demonstrate that Baby Boomers may not benefit from these "mentoring" relationships. Therefore, this could be an incorrect assumption on the part of those 14 faculty members who stated that this technique was effective for both cohorts.

The following are brief excerpts from two older female students who had worked on groups projects with younger students at college X. These first two passages were from unsolicited E-mails that I received from a woman in her late 40s who was taking an off-campus video course from me. These are a few of Ginny's (pseudonym) comments describing what she labeled "the new breed of student":

> [They are] young, lazy, undisciplined generation Xers. For the most part, they are not diligent about their studies. Many of them don't come to class regularly, nor do they do the required reading. Most have had things given to them in life, and think it is supposed to be that way (G. Student, personal communication, November 10, 1998).

The next day, I received a follow-up message from the same Baby Boomer female explaining why she chose to take off-campus classes to avoid having to work with the younger students. Ginny elaborated:

> These 'modern day' students are the very reason that I take as many classes as I can by video or web. . . . I don't do group work with these babies who are enrolled now. Typically the situation is this: there are

> four students to a group. One is a person who you would never know is in the group. . . . Person #2 is worse. That person . . . argues everything, creates tension and aggravation while contributing nothing of value. . . . Person #3 is usually well-intentioned, but does not really have a good grip on things. Then there is person #4. I am #4. I find myself doing 80%+ of the work for a four-person group. It is stressful, time consuming, and unfair . . . (G. Student, personal communication, November 11, 1998).

When I compared Ginny's account of her group experience to that of another Baby Boomer who will be called Olivia, I was amazed at the similarities. Olivia wrote this about her younger peers:

> Working on this team has been a real challenge for me. I know that our age difference is drastic, but anyone old enough to attend college should be responsible enough to keep appointments, take notes, and do what they say they will do. . . . Cindy doesn't stay focused well. . . . Nick showed very little respect for other team members and offered very little input toward his team project. . . . Valerie seldom seemed to have a clue about what was going on with the project. She was not reliable or dependable. She was 30 minutes late for the videotaping session. . . . Shannon was a much better team member than I anticipated. She and Nick clashed a few times, but she quickly told him what to do to himself and how to do it (O. Student, personal communication, May 5, 1999).

So these are a few additional sources and insights that I offer to confirm, or perhaps clarify, some of the earlier comments and perspectives provided by student participants regarding Generation X behaviors and group interactions among two different generations. They also substantiate the dilemma facing educators to create a learning environment beneficial to all constituencies (Baker, 1998).

CHAPTER 5

CONCLUSIONS AND INTERPRETATION OF FINDINGS

Summary

The purpose of this study was to investigate the differences in learning behaviors of two student cohorts: (a) Generation X and (b) Baby Boomers to discover which teaching techniques could be effectively used in classrooms where diverse populations existed. Three key issues were identified in Chapter 1 that were integral to this discovery process:

(1) What are the observable differences in learning styles of the two age cohorts?

(2) Do Baby Boomers and Generation Xers relate differently to their instructors and toward each other while working on classroom projects together? If so, in what ways?

(3) What are the teaching techniques that appear to work better with the younger Generation X students versus the older Baby Boomer students or techniques that are equally effective for both cohorts?

The participants in this study were 31 faculty members and 46 students from three community colleges in east Tennessee. Of the faculty participants, there were seven Generation X instructors between 29 and 33 years old, and 24 older faculty ranging in age from 38 to 65. There were 28 Generation X students and 18 Baby Boomer student participants. Faculty interviews, student focus groups, and classroom observations at colleges X, Y, and Z took place during Spring and Summer semesters. Transcripts of interviews and focus groups were coded and analyzed using a QSR

NUD*IST (Non Numerical Unstructured Data Indexing Search and Theory-building) software program.

Interpretation of Findings

The following conclusions were derived from analyzing and comparing results of faculty interviews with answers given by students during focus groups, in addition to comparisons of various classroom observations and comments from students.

Observable Learning Differences Between Cohorts

Interviews with the 31 instructors from a variety of academic disciplines revealed that Baby Boomer students are generally more motivated, focused, and prepared than the younger students. Although they may exhibit anxieties concerning their overall academic abilities or knowledge of newer classroom technologies, they are attending college to learn. Older students tend to be the ones who ask more questions both in class and outside of class, according to faculty. Additionally, they reported that Baby Boomers' thought patterns were more connected and sequential as evidenced by their writing skills, group work organization, and responses on examinations.

