5-20-2005

An Examination of the Perceptions of Louisiana Technical College Traditional and Non-Traditional Students and Faculty Regarding Effective Teaching Behaviors in Office Systems Technology Programs

Thomas Smith
University of New Orleans

AN EXAMINATION OF THE PERCEPTIONS OF LOUISIANA TECHNICAL COLLEGE TRADITIONAL AND NON-TRADITIONAL STUDENTS AND FACULTY REGARDING EFFECTIVE TEACHING BEHAVIORS IN OFFICE SYSTEMS TECHNOLOGY PROGRAMS

A Dissertation

Submitted to the Graduate Faculty of the
University of New Orleans
in partial fulfillment of the
requirements for the degree of

Doctor of Philosophy
in
The Department of Curriculum and Instruction

by

Thomas S. Smith

B.A., Northeast Louisiana University, 1971
M.Ed., Louisiana State University, 1977
M.A., Louisiana State University, 1994

May 2005

ACKNOWLEDGEMENTS

"And gladly wolde he lerne, and gladly teche."

To my doctoral committee—Dr. Jim Killacky (chair), Dr. Charles Gifford (methodologist), Dr. Christine Flug, Dr. Dee Slavant, Dr. Andrew Talmadge, and Dr. Marvin Thames, I salute you and say thanks for your time and effort on my behalf. Association with all of you is a genuine pleasure.

I also thank and acknowledge the cooperation of Dr. Margaret Montgomery-Richard, Louisiana Technical College Chancellor, and all LTC students and instructors who participated in my study survey.

I dedicate this dissertation to my late parents, James Thomas Smith and Bessie Mildred Smith, who had rough, difficult lives but gave much love and encouragement to my sisters and me. I am still trying to make you both proud.

I thank my wonderful family and friends for their encouragement in my endeavor. I thank my sister Margaret for her prayers and words of faith. I thank my sister Evelyn for her encouragement and sense of humor. I thank my beautiful redheaded daughter Paige for her example of overcoming adversity. I thank my son Tommy and his beautiful wife Sarah for their words of encouragement. I thank my infant grandson James Thomas for his smiles every time he sees his grandfather. J. T., your smiles brightened the dark, dreary winter days of writing and re-writing chapters and gave me inspiration to continue my work. Seeing you explore the world as you grow makes me once again marvel at the wonders of learning.

I especially thank my marvelous and lovely wife of 36 years. Sue, you backed me and supported me in this quest—this dream of mine that I had to postpone until our

children were grown and other service done. Your gentle hand on my shoulder, your loving smile, your prodding for “40 pages, 40 pages,” your reassuring faith in me, and your undying love have provided me the help I required on my quest for this Ph. D. “*Imagine me and you . . .* **happy together**!”

TABLE OF CONTENTS

LIST OF TABLES

ABSTRACT

The purpose of this study was to ascertain non-traditional students', traditional students', and their faculty's perceptions as to effective teaching behaviors in the office systems technology programs on six of the campuses of the Louisiana Technical College and to determine any significant differences in perceptions held by the respective groups—non-traditional students, traditional students, faculty of non-traditional students, and faculty of traditional students. The theoretical framework of this study is drawn from Knowles' concept of andragogy and Bruner's constructivist theory.

The design of this study was non-experimental descriptive research in nature. It used a survey instrument to collect data as to the perceptions of effective teaching behaviors of the respective groups. Two survey instruments were used—one for students and one for faculty. Both instruments were of like format, using a 7-point Likert scale for determination of perceived teaching behavior effectiveness. The faculty instrument was derived from the results of student data collection. The student sample was 299, and the faculty sample was 14. The prime objective of this study was to assemble data from a significant number of the target population for comparison, to summarize findings, and to evaluate any relevant patterns of significance in and among the groups. Methods of statistical analysis used in this study were Mann-Whitney U Statistical Procedure, T-Test for Independent Samples, and Spearman Correlation.

This study revealed important differences in the perceptions as to effective teaching behaviors of non-traditional students, traditional students, faculty of non-traditional students, and faculty of traditional students in the office systems technology program of the Louisiana Technical College. These differences are described and

analyzed. Implications for a range of stakeholders and suggestions for further research are presented.

CHAPTER ONE

Introduction

In what may as well be starkly labeled smug satisfaction, an amazing 94% [of college instructors] rate themselves as above average teachers, and 68% rank themselves in the top quarter of teaching performances.—K. Patricia Cross (1977)

College is no longer an elite place. College populations are more like real life.—Hara Marano (2002, as cited in Perterson, 2002)

The preceding two statements taken together signal a collision between traditional instruction and non-traditional students in higher education undergraduate classrooms. The paradigm of higher educational undergraduate instruction is and has been in a shifting process for the last several years. The shift is from a strictly teacher-centered focus to a greater student-centered focus. The process is slow and laborious, but is it too slow and too tenuous for the quickly increasing numbers of non-traditional students enrolled in institutions of higher education? What is different about teaching traditional and non-traditional students? What differences in instructional practices are necessary in teaching non-traditional students as contrasted in teaching traditional students? Are there differences in teaching and learning concerning the two groups?

An area of interest of this investigator has been teaching effectiveness, particularly comparisons of teaching effectiveness as perceived by traditional students (TS) and non-traditional students (NTS). This investigator has had an interest in teaching effectiveness and the differences in perceptions of TS and NTS for the last nine years since he has been an adjunct instructor in evening classes for two universities. Research in the area of teaching effectiveness in regard to TS and NTS is only beginning in earnest as a result of the ever-increasing number of NTS enrolling in post-secondary institutions

of education. Kinsella (1998, as cited in Yates, 2002) says that non-traditional students make up approximately one-half of the students enrolled as undergraduates in institutions of higher learning. E. McCollin in a paper presented at the 2000 Annual Meeting of the Mid-South Educational Research Association states, "There is a dearth of research comparing how traditional and nontraditional students are taught in a college or university setting" (p. 9). McCollin says that there is limited research that compares "perceptions of the teaching-learning transaction from both the instructors' and students' points of view" (p. 9). This investigation proposed to address these gaps from a research perspective. The purpose of this study was to ascertain NTS, TS, and faculty perceptions as to effective teaching behaviors in response to the ever-increasing number of NTS on post-secondary campuses today. Specifically, this study proposed to examine perceptions of teaching effectiveness in the Louisiana Technical College (LTC) of the Louisiana Community and Technical College System (LCTCS). The LCTCS is a recent reconfiguration of Louisiana community and technical colleges. Because of the newness of the system, there is limited research concerning the system.

The technical college setting and office systems technology program were the choice of investigation of this study because of the limited research in the area and the obvious changes in technology in the last several years and the obvious change in student demographics in the same last several years. More and more NTS are going back to technical colleges to brush up on or to learn the new skills of technology, especially in the area of office systems technology ("The Changing Demographics of the Classroom," 2002). Therein lies the rationale for the study in this specific subject area in the community and technical colleges (CTCs). This area in CTCs is fertile ground for

research in effective teaching behaviors as perceived by TS and NTS, as well as their instructors. Only female instructors of office systems technology were surveyed to minimize any gender-bias surfacing in data analysis. Male instructors are minimal in number in office systems technology courses of study. The gap in research the study is addressing is lack of information about NTS and teaching NTS effectively.

Teaching is much more than just the mastery of content, sound course design, acquisition of instructional techniques, and improving skills of presentation. A significant social dimension to the teaching craft exists. Students do value the many little things a teacher does or does not do. Students want clear communication, enthusiasm, strong course content, etc., plus fair treatment, trust, respect, etc. (Walsh and Maffei, 1994).

> While pedagogical expertise and technical knowledge are essential to it, ultimately teaching is a creative act; it makes something fresh from existing knowledge in spontaneous, improvised efforts of mind and spirit, disciplined by education and experience. What method can supply to teaching we now or can learn; what art can furnish out of our own selves we must imagine—and then practice. Just as all artists learn, now select, and employ varieties of each of the constituent elements of their craft in creating their distinct works. So teachers use the components of their own art to teach in ways as distinctive as each teacher is unique. For this reason, teaching has always defied strict and agreed-upon definition. We think we know great teaching when we encounter it, yet we find it impossible to say precisely what has gone into making it great (Banner and Cannon, 1997, p. 3).

The task of identifying good teachers and effective teaching is not an easy one. Counting the number of times a professor has published or has been cited in professional periodicals is obvious, but teaching is hard to assess. Measurement of teaching quality is not something even experts can agree upon because teaching is uniquely a personal endeavor. No two instructors or professors teach exactly the same way (Bartlett, 2003a).

Boyer in *Scholarship Reconsidered* (1990, as cited in Boggs, 2001) discusses four separate but overlapping forms of scholarship—discovery, integration, application, and teaching. As to teaching, he says the professor's work is consequential only when it is understood by others. Particularly as it pertains to NTS, this statement of consequence is of utmost importance (Boggs, 2001).