In contrast, younger students were reported to be less motivated, prepared, and focused on learning than their Baby Boomer classmates. Rather than making learning an important priority, many Generation X students adopt a philosophy of wanting an easy grade, and some appear to fit school around social agendas, according to accounts from both older faculty and students. Some of the findings in this study confirmed the

constructs of Lantos (1998) and Sacks (1996) regarding Generation X's philosophy toward education.

Generation Xers, more so than Baby Boomers, appear to be visual learners and therefore need an engaging visual component to make learning interesting to them. This usually means videos, interactive software, or CD-ROM slide shows. Videos need to be relatively short and have some entertainment value. If they are simply videos of a speaker giving a lecture, this will have the same effect that a boring monotone lecturer does in the classroom. Even for distance classrooms receiving transmission from the main campus, the visuals need to alternate between the instructor's face and the notepad screen, according to the one distance instructor whom I interviewed.

In addition, while younger students may be more proficient with computer-related technologies, faculty indicated that they have noticed an increase in poor reading skills, discipline problems, and the need to entertain younger students. Furthermore, a few faculty and older students commented on the somewhat fragmented and disconnected thought patterns that younger students exhibit in their organization skills and written assignments. There may very well indeed be a "failure to connect" (Healy, 1998) on the part of a generation overexposed to computers and therefore the need to investigate this phenomenon further, before it is too late for future generations.

How Baby Boomers and Generation Xers Relate to Faculty

The findings revealed two major differences in the ways different cohorts relate to faculty. If younger students perceive faculty as boring or perhaps disinterested in

them, they tend to tune them out in several ways. Either they will disengage from the class by talking to classmates and doing other things in class, or by not coming to class at all. This was clearly evident in classrooms where the instructors relied on the traditional lecture technique versus a more interactive classroom setting.

In the predominantly lecture classes that I observed, a greater portion of the younger cohort failed to interact with the instructors or demonstrate interest in the material by taking notes or participating in discussions, as older students did. With the exception of one student, the others did not use the term entertainment to describe effective teaching. However, some student comments regarding teachers showing enthusiasm and telling jokes could be construed as entertainment.

Secondly, nearly a third of faculty expressed concerns for discipline problems and disrespect on the part of younger students who disrupted classroom activities by holding private conversations or challenging rules of social decorum in the classroom. Whether this was due to a different philosophy toward learning, or the generally shorter attention spans for younger students who could not sit through more than a 20-minute video, both old and younger instructors appeared to be increasingly frustrated and challenged to hold the attention of younger students. This in turn, they said, makes their jobs harder than they used to be. Not only do they have to stay abreast of technological advances, but they have to prepare classes that are entertaining.

Effective Teaching Techniques

Their jobs are made even more difficult by the fact that there appears to be very

little consensus between which teaching techniques are effective for both age groups of students or between what faculty perceive students want and what students actually say they prefer. There are also some discrepancies in actual classroom techniques reportedly used by faculty and their responses to which techniques they feel are most effective. So the gap between theory and practice may also contribute to the difficulty.

Techniques For Boomers. Fortunately for faculty, older students are the least of their worries. Because most come to college to learn and come prepared, faculty do not have to motivate them. Older students respond well to the traditional lecture format with either transparencies or board notes, class discussions, and real-life examples. They especially like practical hands-on applications that they can relate to or use on their jobs. Even though they are usually less comfortable with computers, both Baby Boomer students and some faculty indicated that the younger students were often able to help the older students learn to use computers. I observed one such interaction in the computer class that I visited.

Techniques For Xers. A third of the faculty participants indicated that younger students respond well to different types of visual aids, especially shorter videos. The few faculty using multimedia classrooms, also indicated that younger students like the power point format and access to the Internet. Based on Fred's and Dawn's experiences with younger students' reactions to power point delivery in a multimedia classroom, I would like to interject two observations at this point, if I may: (a) That

using a television monitor reached them with a much more favorable impact than transparencies because they grew up conditioned by watching a great deal of television, and (b) There may be somewhat of a Hawthorne effect taking place here, as evidenced by the comment that Dawn made about the students feeling "special" to be in one of the few classrooms equipped with new multimedia stations.