The ever-increasing number of non-traditional students (NTS) enrolling in colleges and other institutions of higher learning, particularly CTCs, has and is producing a vigorous examination of and growing debate concerning teaching methods and course delivery issues. According to Donaldson and Graham in 1999 (as cited in Guzman, 2000), approximately 50% of students enrolled in college are more than twenty-five years of age.

Evelyn (2002) points out that 73% of undergraduate students are in some way NTS because of their financial status, their age, or when they enrolled in college. Evelyn goes on to report that only 27 % of the undergraduate population fits into the TS group (i.e., students who earned a high school diploma, enrolled full time immediately after finishing high school, and depended on parents/guardians for support financially).

Three-fourths of the post-secondary student population in 1999-2000 possessed at least one non-traditional characteristic. Non-traditional characteristics include, but are not limited to, the following: not solely dependent on parents for major financial support, having children, delayed entry into post-secondary education, part-time attendee for some of the academic year, single parent, not having a regular high school diploma, and works thirty-five or more hours weekly while enrolled. Two-thirds of these students with four or more of the non-traditional characteristics are in 2-year public institutions (Choy,

2002). [Choy's source is the U.S. Department of Education, NCES, National Postsecondary Student Aid Study.]

NTS data from the 1999-2000 academic year are quite revealing. Fifty-one percent were financially independent. Forty-eight percent attended on a part-time basis. Forty-six percent were delayed enrollees. Thirty-nine percent worked full-time. Twenty-seven percent had dependents. Thirteen percent were single parents. Seven percent did not earn a high school diploma (Choy, 2002).

Adults re-entering education are a potpourri of individuals. Typically CTCs have a student population that includes a much wider scope of ages, socio-economic backgrounds, educational goals, family and work responsibilities, levels of fluency in English, and levels of academic readiness than do four-year colleges and universities. The CTC population will grow in number and diversity (Szelenyi, 2001). The CTC and all of its programs will have to adapt to the "continuing wave of the *unders*," an increasing proportion of students who are "underprepared, underrepresented, underachieving, and underclass"(Williams, p. 68, as cited in Schuetz, 2002).

NTS enrollment reveals a different pattern than that of TS. Students, even minimally non-traditional, are much more likely to enroll in a 2-year institution (39 percent), and those fitting the category with the most characteristics have a greater propensity to enroll in a 2-year post-secondary learning institution (64 percent) (Special Analysis, NCES, 2002).

CTCs are facing continuing diversification of their student populations. With that diversification comes issues of educational attainment and retention of the various ethnic minority students. Students bring culture-specific experiences and values as educational

baggage to the CTC educational environment. These values and experiences shape their individual teaching and learning preferences. All CTCs must focus on the most effective teaching of the diverse student population (Szelenyi, 2001).

Significant social changes are seen in the student populations—both TS and NTS. NTS bring in to the post-secondary arena such life experiences as divorce, domestic violence, addictions, psycho-social and psychological disturbances, and much other unfamiliar baggage into the halls of learning (Baiocco and DeWaters, 1998).

"Influenced by prior academic and life-world experiences, the metacognitive knowledge and abilities of older students may differ from those of traditional-age students" (Donaldson and Graham, 1999, as cited in Justice and Dornan, 2001, p. 237). Richardson (1994, 1995, as cited in Justice and Dornan, 2001) determined that older learners were more apt to acquire a deep comprehension-focused learning approach than were TS who looked at greater surface-level and assessment-focused learning approach. Study behaviors are different for the comprehension learning of NTS as opposed to rote recall learning of TS.

This increasing number of diverse students on campuses puts forth new challenges for the classroom and the teaching that goes on within it. Variations in teaching strategies and definitions of effective teaching behaviors are appearing because of research and investigations into the area of teaching in post-secondary education. Faculty must be cognizant of differing values, personal lifestyles, academic abilities, and motivational levels—especially in NTS. Diverse students learn in different ways; student success is obviously impacted by instructional teaching methods (Torrey, 2002).

NTS look upon their education and return to school from a consumer standpoint and how it affects their family in terms of finances and time. As one associate dean put it, "Today many act more like someone who is deciding whether to hire the college to educate them" (Mollison, 2000, p. 3).

The traditional didactic teacher-centered instruction does not often work sufficiently for the NTS. This study investigated traditional students (TS), non-traditional students (NTS), and faculty perceptions of changes that have occurred and are occurring and the ramifications for TS, NTS, and faculty. More specifically, this study investigated differences in teaching effectiveness perceptions between faculty and students in a common environment—that of the Louisiana Technical College of the Louisiana Community and Technical College System.

These perceptions and issues take on greater consequence in light of the need of many colleges to increase their retention rate of all students in order to remain stable financially and healthy from fiscal year to fiscal year. In their study of persistence in post-secondary education, Berkner, Cuccaro-Alamin, and McCormick (1996, as cited in Horn, Peter, and Rooney, 2002), found trend patterns indicating that almost 50 percent of NTS with three or more characteristics (of NTS) would be expected not to complete a degree or certificate program where enrolled. For many higher education institutions the enrollment of NTS is critical in the financial arena. High levels of attrition among both TS and NTS are detrimental and adversely affect funding, short-term planning, and long-term planning in all areas. Large numbers of academically under-prepared NTS (especially those who are part-time) increase the average cost per student. High rates of non-finishers magnify the problem (Jones & Watson, 1990). Accountability is an

important issue, particularly in the eyes of employers and state legislatures and the federal government. Accountability is even on the minds of many of the NTS. They want to learn and desire professors and instructors to teach to them in order for them to develop their full potentials (Jones & Watson, 1990).

Definitions of NTS abound. Even the term has alternate terms—adult students, older students, adult learners, and returning adult students. For this study the term NTS is used, and it is generic for those students who enter higher education (often for a second time) not directly from secondary school. NTS are more often than not classified by situational, demographic, motivational, and personal factors like maturation level, marital status, or age (Cross, 1981; Knowles, 1984; and Merriam and Caffarella, 1991, as cited in Guzman, 2000). Learning groups of adults often include students of different cultures, socio-economic backgrounds, educational backgrounds, and ages (ARIS, 1999). One major university Adult Services Director says "an adult student is anyone whose primary life roles take precedence over his or her role as a student at the university" (Shaw, 2000, p. 1). There seems to be no universal definition of a NTS.

Statement of the Problem

The increasing number and increasing diversity of NTS with their special characteristics enrolled in post-secondary education present new challenges for teaching and learning. NTS are different in several aspects (as discussed on previous pages) from their TS counterparts. CTCs are at the attack point of the challenge. An examination of the perceptions of teaching effectiveness of TS, NTS, and faculty of selected programs in

Louisiana technical colleges adds to the research on effective teaching in general and sheds light on teaching at the technical college level in particular.

The influx of NTS into higher education classrooms, as noted previously, presents a problem by virtue of a new classroom personality—not just TS and their characteristics—and confronts the professor/instructor with a distinctly different challenge in teaching to this diverse group. Most traditional professors/instructors—primarily those who use the lecture method of teaching and have a pedagogical philosophical base (the general science and art of teaching, particularly applied to youth) rather than an andragogical (science and art of the teaching and the learning of adults) philosophical base—have attained their first degrees in the traditional sense and now face the NTS who did not come straight to the world of higher education from high school (Outcalt, 2002).

The NTS brings additional baggage, both good and bad, to the world of post-secondary education. Guzman (2000) lists distinguishing characteristics of NTS including the following: self-directed and autonomous (Knowles, 1980, as cited in Guzman, 2000); reflective and tolerant of ambiguity and contradiction (Caffarella & Barnett, 1994, as cited in Guzman, 2000); greater, more mature, critical/higher order thinking skills (Garrison, 1992, as cited in Guzman, 2000); hampered by scheduling problems, job and family responsibilities, lack of money and time (Neeley, Niemi, & Ehrhard, 1998, as cited in Guzman, 2000); and less connected to campus environment and rusty study skills (Donaldson & Graham, 1999, as cited in Guzman, 2000). Cyr (1999) compared—based on the work of Knowles and others—characteristics of non-adult learners and adult learners. Several differences were found:

- The TS is not as self-directed as the NTS.
- The TS is more teacher-centered and passive than the NTS who is more student-centered and active as a learner.
- The TS has fewer kinds of life experiences than does the NTS.
- The TS fits into the strongly dependent student mode more so than the NTS who is rather independent and assumes the class member role.

Analysis of a related literature review led to these inferences about NTS and their characteristics:

- NTS become more independent and self-directed as they get older.
- NTS apply life experiences to their learning and become performance-centered, seeking relevant, attainable, practical learning.
- NTS seek learning to cope with changes in their lives.
- NTS prefer to learn in their own way, at their own pace, and at convenient times to their own schedules.
- NTS prefer clearly stated, measurable, criterion-referenced learning goals.
- NTS want andragogically-oriented learning methods and conditions.
- NTS desire physical and psychological learning climates respectful of their adult status (Cyr, 1999).