Like their Baby Boomer classmates, Generation X students like real life examples, but they need to relate more to the pop culture of Xers. Because of this, the younger faculty appear to have a better grasp on the activities, music, television programs, and Internet sites that Generation Xers like. This may also help to create better rapport with the younger cohort, although a third of the faculty and 43% of young students said individual attention is the key to that rapport. Like Ramsden (1988), a dozen younger students agreed that good teaching is measured by how much individual attention their instructors show them. In fact, relevant real life examples and individual attention were the first and second choices of effective teaching techniques mentioned by Generation X participants.

Besides real life examples and attention, a third of young students also preferred hands-on applications, small group work, and some type of visual aids. If group work is used, younger students insist it must be done in class because they find outside class meetings difficult to schedule. So a third of the faculty had correctly assessed that the younger crowd needs some type of visual component for learning. Additionally, 26% of faculty agreed with 32% of younger students that cooperative/collaborative learning in small groups is effective.

Although group work is generally not popular with older adult learners, collaborative teams with older members prove beneficial to faculty for maintaining focus of the younger participants. However, generational clashes on mixed teams were often reported to be unpleasant by both older and younger students who had bad team experiences with the opposite age cohort. More complaints appeared to come from the older students who often said the burden of the workload fell on their shoulders, due to the lack of focus and responsibility of younger members. There was evidence of this in Baby Boomers' comments from focus groups and E-mail artifacts.

Techniques For Both. The overwhelming favorite choice reported by instructors for the most effective technique for both cohorts was older student modeling and mentoring. However, I question the reasoning of the faculty who think that this technique is truly effective for most Boomer students. (I will address this issue in my conclusions.) Fourteen of the 31 faculty indicated that it was to their advantage to have Baby Boomer students in the classroom to set the tone for higher academic standards. Not only do they demonstrate a greater interest in learning than their Generation X classmates, but they often serve as a buffer between faculty and younger students in several ways. They mitigate the complaints younger students have regarding assignments by telling them that faculty expectations are reasonable. Also, because they have job experiences, they can often relate the usefulness of classroom theories to real-world situations. In some Applied, Nonlife disciplines the older students may be instrumental in securing entry-level jobs for younger students.

Again, as with the younger cohort, a third of the faculty also strongly recommend using real world applications and videos for both cohorts. Although both age groups said they favor real world scenarios, the examples they gave indicate that there may be a difference between the types of examples that would appeal to each age cohort. Some of the younger faculty appear to have the best grasp of what would appeal to younger students.

Conclusions

The key issue that emerged from this study is that one of the single greatest threats and challenges facing community colleges today is how to accommodate the generational differences in learning styles and classroom behaviors created by two very diverse age cohorts: Generation X and the Baby Boom Generation. By contrasting and comparing numerous responses and perspectives from all sources, it became imminently clear that the differences in the needs of the two cohorts, combined with increasing faculty frustrations to ameliorate those differences, have complicated and made the tasks of educators more difficult. These generational clashes are impacting the success of community colleges in the 21st century, as Baker (1998) alluded to in his article.

Furthermore, I believe that part of the failure to adapt to both cohorts, especially the Generation Xers, is because about two-thirds of the faculty whom I interviewed appeared to be uninformed and perhaps ill-equipped on how to deal with a variety of learning styles. I say this because only 8 of 31 faculty consciously mentioned their awareness of different learning styles and the need to use a variety of techniques

to accommodate them. Although 58% of faculty classroom practices appeared to include a variety of techniques, the accounts of reported behavioral intentions and actual classroom practices appeared to differ. This discrepancy between what faculty say they do and what they recommend to be effective could be part of the problem.

I believe this gap between theory and practice is especially evident in the faculty perceptions that "older student mentoring and modeling" is an "effective technique for both age cohorts." Although almost half (45%) of faculty participants reported that this technique is beneficial for both age cohorts, I question if: (a) they clearly considered the soundness of their responses or (b) just how many faculty actually understand what each cohort needs for learning to be effective and therefore successful. If some of their responses to this question are any indication of an accurate awareness of what each cohort needs, then I think this ignorance is where part of the problems originates.

Moreover, by including the perspectives of seven Generation X faculty among study participants, I was able to ascertain that the generation gap between Baby Boomer faculty and Generation X students may very well indeed be part of the problem. While many older faculty complained about behavioral problems with younger students, and some older faculty had apparently tried to adapt their teaching styles to the younger cohort, I realized that the younger faculty were among the more successful in understanding what actually motivates younger students. I agree with 31-year-old Shane's assessment that the failure of older faculty members to adapt to Generation X may be why they do not relate to the older instructors and vice versa.

Additionally, I believe that the generation gap between Baby Boomer faculty

and Generation X students stems from the lack of a match between their cognitive styles. Because Messick (1976) found that a closer match between teaching styles and learning styles led to more effective communication and mutual respect between teachers and students, I think the older instructor's failure to adapt to the younger students' learning styles has widened the gap in the classroom.

If nothing else, this study clearly illustrates Kolb's (1984) premise: "Different learning styles manifest themselves in variations [across] . . . disciplines and . . . [in] differences in faculty and student demographics, personality and aptitudes, values and group norms" (1984, p. 121). However, the complexity and number of differences created by variations in learning styles among diverse college populations make it more difficult to match teaching and learning styles than ever before.

Based on student responses and faculty comments, learning styles between Boomers and Xers are indeed different. Most Baby Boomers appear to learn better with teaching techniques that appeal to Kolb's (1984) convergent and assimilative styles because of their ability to conceptualize abstract concepts more easily than Xers. Many Generation X students appear to possess divergent and accommodative learning styles, as do some Boomers, as evidenced by their preferences for concrete experiences such as hands-on applications and real world examples. However, as stated previously, there is not always agreement as to which experiences are effective for which cohort.

Clearly, a larger repertoire of instructional methods in college classrooms would appeal to, and help ensure, successful learning for various age cohorts, as confirmed by Joyce and Hodges (1966) and Renzulli and Smith (1978). Perhaps the enhanced visual

presentations in multimedia classrooms could contribute to this success, as indicated by Mayer (1997). Nevertheless, one revelation derived from comments by Xer students is clear: Almost half (43%) of the younger students still measure effective teaching in terms of the individual attention they receive from instructors, as Ramsden (1988) had discovered over a decade ago. In using power point presentations, educators must be careful not to substitute the flash and glitzy production of modern technology for the old-fashioned quality of empathy for students and their learning problems.

Recommendations for Educators

Faculty need to adapt to the diverse age cohorts present in college classrooms by adapting their teaching styles to accommodate a variety of techniques. In the first place, faculty need to be reminded or trained about different learning styles and corresponding teaching strategies that they can effectively use. Because only eight participants even mentioned or considered learning styles in their responses, this is an issue that needs to be seriously addressed by faculty and administrators alike. Even though over half of interview participants related using a variety of techniques, it may need to be a more conscious concern in classroom preparation. Also, college administrators may want to consider the long-term benefits of this type of training on retention of different student groups.

Secondly, faculty need to update their teaching repertoires to include techniques that appeal to Generation X, especially videos and real world scenarios that relate to the pop culture of Generation X. While some educators appear to have already done

this, I heard too many comments from students who were taking, or had taken, classes from instructors that still rely solely on the traditional lecture method. I also observed a couple of these types of classes myself, among the nine sections that I visited, and found them boring. Because younger students tend to respond to these outdated methods by ignoring them or perhaps not attending classes at all, faculty need to consider the impact of their teaching styles on student success and retention.

Thirdly, even though generational conflicts exist among the two age cohorts, 14 faculty reported that the presence of older students in classrooms could be used to effectively model appropriate behavior for the younger students. While this may be beneficial to instructors and Generation X students, how is this effective for Baby Boomers, considering the conflicts with younger students that were reported in the focus groups and student narratives?

If Baby Boomer students could be effectively used as mentors for younger students, what rewards or incentives could faculty offer to make these relationships worthwhile for Boomer students? Other than a few instructors who noted that there could be a role reversal in which younger students mentor the older concerning computer technologies, none seemed to address strategies for making the learning experience beneficial for the Baby Boomer cohort. Can educators afford to ignore the needs of either cohort or place the needs of one over the other? I think not.

Higher education needs to address the issue of how to make the learning experiences positive for both age cohorts without sacrificing one cohort's needs for those of the other or sacrificing the quality of one cohort's education at the expense

and displeasure of the other. College administrators should consider offering professional development training to faculty on effective ways to teach Generation Xers and Baby Boomers simultaneously. I would especially suggest that some of the younger faculty members, who appear to relate better to younger students, conduct these seminars to update older faculty teaching styles. Additionally, some older faculty who have won teaching awards may be excellent candidates to demonstrate that generational differences can be overcome by Baby Boomer faculty who have already addressed the needs of both generations in their teaching styles.