It is common knowledge that today's adult students do not automatically accept as "gospel" everything the college teacher says (Bishop-Clark & Lynch, 1992). The NTS interprets according to past experience, situation, and background. Also, many NTS are not true academics themselves and are deficient in many areas—for various and sundry reasons—that the TS are not. Higher education faculty must have a realistic

understanding of the needs and expectations of the NTS as to what is offered to them to learn and how it is offered. Classrooms with NTS predominant in number have a quite different personality than the TS predominant classrooms. Faculty of higher education should also be cognizant as to what adult learners consider attributes of effective instructors. The attributes according to Donaldson, Flannery, and Ross-Gordon (1993, p. 150, as cited in Imel, 1995) are "to be knowledgeable, to show concern for student learning, to present material clearly, to motivate, to emphasize relevance of class material, to be enthusiastic." Older NTS many times have a different perspective toward faculty. Many older students often look upon the instructor as a peer, even while according him/her authority status. Older NTS are not awed by the professor as younger TS are (Bishop-Clark & Lynch, 1992).

Darkenwald and Merriam (1988, as cited in Carr, 1998) define teaching style as "various identifiable sets of classroom behaviors by the teacher which are consistent even though the content that is being taught may change" (p. 2). Adult education literature identifies two dominant teaching styles—teacher-centered teaching style and learner-centered teaching style (Conti, 1985). Teacher-centered teaching style generally is the mark of a teacher who has a pedagogical philosophical base, and learner-centered teaching style generally is the mark of a teacher who has an andragogical philosophical base (Conti, 1985). More than any other single factor, the behavior of the teacher impacts the character of the learning climate (Knowles, 1970).

Many post-secondary institutions are attempting to prepare instructors for the classroom. Programs exist for graduate teaching assistants (Bartlett, 2003b). These teaching assistants realize that many of the powers in higher education think that just

because an instructor knows the subject matter content, he or she should be able to teach it. These programs need to show differences in TS and NTS to their participants. Some programs, based upon the existing research, are already doing so. The need for such programs extends to old and new faculty as well (Bartlett, 2003b). Shek (2002) quotes Deidra Lewis, vice chancellor of academic affairs at Harold Washington College, who said, "When you are teaching someone who is 30 years old as opposed to a student who is just out of high school, there is sensitivity that needs to be developed" (Shek, 2002, p. 1). NTS have multiple obligations and multiple priorities. Many come to class unprepared some of the time and underprepared more of the time. It is absolutely critical for instructors of NTS to capture and reach students during the time they spend in class (Evelyn, 2003).

Purpose of the Study

The purpose of this study was to ascertain NTS, TS, and faculty perceptions as to effective teaching behaviors in response to the ever-increasing number of NTS on college campuses today. Any changes in teaching style as represented by instructional modifications are worthy of faculty consideration. Faculty can change teaching styles given the right motivation, support, and assistance.

Need for the Study

The need for this study is clear as seen in enrollment numbers—particularly in community and technical colleges. As previously stated, up to 73 percent of undergraduates possess some NTS characteristics, and NTS students are much more

likely to attend 2-year post-secondary institutions of higher learning. These colleges are crucial because they are the most teaching-intensive sector of post-secondary institutions (Kerekes and Huber, 1998). According to Donaldson and Graham in 1999 (cited in Guzman, 2000), approximately 50% of students enrolled in college are more than twenty-five years of age. This influx of NTS poses a challenging problem by virtue of the new classroom personality facing instructors. Adults re-entering higher education institutions possess many and varied characteristics. Traditional teaching and methods of delivery are insufficient to meet the needs of NTS. In a paper presented at the National Conference on the Adult Learner 2000 in Atlanta, Georgia, Al Siebert, noted psychologist, stated that the teaching of adult learners requires additional advanced teaching skills than does the teaching of TS. He continues to say that the facilitation of adult learning requires an instructor with many diverse skills (Siebert, 2000). Malinda M. Matney points out in her 2001 dissertation entitled "Institutional and Department Factors Influencing Faculty Adoption of Innovative Teaching Practices" that in general undergraduate teaching discussion does not have an empirical base. Tom Nesbit in a 1998 article stated:

> Given the centrality of teaching and teachers to many adult education practices, the paucity of empirical research on teaching in adult education is striking . . . Indeed, it seems adult education researchers often ignore the 'black box' (Mehan, 1979) of class settings, and prefer investigating what goes in and what comes out of the box rather than what takes place within (Nesbit, 1998, p. 157).

This study makes a contribution to enlargement of that empirical base of teaching adults/NTS.

Significance of the Study

The significance of this study is multifaceted: It is important for NTS for enhancement of learning, for post-secondary faculty for enhancement of their teaching, and for post-secondary institutions in their ability to serve their students to the best of their capability and retain those students program completion. NTS usually are intrinsically motivated. They return to higher education with specific goals in mind. They want successful learning experiences and obtainment of degrees and/or certificates. However, if they do not get the teaching and learning they desire, the old adult educators' adage of "adults vote with their feet" comes into play. They find teachers and institutions that deliver what they want (Imel, 1994). College faculty face unique challenges with classes, including greater numbers of NTS. Traditional methods of instruction often are not adequate for NTS. Traditional environments are not often equitable for NTS. Traditional classes are not often conducive to NTS learning. Higher education institutions face problems of sustaining enrollments (even with growing NTS numbers), lack of retention of students, and competition from other public and private institutions as well as from for-profit educational agencies. Administration at higher education institutions must give adequate attention to teaching and learning—what is going on in the classroom—in order to be financially stable and keep up the pace of current commitments. These institutions cannot afford to ignore the increasing enrollment numbers of NTS and their needs and their issues (Imel, 1994). This study investigated the focal point (the contact between teacher and student) of instruction in the classrooms of higher education. It holds significant implications for individual NTS, higher education faculty, and higher education institutional administration. Perhaps it will help

to minimize passive attitudes or reluctance of many administrators and faculty in the area of improvement of instruction for all students, not just NTS. Results of this study should help faculty and administrative leaders to develop or to customize faculty development programs/projects for technical colleges and other post-secondary institutions. Eble states that "teaching skill can be acquired. More bluntly, teaching can be taught" (Eble, 1988, p. 5). He furthers states that "there are great similarities among teachers and teaching at all levels and subjects" (p. 6). Increased NTS success in the classroom and improved retention rates for NTS could be net successes for higher education institutions.

Research Questions

The research questions for this investigation were developed from the review of literature which demonstrates an absence of research in this area. Additional sources for the questions included the pilot study and the researcher's experiences with NTS and TS in post-secondary education settings. The questions were the following:

- What are the relationships between faculty of TS perceptions of effective teaching behaviors and TS perceptions of effective teaching behaviors?
- What are the relationships between faculty of NTS perceptions of effective teaching behaviors and NTS perceptions of effective teaching behaviors?
- What are the relationships between faculty of TS perceptions of effective teaching behaviors and faculty of NTS perceptions of effective teaching behaviors?
- What are the relationships between TS perceptions of effective teaching behaviors and NTS perceptions of effective teaching behaviors?

Through this study and the review of literature, issues and perceptions regarding instruction were illustrated and highlighted. A closer look at perceptions of Louisiana Technical College faculty, TS, and NTS concerning effective teaching behaviors and modification of classroom instruction for improvement in learning of TS and NTS contribute to the effectiveness of higher education in that teaching and learning styles can be examined and more closely matched for maximum efficiency in the teaching-learning process. Examination of these two perspectives results in a more comprehensive view of instructional issues relative to NTS.

Research Hypotheses

The research hypotheses of this study were the following:

H 1 : There is no difference in perceived effective teaching behaviors between faculty of TS and TS in office systems technology programs.

H 2 : There is no difference in perceived effective teaching behaviors between faculty of NTS and NTS in office systems technology programs.

H 3 : There is no difference in perceived effective teaching behaviors between faculty of TS and faculty of NTS in office systems technology programs.

H 4: There is no difference in perceived effective teaching behaviors between TS and NTS in office systems technology programs.

Conceptual Framework

The conceptual framework of this study is drawn from Knowles' concept of andragogy and Bruner's constructivist theory.

Malcolm Knowles' concept of andragogy is well-known and widely discussed when adult education is the topic. Knowles sets forth five underlying assumptions of his concept of andragogy:

1. As a person matures, his or her self-concept moves from that of a dependent personality toward one of a self-directing human being.
2. An adult accumulates a growing reservoir of experience, which is a rich resource for learning.
3. The readiness of an adult to learn is closely related to the developmental tasks of his or her social role.
4. There is a change in time perspective as people mature—from future application of knowledge to immediacy of application. Thus an adult is more problem centered than subject centered in learning.
5. Adults are motivated to learn by internal factors rather than external ones (cited in Merriam and Caffarella, 1999, p. 272).

Bruner's constructivist theory maintains that learning is active in nature and that learners construct new concepts, understandings, or ideas on the foundation of current and/or past knowledge they already possess. Learners transform information and construct hypotheses on previous acquired knowledge and concepts (Bruner, 1966).