Recommendations for Further Study

Because all three colleges are just beginning to convert to multimedia classrooms, additional research needs to be conducted to determine if this would be an effective alternative to successfully teach both age cohorts, especially Generation X. Because I was only able to interview four faculty who had experience with this technology, no definitive conclusions could be reached. One instructor alluded to this technology being effective because students felt "special" being in a new multimedia classroom. Would this perception disappear when the technology becomes customary? Too many students, young and old, said that power point slides projected on television monitors in multimedia classrooms were either too flashy or difficult to see, even though several instructors thought that they were effective. So I agree with Mayer's (1997) contention that more conclusive studies are needed in how students learn with this technique.

Secondly, although 23% (7 of 31) of faculty participants said that computer-oriented instruction was effective for Generation X students, in addition to the four instructors who reported successful practices with multimedia classrooms, their accounts contradicted those of Generation X students. When Xer students were questioned, only one said he liked learning with computers. Whether this failure on the part of younger students to identify computers as an effective teaching technique means that they disagree with faculty perceptions, or just simply take computers for granted, is also cause for further investigation. I would therefore recommend more in-depth interviews with Generation X students regarding their experiences with computer-based learning.

Thirdly, because there did not appear to be a great deal of overlap between faculty and student opinions in some areas already discussed, I would advise that perhaps a quantitative study using a forced-response questionnaire might be useful in revealing the degree of correlation, if any, between faculty and student responses. By more closely examining apparent faculty-student contradictions, maybe a greater understanding of the different perceptions would lead to more definitive solutions. This would especially be beneficial in the two ambiguous areas already discussed: (a) whether older students find mentoring effective and (b) the apparent omission of younger students to mention the use of computers as being effective. By compiling the combined responses of both faculty and students derived from this study and using them as a basis for a quantitative survey instrument, perhaps more specific information could be obtained. Then correlations between faculty and student responses could be

compared to identify teaching techniques that both agree are effective.

Finally, because this study only revealed some strategies for effective teaching that all participants agreed with, I would hope that other educators will continue to research and discover additional techniques that benefit all constituencies present on community college campuses. There are no easy answers or solutions. Moreover, the fact that the first members of Generation Y (born after 1981) will begin to enroll at colleges in the fall of 2000, may further complicate attempts to find effective teaching techniques that appeal to the next cohort as well, thus exacerbating the problem.

REFERENCES

REFERENCES

Association of Collegiate Business Schools and Programs. (1997). Mission possible: ACBSP ninth annual conference proceedings. Overland Park, KS: Author.

Baker, G. (1998). Keeping all generations happy: The Xers, boomers, and beyond . . . Community College Journal, 68 (5), 10-16.

Baker, R. (1968). Ecological psychology. Stanford, CA: Stanford University Press.

Barna, G. (1994). Baby busters: The disillusioned generation. Chicago: Northfield.

Batson, D. (1998). Pellissippi State Technical Community College - Fall 1998 enrollment summary. Knoxville, TN: Pellissippi State Technical Community College, Office of Institutional Research.

Benezra, K. (1995). Don't mislabel gen X. Brandweek, 36 (20), 32-34.

Biglan, A. (1973). The characteristics of subject matter in different academic areas. Journal of Applied Psychology, 57 (3), 195-203.

Bruyn, S. (1966). Human perspectives in sociology. Englewood Cliffs, NJ: Prentice-Hall.

The Chronicle of Higher Education Almanac. (1999). XLVI (1), Washington: Robinette D. Ross.

Coupland, D. (1990). Generation X. New York: St. Martin's.

Fowler, F. J. (1993). Survey research methods. (2nd ed.) Newbury Park, CA: Sage.

Frishberg, D., & Levin, D. (Producers). (1997). Growing up on fast forward. [Film documentary]. New York: ABC Television.

Gall, M., Borg, W. & Gall, J. (1996). Educational research. (6th ed.) White Plains, NY: Longman.

Glasser, B., & Strauss, A. (1967). The discovery of grounded theory. Hawthorne, NY: Aldine.

Glesne, C. (1999). Becoming qualitative researchers. (2nd ed.) New York: Addison Wesley Longman.