These two educational theorists—Knowles and Bruner—provide the framework for the larger investigation in that the literature review of students' and instructors' perceptions of effective teaching behaviors and the pilot study conducted by this investigator revealed data connected to the theories advanced by the two educators. A comparison of concepts/theories and data show common threads including experience to build learning upon and immediacy for learning from Knowles and experiential learning and active learning and construction of new learning on past knowledge from Bruner.

Method of Investigation

A pilot study utilizing the Q-Sort Method was used by the investigator as the springboard for this study of perceived effective teaching behaviors of TS, NTS, and faculty in the Louisiana Technical College in the LCTCS. The pilot study became the basis of the development of a survey instrument used in this study.

The pilot study examined the perspectives concerning effective teaching behaviors of four sample groups—TS, NTS, full-time faculty, and part-time faculty—at a single technical college campus of the LCTCS. The sampling included 8 TS, 8 NTS, 4 full-time faculty, and 4 part-time faculty. Methodology used was the Q-sort procedure devised by William Stephenson in the early 1950s. Members of the four groups participated in a double Q-sort procedure involving 40 teaching behaviors selected and assembled from literature on teaching behaviors research.

The pilot study showed differences in the perceptions of TS and NTS and faculty as to effective teaching behaviors. TS rated highly teaching behaviors in the category of interpersonal behaviors. NTS rated highly teaching behaviors in the category of instructional behaviors. Faculty rated highly instructional teaching behaviors. The pilot study revealed the need for additional investigation in the area of effective teaching behaviors in the Louisiana Technical College.

This larger study of perceived effective teaching behaviors in the Louisiana Technical College was non-experimental descriptive research in nature. The prime advantage of this non-experimental method was the ease of data collection through use of the survey method. No variables were manipulated, and the research setting was not controlled by any means. Participation by faculty and students was voluntary in nature.

The prime disadvantage of this research design was that no controls and non-manipulation of variables yield results implying only associative relationships.

The quantitative method of investigation for this study consisted of questionnaires distributed to TS, NTS, and faculty in office systems technology programs at 6 campuses of the Louisiana Technical College. Campuses selected were chosen on the basis of enrollment and programs with predominantly TS or NTS.

The purpose of the survey was to reveal faculty and student perceptions concerning effective teaching behaviors and any other related issues arising from teaching and learning involving NTS and their challenging characteristics and demographics, as well as the impact on the future of the Louisiana Technical College and instruction.

The most important objective of this study was to assemble data from a significant number of the target populations for comparison, to summarize findings, and to evaluate any relevant patterns of significance regarding instruction pertinent to issues and characteristics of NTS that are different from those of TS. Statistical analysis of the data collected was used to determine the existence, or not, of a statistically significant difference in the perceptions of faculty and TS and NTS as to effective teaching behaviors.

Limitations and Delimitations

Limitations and delimitations of this study included the following: This study confined itself to the office systems technology programs on 6 campuses in the Louisiana Technical College of the Louisiana Community and Technical College System and to

faculty and students—TS and NTS—enrolled on these campuses. Completion of the questionnaires was based upon the assumption of "good faith" responses by the participants. Individuals—both faculty and students—who participated may not be representative of the respective general population for each group. Time and financial constraints prohibited a greater distribution of questionnaires. Generalizability of the study may be affected.

Assumptions of the Study

Assumptions central to this study are the following:

1. Perceptions of issues regarding instruction can be measured quantitatively.
2. The survey questionnaire instrument used in this study was a viable vehicle for information collection on perceptions of the participants regarding instruction and differences in teaching and learning of NTS and TS.
3. Obtained data reflects the perceptions of the participating faculty and students.

Definitions of Terms

Several terms necessitate definition.

Andragogy: concept developed by Knowles (1970) concerning the teaching and learning of adults based on assumptions about the characteristics of adult learners, such as, self-directed learning, task orientation, and experiential background

Instructional adaptations/modifications: changes in teaching methods and course delivery strategies.

Instructional practices: teaching methods and course delivery strategies

Non-traditional students: a term with no universal definition but more often than not the NTS are classified by situational, demographic, motivational, and personal factors like maturation level, marital status, or age (Cross, 1981; Knowles, 1984; Merriam and Caffarella, 1991, as cited in Guzman, 2000); typical definition used for this study—a student who is married or a parent, 25 years old or above, and returning to education after being out for a time

Pedagogy: the general science and art of teaching, typically focusing on youth

Teaching behaviors: instructor characteristics or attributes that influence/impact student learning

Teaching style: identifiable sets of classroom behaviors of an instructor that are consistent even with different content being taught

Traditional students: students that matriculate into a higher education program immediately after completion of secondary school

Summary and Overview of the Study

The purpose of this study was to ascertain NTS, TS, and faculty perceptions as to effective teaching behaviors in response to the ever-increasing number of NTS on post-secondary campuses today. The influx of NTS into higher education classrooms, as noted previously, presents a problem by virtue of a new classroom personality—one that exhibits different characteristics than TS-dominated classrooms—and confronts the professor/instructor with a distinctly different challenge in teaching to this diverse group. The need for this study was seen in enrollment and retention figures for NTS. There is a lack of information concerning NTS and effective teaching. As related earlier in this

chapter, Nesbit (1998) pointed out that most researchers do not investigate what takes place within the classroom. As indicated earlier, Matney (2001), too, pointed out that the discussion of undergraduate teaching does not have a substantial empirical research base. This study gathered and analyzed data from questionnaires concerning effective teaching behaviors as perceived by faculty and students at 6 selected campuses of the Louisiana Technical College. Additionally, this study attempted to address the gaps in general knowledge in the area of office systems technology programs by gathering specific research data from campuses of the Louisiana Technical College. Potential uses of the results of this study—particularly the NTS data—include administrative use for programs of faculty development and employment and faculty use for justification for changes in instructional practices and direction for that change, if warranted. NTS diversity must be recognized and respected in post-secondary institutions. Acknowledgement of NTS diversity is merely the initial step. Respecting that diversity and acting on that respect to improve teaching is the best avenue for improvement of the institution of the individual students (Rallis, 1994). If this diversity is really valued and teaching effectiveness is to be improved, student voices concerned with student perceptions of effective teaching behaviors must be listened to and taken heed of. Teachers can use student ratings as a beginning point in the quest for quality teaching. Diverse students, especially NTS, have much to say about their perceptions of effective teaching behaviors. Changes in teaching for the purpose of improving student learning must take into account diverse voices (Rallis, 1994). This study, if nothing else, should stimulate discussion of the issues of teaching of both TS and NTS in the Louisiana Technical College as well the general undergraduate population in other colleges and universities. Many premises and

conclusions derived from investigation of effective teaching in community colleges, including the technical colleges, are quite applicable to other educational institutions—from high schools to four-year colleges. Quality of teaching matters—no matter what level (Grubb, 1999).

This chapter has introduced this study, has addressed its need and significance, and has described its proposed methodology, the research questions, and the conceptual framework. Chapter 2 provides a detailed review of the appropriate literature. Chapter 3 presents the methodology for the study. Chapter 4 contains the findings of the study. Chapter 5 includes analysis of the findings, implications for a range of stakeholders, and suggestions for further research.

CHAPTER TWO

Introduction

The adult student population increased dramatically during the last 30 years (Asianian 2001, as cited in Imel, 2001). The number of women grew threefold; over-35 adult students increased in number more than 2 ½ times (Kasworm, Sandmann, and Sissel 2000, as cited in Imel, 2001). Projections from the National Center for Education Statistics indicate that NTS enrollment will not hold its rate of increase (Snyder and Hoffman 2001, as cited in Imel, 2001). However, the presence of NTS will keep on challenging how post-secondary institutions structure programs and support services and deliver instruction (Kasworm, Sandmann, and Sissel 2000, as cited in Imel, 2001). The sheer presence of NTS creates a tension in the classrooms of higher education (Imel, 2001).

The number of NTS will continue to increase (up by as much as 14 percent by 2010) according to 2002 NCES reports. The NCES reports show that 73 percent of undergraduates are NTS (Roueche, Milliron, and Roueche, 2003).

Alusine M. Kanu (2000) states that there is ample argument that higher education is facing a changing student demographic wave, which includes students from different academic, social, economic, and cultural backgrounds with the additional element of being grossly under-prepared for college work. She points out that community and technical college teachers who face these students with academic deficiencies have difficult teaching times ahead of them and that student perceptions found on student evaluations of instructors are significant to the teaching-learning process (Kanu, 2000).

The student population of community and technical colleges (CTCs) across the United States can be divided into two rather distinct groups—the traditional student group and the non-traditional student group. The non-traditional student population is increasing in number in most community and technical college settings. C. L. Howell (2001) says that CTCs enroll more than 2.5 million adult students (those 25 years old and above). Kinsella (1998, as cited in Yates, 2002) says that non-traditional students make up approximately one-half of the students enrolled as undergraduates in institutions of higher learning. As previously pointed out in the first chapter, 73% of undergraduate students are in some way characterized as NTS because of age, financial status, or time of enrollment in post-secondary education (Evelyn, 2002).

This chapter includes this introduction and the following sections: Historical Background, NTS Defined, NTS Impact on Higher Education, Teaching—Art or Science?, Effective Teaching Behaviors/Characteristics, TS and NTS Perceptions of Effective Teaching, Related Research, Teaching Culture in Higher Education, NTS Needs in the Classroom, Study Justification, and Summary.

Historical Background

Before World War II adults interested in continuing their education enrolled in alternative programs of study including correspondence study, special evening courses, off-campus programs, or special "adults-only" offerings (Kasworm, 1980, as cited in Bendixen-Noe and Giebelhaus, 1998). The GI Bill in the late 1940s and the emergence of the "re-entry woman" in the 1960s and early 1970s were two major issues that caused NTS to go to daytime classes. Today the influx of NTS is caused by such factors as

"changing career and leisure expectations, advances in technology and business operations, changing roles of men and women in society, and the rise in consciousness regarding life quality" (Hall & Miller, 1989; Iovacchini, Hall & Hengstler, 1985, as cited in Benidexen-Noe and Giebelhaus, 1998, p. 27). The NTS has become a significant element in post-secondary student population demographics.

Non-Traditional Student Defined

A literature review produced the general notion of a lack of a universally accepted precise definition of non-traditional student (NTS), but it did yield parameters that various experts and higher education institutions used to give a general definition of NTS.

Edward Pittman, Associate Dean of the College for Campus Community and Adviser to Special Students at Vassar College says that non-traditional status is an evolving and expanding concept (Shroyer, 1999). These students can be deemed "non-traditional students," "adult students," "adult learners," "older students," etc. For this study the term "non-traditional students" will be used. Typical definitions of NTS refer to marital status, being a parent, being above 25 years of age, and returning to education after being out for a time.

Traditional students (TS) are students that matriculate directly into higher education programs from their senior year in high school with little or no "other life baggage" that is carried by NTS. The TS has as his or her sole main focus college life of learning and associated themes.

"The gray-haired woman sitting in the college classroom is most likely not the professor, but a student, one of a growing number of college students classified as 'adult

learners'" (Guzman, 2000, p. 1). Donaldson and Graham in 1999 (cited in Guzman, 2000) state that approximately 50% of students enrolled in college are more than twenty-five years of age. Evelyn (2002) says 73% of undergraduate students possess some characteristics of NTS.

Exactly what is a non-traditional student (NTS)? Definitions abound. Many are similar. There are about as many definitions of NTS as there are kinds of non-traditional students themselves. Adults re-entering education are a potpourri of individuals. They exhibit so many differences. Some are old; some are young. Ethnicity is varied. Some are well equipped with academic skills; some lack basic academic backgrounds. Ability is wide-ranged. NTS are a smorgasbord of individuals.

A universal definition of NTS does not exist. Definitions vary at different colleges and from different experts. No one term is generally accepted either.

Definitions of "non-traditional students" or "adult learners" or "adult students," etc., vary from one institution of higher learning to another and from expert to expert. This study uses the term "non-traditional student" as the inclusive term for all adult learners. NTS are more often than not classified by situational, demographic, motivational, and personal factors like maturation level, marital status, or age, according to Cross (1981), Knowles (1984), Merriam and Caffarella (1991) (as cited in Guzman, 2000). The 1999 ARIS Information Sheet "Adult Learning" summarizes general observations about the adult learner or the NTS. It concludes that adults from many different walks of life seek learning at various different times in their respective lives, for many different reasons, and for distinctly different purposes. Learning groups of adults often include students of different cultures, socio-economic backgrounds, educational

backgrounds, and ages (ARIS, 1999). There seems to be no universal definition of a non-traditional learner, just as there is no one accepted term used to refer to the "non-traditional student." Typical definitions include references to marital status, parenthood, age above 25 years old, and a return to formal education after being away for a time.

Adult NTS that "come back to school" are a genuine potpourri of individuals. Some are retired individuals prepping for a second career; some are retired persons returning for purely personal interests; some are housewives or mothers re-starting interrupted studies; some are individuals who have served in the military; some may have prior transcripts with excellent grades; some may have poor prior academic backgrounds; some are first-generation college students; some are financially well-off; some are stretching their budgets; some have age-related health problems (vision or hearing loss); some may be pursuing hours for advancement in their careers; some are equipped with all the academic skills needed; and some lack basic academic backgrounds. Some are old, and some are still rather young. Ethnicity and ability are wide-ranged and varied.

Perterson (2002) in "College Weighs on Minds" quotes noted psychologist Hara Marano: "College is no longer an elite place. College populations are more like real life" (p. D1). The non-traditional student population is increasing in number in most college settings. Some settings like the CTCs are seeing overwhelming growth in numbers of NTS.

The ever-increasing enrollment of NTS in colleges and universities has in the last few years finally achieved adequate significance to demand the attention of higher education administrators and faculty. These NTS as adult learners have different needs and interests in regard to the teaching and learning process going on in higher education

classrooms. These NTS can be successfully educated if the post-secondary institutions recognize and act accordingly concerning the unique aspects of the NTS learner and the adult learner environment (Bowden and Merritt, 1995).

The literature review also revealed the lack of substantive research on issues concerning NTS when compared with TS in the area of effective teaching behaviors in actual practice in higher education. No LCTCS research has been found. Related research on adult learners does exist and provides enlightenment. Much research on teaching and teaching behaviors has been conducted and does provide a foundation for the research in this study.

NTS Impact on Higher Education

At CTCs and some four-year institutions the increase in growth of the number of NTS is often overwhelming. Other settings like major universities are only now seeing the tip of the iceberg bearing in upon them. The NTS are in college ranks in increasing numbers. Their presence is significant in many ways.

NTS come into higher education placing different demands upon the instructional delivery, procedures, and design. What CTCs will be in the future will partly be determined by the influx and needs of these adult students. NTS have different motivations concerning education and thus place different demands on teaching situations. They want to know what they can derive from a course other than just abstract concepts. Most NTS desire to learn in order to reach specific goals, such as, a job, a promotion, certification, etc. (Hornor, 2001).

> CTCs shoulder the main brunt of worker retraining as the economy changes with new infusions of technology and the process of globalization. CTC enrollment rose 38 percent from 1992 to 2002. At present about 12 million persons attend at least on a part-time basis. More and more older students, the NTS, are enrolling for retraining in job-specific skills and knowledge (Pope, 2004). The chief reasons that adults go back to school are to meet credentialing requirements to advance in their careers and to keep up with skills or new knowledge in their respective fields of work. NTS have a greater awareness of their schooling's impact on their lives. NTS have a greater consumer orientation about education; they often view it as a direct investment in their livelihoods and futures. CTCs recognize the impact of NTS (The Changing Demographics of the Classroom, 2002, p. 3).

Evelyn (2002) says that approximately one-third of all undergraduate students are enrolled in programs of vocational-training that do not culminate in a bachelor's degree. Spring 2002 data from the United States Education Department given to the annual meeting of the American Association of Community Colleges indicate also that almost half of these students complete a year or less of higher education. The data show that the number of students enrolled in vocational programs is second only to the number of students enrolled in baccalaureate-degree granting programs. Findings revealed that only 33.5 percent scored in the upper 50 percent on exit and achievement tests while in high school. More than half of them are first-generation college students, and almost 70 percent have irregular attendance and often drop out a semester or so and return later. About 85 percent of vocational students are employed while attending class, and many of the students do not complete their programs in a timely manner. These indicators provide an important "snapshot" with significance for the teaching and learning situation in universities, community colleges, and technical colleges.

Half of the student population in community and technical colleges is more than 25 years old. Increasing numbers of these NTS are lower-ability students. Also, the

socio-economic level of many community and technical college students is lower than that of students attending four-year institutions (Cohen and Brawer, 2003).

Four primary developments highlight the need for directing attention on student learning in higher education. They are the following: increasing demand from stakeholders for accountability, research in the fields of cognition and learning showing students are the active locus for learning, the influx of unprepared or underprepared students in the post-secondary sector, and the increasing student tendency to acquire their education from several post-secondary institutions (Cross, 2001).

Faculty of higher education is also impacted by what the adult learner NTS considers as attributes expected of effective instructors. Some of the attributes according to Donaldson, Flannery, and Ross-Gordon (1993, p. 150, as cited in Imel, 1995) are being knowledgeable, showing concern for student learning, presenting material clearly, being motivational, emphasizing relevance of class material, and being enthusiastic.

Faculty need better preparation in meeting the needs of most NTS. This idea of better preparation of faculty is prevalent as one of the general conclusions of many adult learners' needs studies (Benshoff and Lewis, 1992).

Parker Palmer states that the difficult truth is that teaching "will never take unless it connects with the inward, living core of our students lives" (Palmer, p. 20, 1997, as cited in Baxter, Terenzini, and Hutchings, 1999). Undergraduate education trends in the United States point to some change in faculty perceptions as to their role in the classroom from instruction provider to learning facilitator. Educational research is a constant when it says that what is effective for some may not be effective for other students. An

understanding and acceptance of who students are is the first essential to best teaching practices for everyone (Baxter, Terenzini, and Hutchings, 1999).