Glesne, C., & Peshkin, A. (1992). Becoming qualitative researchers. White Plains, NY: Longman.

Harr, J. (1998). Northeast State Technical Community College- Fall 1998 enrollment summary. Blountville, TN: Northeast State Technical Community College, Office of Institutional Effectiveness.

Healy, J. (1990). Endangered minds. New York: Touchstone.

Healy, J. (1998). Failure to connect: How computers affect our children's minds. New York: Simon & Schuster.

Hornblower, M. (1997). Great Xpectations. Time, 149 (23), 58-68.

Jackson, P. (1968). Life in classrooms. New York: Holt, Rinehart, & Winston.

Joyce, B., & Hodges, R. (1966). Instructional flexibility training. Journal of Teacher Education, 17, 409-416.

Kennedy, M. (1996). When a boomer meets a buster. Across the Board, 33 (88), 53-54.

Kolb, D.A. (1984). Experiential learning: Experience as the source of learning and development. Englewood Cliffs, NJ: Prentice-Hall.

Lantos, G. (1998, Winter). Can we motivate gen X slackers? Marketing Educator, 4, 3.

LeCompte, M., & Preissle, J. (1993). Ethnography and qualitative design in educational research. (2nd ed.). San Diego: Academic.

LeShan, E. (1972). The Sesame Street syndrome. The Humanist, 32 (6), 9-11.

Macunovich, D. (1997). Will there be a boom in the demand for U.S. higher education among 18- to 24-year-olds? Change, 29 (3), 34-44.

Matthews, R., Cooper, J., Davidson, N., & Hawkes, P. (1995). Building bridges between cooperative and collaborative learning. Change, 27 (4), 34-39.

Maxwell, J. (1996). Qualitative design: An interactive approach. Thousand Oaks, CA: Sage.

Mayer, R. (1997). Multimedia learning: Are we asking the right questions? Educational Psychologist, 32 (1), 1-19.

McNamara, P. (1995, April 21). All is not lost: Teaching generation X. Commonweal, 122, 12-15.

Merriam, S. (1988). Case study research in education: A qualitative approach. San Francisco: Jossey-Bass.

Messick, S. (1976). Introduction: Individual differences and individualized education. In S. Messick & Associates (Eds.), Individuality in learning (pp. 1-38). San Francisco: Jossey-Bass.

Mitchell, S. (1997). Generation X: The young adult market. Ithaca, NY: New Strategist.

Morrison, D. (1994). More than new label, gen X needs research. Advertising Age, 94(8), 12.

Muchnick, M. (1996). Naked management: Bare essentials for motivating the X-generation at work. Delray Beach, FL: St. Lucie.

Muro, M. (1991, November 17). Twentysomething generation inherits a bum deal. Pittsburgh Press [CD-ROM], p. B1 (3 pp.). Available: 1997 SIRS Researcher/ SIRS 1991 Youth/Volume 4/Article 20 [1997, May 14].

Postman, N. (1985). Amusing ourselves to death: Public disclosure in the age of show business. New York: Penguin.

Ramsden, P. (1988). Context and strategy. In R. Schmeck (Ed.), Learning strategies and learning styles (pp. 159-184). New York: Plenum.

Rayner, S. (1997). Towards a categorization of cognitive styles and learning styles. Educational Psychology, 17 (2), 51-64.

Renzulli, J., & Smith, L. (1978). Learning styles inventory: A measure of student preference for instructional techniques. Mansfield Center, CT: Creative Learning.

Sacks, P. (1996). Generation X goes to college. Chicago: Open Court.

Sarason, S. (1971). The culture of schools and the problem of change. Boston: Allyn & Bacon.

Schneider, A. (1998). Insubordination and intimidation signal the end of decorum in many classrooms. The Chronicle of Higher Education, p. A12. Available: http://chronicle.com/The Faculty [1998, March 27].

Schnotz, W., & Kulhavy, R. (Eds.). (1994). Comprehension of graphics. Oxford, England: Pergamon.

Skolits, G. (1998). Walters State Community College - Fall 1998 enrollment summary. Morristown, TN: Walters State Community College, Office of Institutional Research.

Smith, L., & Geoffrey, R. (1969). Complexities of an urban classroom. New York: Holt, Rinehart, & Winston.

Sternberg, R. & Grigorenko, E. (1997). Are cognitive styles still in style? American Psychologist, 52, 700-712.