Teaching—Art or Science?

Is teaching an art or a science? Art say Hostler (1982) and Lenz (1982) (as cited in Barker, Sturdivant, & Smith, 1999), and science says Miller (1964) (as cited in Barker, Sturdivant, & Smith, 1999). Teaching behaviors exist in both viewpoints. Teaching behaviors can be made more effective by applying theory and research to faculty development.

"Teaching is the 'business of the business—the activity that is central to all colleges and universities'" (Pew Higher Education Research Program, 1989, p. 1). Teaching, as anything else, can be improved and/or strengthened in all post-secondary institutions.

That teaching is multi-dimensional in nature is indicated by both theory and research (d'Apolliana and Abrami, 1997; Marsh and Roche, 1997, as cited in Delucchi and Pelowski, 2000). Teaching involves instructors' personal attributes and the qualities or characteristics more traditionally known as benchmarks of good pedagogy.

In an exercise—not a research project—conducted at the University of Newcastle, student evaluations were used to answer the question eliciting responses concerning what is good university teaching. Students enrolled in an education program of studies at a point before they were exposed to any significant examination of educational theories were asked their perceptions of their best and their worst teachers. Students were asked open-ended questions. The best teacher characteristics included the following (presented

in order of most frequently occurring first): encouraged interaction, displayed enthusiasm, made the lessons interesting, had good explaining skills, had good content knowledge, had good rapport with students, had a sense of humor, provided help when needed, and gave good examples. Other best teacher characteristics named fewer times were the following (high frequency to low): used a variety of teaching strategies, well organized, challenging, clear expectations, practical experiences, allowed time to take notes, and supportive classroom atmosphere. The most frequently mentioned characteristic appeared only 48% of the time with most characteristics much less. The exercise points out that its limited data and its conclusions and assumptions should be viewed with caution. However, certain implications manifest themselves from the data and its examination. One implication is that a high quality teacher can possess several different styles and characteristic combinations. Another is that knowledge of the content is not as important as other teacher behaviors in these students' perceptions of effective teacher characteristics and that students hold basic teaching behaviors like explaining clearly, encouraging student interaction, motivating students through enthusiasm, and using a variety of instructional methods. It is concluded that through examination of students' perceptions of university teaching that characteristics can be identified to serve as a basis for professional reflection on teaching (Palmer, 2000).

Microteaching has been a technique used in teacher training. The idea of microteaching is that teaching can be delineated into specific skills or teaching behaviors. These skills can then be analyzed, demonstrated, and refined with practice and feedback critique. Thus instructional competence can be improved (Eble, 1980).

Whether looked at as an art or a science, teaching can be improved. Much research has been conducted to ascertain effective teaching behaviors.

Effective Teaching Behaviors/Characteristics

Characteristics of effective teachers are the main focus of several researchers. Pratt (1979, 1981, as cited in Brookfield, 1986) refined the following clusters of successful teaching behaviors of adults from his research: the development of adult-to-adult relationships, development of instructional understanding and responsibility, development of closure and ending, development of role credibility and clarity, and development of the so-called contract of teaching (staying within instructional boundaries). Wilson (1979, as cited in Brookfield, 1986) advanced five categories of teaching competence—the teacher as a content resource person, as a learning guide, as a program developer, as in institutional representative, and as a controller of expressive competencies.

Key ingredients of sound teaching are increasingly identified by hundreds of research studies. These key ingredients are the ability to communicate well with and to motivate students, a deep subject matter knowledge, presentation clarity, fairness, and enthusiasm for teaching and one's subject. Seldin concludes, "Teaching is an art and not a science. Yet, every artist needs a grounding in technique before setting to work, and there is not artist—or teacher—who cannot improve his or her skill."(Seldin, 1995, p. 6)

Chickering and Gamson, (1991, as cited in Grubb, 1999) posit several principles for good practice at the undergraduate level: "encourages faculty-student contact, encourages cooperation among students, encourages active learning, gives prompt

feedback, emphasizes time on task, communicate high expectations, and respects diverse talents and ways of learning" (Grubb, 1999, p. 43).

Gilbert (1958, as cited in Ross-Gordon, 1991) identified behaviors/characteristics of good and poor college instructors as perceived by 144 college faculty and department heads through use of the Critical Incident Technique. The most frequently reported best teaching behaviors/characteristics were the following: subject matter knowledgeable, practical application of content material, encouragement of students to think, providing academic help, encouragement of students' asking questions during class, use of concrete examples, and being willing to discuss student personal problems.

Menges and Kulicke (1984, as cited in Ross-Gordon, 1991) also used the Critical Incident Technique with 54 college students in order to pinpoint variables concerned with college classroom satisfaction and dissatisfaction. Most frequently reported were teacher interest in students, respect of or consideration for students, criticism of students, communication patterns, instructor feedback, interest in content area, and acceptance of student opinions when expressed in class.

Sheehan and Duprey (1999) conducted a study to identify qualities of effective university teachers. The study also sought to identify items on a teaching rating scale that would predict effective university teaching. Related literature reviews emphasized that Marsh and colleagues (Marsh, 1983, 1984, 1987; Marsh & Dunkin, 1992; Marsh & Roche, 1997, as cited in Sheehan and Duprey, 1999) concluded that teaching is multidimensional in nature and delineated nine dimensions of teaching.

From the literature review and examination of many sample rating scales and items, Sheehan and Duprey formulated their own 27-item Likert-scale questionnaire

course evaluation instrument of teacher behaviors they deemed of prime importance in effective instruction. Course evaluations were taken from 161 psychology courses over a two-year period. A regression analysis was conducted to determine the prime predictors of teaching effectiveness. Their finding paralleled the general findings in the literature on effective teaching. The data "support the notion that teaching effectiveness can be predicted" (Sheehan and Duprey, 1999, p 5).

Murray (1997) reviewed literature dealing only with teaching activities occurring inside the classroom. With the classroom domain, he focused on "low-inference" teaching behaviors (instead of global "high-inference" ones) that were defined by Rosenshine and Furst (1971, as cited in Murray, 1997) as concrete, denotable actions of the teacher that are recordable with little or no inference on an observer's part. Three examples of low-inference teaching behaviors are "gestures with arms and hands," calls students by name," and "signals topic transition." Several reasons were given for focusing on low-inference teaching behaviors including the idea that these teaching behaviors of the classroom are the "leading edge" of the practice of teaching, or the direct contact point between student and teacher, and are the most likely to effect impact of student learning than other teacher characteristics. He continues to say that investigations on teacher behaviors in the classroom can contribute theoretically and practically to post-secondary education (Murray, 1997).

Murray states that classroom teaching behaviors research is divided into two categories based on methodological approach—observational and experimental. Observational approach is the approach with no manipulation or control of variables.

Experimental approach is the approach with deliberate manipulation and control of variables.

Observational studies reviewed are numerous. Murray's conclusions are several in number including the following: Classroom teaching behaviors in a variety of research designs proved to make significant differences in course content learning, attitudes of students, and general motivation for more learning; and specific teaching behaviors within the traditional lecture method contribute to general teaching effectiveness across academic disciplines (Murray, 1997). Some of the major observational studies are summarized in the next several paragraphs.

Solomon, Rosenberg, and Bezdek (1964, as cited in Murray, 1997) yielded results suggesting "that what the teacher does in the classroom is indeed related to student cognitive and affective development (p. 176)." Most of the teaching behaviors in the study were "high-inference" ones and thus were rather difficult to interpret and translate the results into behavioral terms.

Solomon (1966, as cited in Murray, 1997) did a follow-up to the prior study. Classroom teaching behaviors were gauged by a 69-item questionnaire answered by students at the end of the term. This follow-up study yielded more evidence "that perceived teaching effectiveness is predictable from specific classroom behaviors of the instructor" (p. 178).

Tom and Cushman (1975, as cited in Murray, 1997) investigated classroom teaching behaviors related to student self-rating of what was learned in some university agriculture courses. The study dealt with low-inference teaching behaviors and instructor frequency of use and student rated progress in reaching course goals. This study, too,

gave similar evidence that student learning is related significantly to specific teacher classroom behaviors.

Mintzes (1979, as cited in Murray, 1997) investigated teaching effectiveness and specific instructor classroom behaviors. A positive relationship was established here as well using student ratings of teaching assistants.

Cranton and Hillgartner (1981, as cited Murray, 1997) used videotape to record 28 instructors' classroom teaching behaviors at a major university. The instructors taught in a wide variety of disciplines. Teaching behaviors were noted by 5-second observations and compared with student ratings on the Teaching Analysis by Students questionnaire. The results confirmed that low-inference teaching behaviors account for much variance in perceived teaching quality.

Murray (1983, 1985, as cited in Murray, 1997) used student rating to measure teaching effectiveness. Significant correlations were found between teaching behaviors and instructional outcomes. The 1983 study results suggested "that low-inference teaching behaviors are related to a wide range of cognitive and affective outcome measures" (p. 186).

Erdle and Murray (1986, as cited in Murray, 1997) investigated possible differences across the academic disciplines. Correlations between student instructional ratings and teaching behaviors were similar among the academic disciplines.

Roberts and Becker (1976, as cited in Murray, 1997) studied teaching behaviors of 123 teachers using one-on-one instruction in vocational and technical courses in secondary and post-secondary schools (technical schools and community colleges).

Observations, rating scales, and narrative summaries rated teaching behaviors. Specific teaching behaviors correlated to student outcomes.

Murray reviewed several experimental studies that supplement or complement his previously reviewed observational studies. Murray's conclusions are several in number including the following: Classroom teaching behaviors appear to be more than correlates. Clarity and enthusiasm seem to be causal antecedent of several instructional outcome measures. Low-inference teaching behaviors appear to influence objective measures of student learning. Teaching behaviors accounted for a good proportion of outcome measure variance in observational and experimental studies. Some of the major studies are summarized in the next paragraphs.

On the idea of teacher enthusiasm several studies are mentioned. Coats and Smidchens (1966, as cited in Murray, 1997) tested the bearing of teacher enthusiasm on learning outcomes. Ware and Williams (1975, 1977, and Perry, Abrami, and Leventhal, 1979, as cited in Murray, 1997) were "Dr. Fox" experiments on teacher enthusiasm. Andersen and Withrow (1981, as cited in Murray, 1997) showed that lecturer expressiveness impacted positively on perceived teacher effectiveness. Slater (1981, as cited in Murray, 1997) determined that teacher enthusiasm strongly impacted ratings, achievement, and student motivation for further learning. Perry (1985, as cited in Murray, 1997) and Perry and Magnusson (1987, as cited in Murray, 1997) dealt with "perceived control" in the classroom. Positive impact was revealed in these studies, also. Perry and Penner (1990, as cited in Murray, 1997) paralleled other results of teacher behavior effects. Teacher clarity as investigated in Land (1979) and Land and Combs (1981) (as cited in Murray, 1997) showed a significant correlation with student learning

and perceived teacher effectiveness. Hines, Cruickshank, and Kennedy (1985, as cited in Murray, 1997) investigated instructor clarity in a quasi-experimental study. Teacher clarity as a teaching behavior was found significantly related to student learning outcomes.

Murray (1997) states, "The research reviewed above indicates that there are specific, concrete teaching behaviors that make a difference in the college classroom" (p. 195). Furthermore, he says that the reviewed research "indicates that college teaching effectiveness is predictable from specific, low-inference classroom behaviors of the instructor" (p. 201).

Feldman (1988, as cited in Marsh and Dunkin, 1997) examined 31 studies that evaluated degree of agreement of student and faculty perspectives on specific components of teaching effectiveness most important to effective instruction. The average correlation of .71 between the ratings patterns indicated the two groups agreed in a substantial manner.

Work completed by Cruickshank (1990, as cited by Gordon and Yocke, 1999) on teacher behaviors and effectiveness summarized ten research studies (Rosenshine & Frust, 1971; Dunkin & Biddle, 1982; Cruickshank, 1986; Medley, 1977; Gage, 1978; Borich, 1979; Good, 1979; Emmers & Evertson, 1982; Stallings, 1982; Potter & Brophy, 1988). Teacher effectiveness behaviors were organized into these seven clusters: teacher character traits, what the teacher expects, what the teacher knows, what the teacher teaches, how the teacher teaches, how the teacher manages the classroom, and how the teacher reacts to students. Coker compiled a list of teaching competencies (to form his COKER instrument) from the following observation instruments: OSCAR 5V (Medley,

1973), STARS (Spaulding, 1976), FLAACS (Soar, Soar, and Rogosta, 1971), TPOR (Brown, 1970), and CASES (Spaulding, 1976). Findings from the study were that many of the teaching effectiveness competencies had significant positive relationships with certain teacher temperament personality types and that systematic observation and research concerning teaching behaviors merited further attention of teaching effectiveness scholars on a larger scale (Gordon and Yocke, 1999).

Gordon and Yocke's study investigated teaching effectiveness as determined by the Classroom Observation Keyed for Effectiveness Research (COKER) of a select group of beginning health occupations and industrial education teachers. The study examined relationships between personality characteristics and observable teaching effectiveness of starting career and technical education teachers. Coker and Coker's (1982, as cited in Gordon and Yocke, 1999) extensive work identified key competencies determined to be effective teaching prerequisites at any education program level: instructional strategies/ techniques/methods, communication with the learner, and learner reinforcement-involvement. The Gordon and Yocke study utilized the COKER instrument.

When researchers and practitioners look at the role of the community college teacher and at what makes effective teaching, traditional instructional practices come under fire for being antiquated and limited as to effective learning of community college students. What is favored is the adjustment of instructional activities to match the learning styles of students taught. Questions arise. What is an effective teacher? What teacher characteristics make for effective teaching behaviors? Identification of effective teaching behaviors is a problematic task ("Teaching and Learning in the Community College," 1998).

Effective teaching is a magnet that draws enrollment and sustains enrollment. Student performance is a direct result of teaching. The paradigm of higher educational undergraduate instruction is and has been in a shifting process for the last several years. The shift is from a strictly teacher-centered (traditional didactic lecture method, "sage on the stage" idea) focus to a greater student-centered (collaborative/cooperative learning strategies, "guide on the side" idea) focus. Knowles, Holton, and Swanson (1998) (as cited in Guzman, 2000), point out that "education emphasizes the educators, while learning emphasizes the person in whom the change occurs or is expected to occur" (p. 66). The process is a slow and tedious one, but is it too slow and too tenuous for the rapidly increasing numbers of NTS enrolled in higher education?

Effective teaching, when looked at through the lens of student evaluations in both two-year and four-year colleges, is remarkably similar. The top ten ranked characteristics of effective community college teachers (from 1920-1989) are the following: is student-oriented/interested in students, has a thorough subject matter knowledge, uses a variety of teaching methods, posses good communication skills/explains effectively, motivates/ inspires students, is well-organized/good planner, posses an inborn capacity/dedicated to/enjoys teaching, is enthusiastic, has broad scholarship, and up-to-date in discipline (Miller, Finley, and Vancko, 2000).

In summary, effective teaching behaviors/characteristics are relative—much depends upon the instructor (personality, communicative skills, organizational skills, etc.) and much depends upon the student (TS, NTS, etc.). Perspective is significant. However, effective teaching behaviors/characteristics are "remarkably similar" when considered across disciplines (subject content areas) and place (university, CTC, and

adult education settings) as evidenced by research. Absence of attention to investigations of teaching effectiveness in the CTC world warrants study to add to the knowledge base by focusing on the Louisiana Technical College and its office systems technology programs in particular.

TS and NTS Perceptions of Effective Teaching

Obviously the ever-increasing number of NTS enrolling in colleges and other institutions of higher learning has and is producing a vigorous examination of and a growing debate concerning teaching methods and course delivery issues. Theorists and practitioners raise many questions. What is different about teaching NTS and TS? What differences in instructional practices are necessary in teaching NTS as contrasted in teaching TS? Are there differences in teaching and learning concerning the two groups?

Brookfield categorized research in the field of teaching adults into four general themes:

> the awareness by teachers of adults of the need for a style of teaching different from that used with children, the pedagogic implications that can be derived from analyses of adult learning theory, the factors contributing to instructional effectiveness most commonly identified, and learners' perceptions of the qualities of successful teachers (Brookfield, 1986, pp. 128-129).

Learners' perceptions of prime teaching behaviors are another area of research. Solomon and Miller (1961, as cited in Brookfield, 1986) advanced a number of variables of effective teaching behaviors as a result of teacher interviews and research reviews. Using a number of these variables, Solomon, Bezdek, and Rosenberg (1963, as cited in Brookfield, 1986) studied 24 evening course instructors and established profiles of teaching effectiveness. Their results suggested that presenting information with clarity

and precision and much teacher animation (generating excitement and using humor) while teaching were the characteristics that significantly contributed to greater factual knowledge and comprehension in students. McKeachie (1970, as cited in Brookfield, 1986) did a literature review on instructional methods of adult learners and psychological characteristics of effective teaching. He offered several broad conclusion including placing high value on instructors skillful in facilitating class discussions and in generating interest in the content.

Zerges (1984, as cited in Brookfield, 1986) explored the link between personalities of students in continuing education courses and their perceived valued teacher behaviors. Those behaviors rated most important were the following in order of importance: up-to-date content knowledge, clear objectives and expectations, sequential organization of content, and fair evaluation with prompt feedback.

Schmidt (1984, as cited in Brookfield, 1986) researched learning styles of NTS at the University of Wisconsin. The returning adult students liked teacher-directed work (with an independent bent) and non-competitive class activities. Developing social relationships with others students or instructors was not high on the list of importance. Most wanted class to show the proper relationship of theory and actual practice.