Strauss, W., & Howe, N. (1991). Generations: The history of America's future:1584 to 2069. New York: William Morrow.

Strauss, W., & Howe, N. (1992, December). The new generation gap. Atlantic [CD-ROM], 67+. Available: 1997 SIRS Researcher/ SIRS 1992 Youth/Volume 4/ Article 40 [1997, May 14].

Tennant, M. (1997). Psychology & adult learning. (2nd ed.) New York: Routledge.

Turkle, S. (1984). The second self. New York: Simon & Schuster.

U.S. Bureau of the Census. (1997). Statistical abstracts of the United States (House Document No. 93-78). Washington, DC: U.S. Government Printing Office.

Wagschal, P. (1995). Identities, technology distinguish the learning habits of generations: Silents, boomers, and generation X should be trained differently. San Diego Business Journal, 16 (32), 24-26.

Wapner, S. (1976). Commentary: Process and context in the conception of cognitive style. In S. Messick & Associates (Eds.), Individuality in learning (pp. 73-78). San Francisco: Jossey-Bass.

Webb, E. (Ed.). (1966). Unobtrusive measurement. Chicago: Rand McNally.

Weiss, R. (1994). Learning from strangers: The art and method of qualitative interview studies. New York: Free Press.

Yin, R. (1994). Case study research: Design and methods. (2nd ed.). Thousand Oaks, CA: Sage.

Zill, N., & Robinson, J. (1995). The generation X difference. American Demographics,4 (86), 24+.

APPENDICES

APPENDIX A

IRB Letter of Exemption Status

ETSU

East Tennessee State University
Institutional Review Board • Box 70565 • Johnson City, Tennessee 37614-0565 • (423) 439-6134 • Fax (423) 439-8329

Tuesday, March 16, 1999

Karen O. Fritz
Educational Leadership & Policy Analysis
70,550

RE: Effective Teaching Techniques for Diverse College Populations: Generation Xers versus Baby Boomers

IRBNo: 98-120e

I reviewed the above-referenced study and find that it qualifies as exempt from coverage under the federal guidelines for the protection of human subjects as referenced as Title 45--Part 46.101. If you feel it is necessary to call further IRB attention to any aspects of this project, please refer to the above-titled project and IRB number. I appreciate your bringing this project before the IRB for its concurrence of exempt status.

Sincerely,

David N. Walters, M.D., IRB Chair

APPENDIX B

Letters of Confidentiality

Informed Consent Form

I have voluntarily agreed to participate in Karen Fritz's doctoral study regarding Effective Teaching Techniques for Diverse College Populations.

My contributions will include talking about my various teaching experiences as a community college instructor. I have agreed to be audio taped during the interview, and have selected a pseudonym to protect my identity. I also understand that I am not to use my current place of employment's name in the actual interview, but will also refer to it by an imaginary pre-selected name.

I understand that my individual identity will be kept confidential and that the researcher may combine my responses with those of other participants to illustrate common themes that may emerge from her research. In addition, at my request, she will share her findings with me after she has completed her dissertation.

The consent forms will remain in a locked filing cabinet in McWherter 222 at the Hardin Valley Road campus of Pellissippi State Community College, or in the study desk in the residence of Ms. Fritz. I have read and understood the explanation of the research project and I voluntarily agree to share my teaching experiences. I am aware that the researcher hopes that my contributions may help improve the teaching profession.

_____

Name (signature)

Informed Consent Form

I have voluntarily agreed to participate in Karen Fritz's doctoral study regarding Effective Teaching Techniques for Diverse College Populations.

My contributions will include talking about my various learning experiences as a community college student. I have agreed to be video taped in a focus group setting with other student participants. I understand that instead of referring to specific teachers by name, I will select pseudonyms to protect their identities. I also understand that I am not to use my current college's name in the actual interview, but will also refer to it by an imaginary pre-selected name.

I understand that my individual identity will be kept confidential and that the researcher may combine my responses with those of other participants to illustrate common themes that may emerge from her research.

The consent forms will remain in a locked filing cabinet in McWherter 222 at the Hardin Valley Road campus of Pellissippi State Community College. I have read and understood the explanation of the research project and I voluntarily agree to share my learning experiences.

Names of Participants in Focus Group ____, College ____

_____

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_____

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_____

_____

_____

_____

VITA

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