Characteristics of good adult teachers have been delineated by several researchers and investigators. Apps (1981, as cited in Brookfield, 1986) formulated a list of eight exemplary teacher characteristics. These exemplary teachers show concern for learners, show knowledge in their content area, connect theory with practice as well as their content to other fields, are confident, are open and not narrow-minded, reveal authentic personality to students, show willingness to do extra beyond course objectives, and create

an atmosphere that fosters learning. Apps went on to advise teachers to know student background, use student experiences to add to class content, to mesh theory and practice, to establish an atmosphere conducive to learning, to use a variety of format and technique, to give feedback, to assist students in resource acquisition, and to be accessible to students out of class. Stephens and Roderick (1971, as cited in Brookfield, 1986) say that exemplary characteristics of NTS teachers include liking people, acting intelligently toward people, and being courteous, tactful, good humored, fair, imaginative, energetic, articulate, and adaptable. Draves (1984, as cited in Brookfield, 1986) stated that NTS teachers love their content area, know their subject, and desire to share their knowledge and skills. He stated further that effective teaching behaviors include effective listening, avoiding punitive action, set up a supportive learning climate, use of humor, and the instilling of confidence in their students.

Ross-Gordon (1991) conducted a study to determine what NTS in undergraduate school perceived as effective teaching. The steady growth of the NTS population warranted the investigation. "The research generated four categories of critical requirements for effective teaching: teaching style, teacher-student relationships; personal characteristics, and attitudes toward adult students." (Ross-Gordon, 1991, p. 14) The researcher also compared NTS perception of effective teaching with that previously identified by TS. The study wanted to explore NTS perceptions of effective college teaching with the special desire to identify those characteristics making NTS perceptions different from the perceptions of TS. Ross-Gordon's research took into consideration other studies of the perception of effective teaching of undergraduate college students.

Ross-Gordon's study used the Critical Incident Technique (developed by Flanagan in 1954). A randomly selected group of 526 undergraduate students at a northeastern university were sent a questionnaire asking for recall of representative situations of the best and poorest instruction personally experienced by the individual students. The questionnaire also asked for general demographic data. Usable responses numbered 181. Content analysis of the six open-ended questions was done. Responses were then placed into these three general headings: classroom learning situation, personal reactions to recalled incidents, and teaching behaviors or characteristics (Ross-Gordon, 1991).

The sub-category of teaching behaviors or characteristics is examined here. Four sub-categories under the teaching behavior and characteristics heading were generated: "teaching style, teacher-student relationship, teacher's personal characteristics, and attitudes toward adult students" (Ross-Gordon, 1991, p. 20). The 16 most mentioned teacher characteristics/behaviors in the study were the following in rank order: availability and helpfulness, encourages discussion/ questions, shows concern for individual student, clear presentation, displays enthusiasm, stimulates interest, flexibility, well-organized lectures, challenging, knowledgeable, chooses relevant content, humorous, fair, controls classroom, open-minded, and feedback to students. Fourteen of the 16 most frequently mentioned items in the Ross-Gordon study are in the Feldman lists from his meta-analysis of 31 studies (1988, as cited in Ross-Gordon, 1991). Rated higher by adult students in the Ross-Gordon study were teacher availability /helpfulness, teacher encouragement of discussion/questions, intellectual challenge, and teacher humor. Rated higher by TS were well-organized lectures and teacher knowledge. This study's data

suggest that undergraduate NTS want several of the same teaching behaviors that TS desire in a teacher. NTS want a teacher that is flexible (in response to their adult life needs and situations) and in control of the classroom. NTS want teachers that are available outside of class, challenging, good facilitators of classroom discussion, and use humor in the classroom. The Ross-Gordon study recommends that future studies include large samples of TS and NTS and various sub-populations of adult students (Ross-Gordon, 1991).

"When people recall their educational experiences, they tend to remember, above all, not courses or subjects or the information imparted, but people who changed their minds and lives, people who made a difference in their developing sense of themselves" (Noble, 2002, as cited in Alfred, 2003, p. 21).

Students' perceptions on the quality of learning opportunities and instructional teaching behaviors produce an extremely useful perspective. What students think or perceive about teaching behaviors is important (Condition of Education 2000, 2000).

Echoing the justification of the Ross-Gordon 1991 research, this investigation based its justification on the continued growth of the NTS population, particularly in the CTC setting. Summation of the various studies reveals differences in the perceptions of TS and NTS as to the most effective teaching behaviors. Each respective group values some TBs in common and, additionally, holds other TBs in higher regard than the other group. This study focused on perceptions of TS, NTS, and faculty in CTC settings and adds to the knowledge base of teaching effectiveness there and help to close part of the research gap in the field. Specifically, the investigation focused on office systems technology programs in the LTC. The office systems technology programs, because of

the innovations in technology and many returning NTS, was a prime area for studying differences in student perceptions concerning effective teaching behaviors. Focusing on the perceptions of female instructors (since male instructors are minimal) as to effective teaching behaviors eliminated any gender-bias that may exist in other disciplines.

McCollin (2000) points out that variables such as course characteristics and gender were significant in affecting the perception of effective teaching behaviors from the student perspective.

Student gender has little effect on ratings or evaluations of instructors and courses. Instructor gender may have impact. Some studies show no relationship between instructor gender and student evaluations; however, other investigations reveal that adherence to a gender-appropriate style of teaching may produce higher or more favorable evaluations (Basow and Silber, 1987; Bennett, 1982; Kierstead, D'Agostin, and Dill, 1988; Marsh and Dunkin, 1992; Statham, Richardson, and Cook, 1991, as cited in Davis, 1993).

Sensenbaugh (1995) points out that student attitudes concerning graduate teaching assistants differ depending on the gender of the graduate teaching assistant and the gender of the student. Female students rated instructors more favorably or higher on interpersonal flexibility and instructional adaptability (characteristics more visible in female instructors in the study). These same female students tended to rate male instructors more favorably or higher on organizational stability (characteristics more visible in male instructors in the study) than they did female instructors.

In a 1996 E. R. Singer study reviewed by Gaddis (1999), gender was an issue in teaching paradigms. The study encompassed biology and math courses that had a

relatively low number of female instructors. Because of the low percentages of instructors of one gender, the analysis of survey responses were thought to be problematic when it came to data analysis and interpretation.

Cramer and Alexitch (2000) investigated student evaluations of instructors. The study concluded that student evaluation of instructors may be influenced by instructor gender as well as other variables.

Related Research

The literature review generated related research findings in associated areas of effective teaching. This related research helps to illuminate the teaching-learning process.

Alciatore and Alciatore (1979, as cited in Ross-Gordon, 1991) asked almost 1600 college seniors about the quality of their undergraduate college teaching. TS and NTS agreed concerning characteristics of their worst and best instructors. TS were more critical of their teachers as a group.

Keller and Switzner (1983, as cited in Ross-Gordon, 1991) inquired of 35 undergraduates to name their best teacher and then describe that instructor completely. Student responses were divided into four categories: psychological (disposition, personality, character), role (role-relevant beliefs and habitual activities), interaction (communication behaviors like gesture and voice), and other. NTS related greater to the psychological and interaction constructs than did TS. TS related greater to role behaviors. The small number of study participants limits the generalization ability of the study.

Donaldson (1987 and 1988, as cited in Ross-Gordon, 1991) used content analysis of NTS letters of nomination of off-campus instructors for a teaching award. The rank order of the extracted effective teaching behaviors compared favorably with Feldman (1976, as cited in Ross-Gordon, 1991) and his "non-structured response" studies. The top three from Feldman's review matched three of the top five of Donaldson's. They were these: teacher concern and respect for the student, teacher subject matter knowledge, and stimulation of subject matter interest. Donaldson's other two of the top five were relevance of class material and instructor's professional commitment.

Some research studies do exist on related aspects, also. One related study is that of Kirby and Chugh (1993). Their paper is a description of their investigation of students and distance education instructors as to their perceptions of the audio-teleconferencing environment. Their research is an on-going program to investigate the Kirby and Boak (1987, as cited in Kirby and Chugh, 1993)) instructional model examining whether audio-teleconferencing environment elements interact with predispositions of instructors in determining instructional strategies. This study utilized a Q-Sort and a short questionnaire. The comparison of the students' and instructors' perceptions of elements in the audio-teleconferencing environment revealed several differences. Students attached greater importance to student characteristics and other factors related to course availability. Instructors ranked instructor traits and abstruse elements like goals of education higher. An earlier paper by Kirby and Chugh (1992) (as cited in Kirby and Chugh, 1993) looked at the audio-teleconferencing instructors' perceptions of aspects of the instructional environment. This research found that instructors perceived instructor

characteristics directly related to teaching, such as verbal skills and aptitude for teaching, as the important elements in the instructional environment.

"A critically reflective stance toward the practice of community college teaching can help teachers feel more confident that their judgments are informed and leave them with energy and intent to do good work" (Brookfield as cited in Outcalt, 2002, p. 31). One premise of reflective practice is that it enables instructors to make more and better informed decisions. Informed decision-making is the core of good teaching. Literature shows that information from students about their learning can help teachers do their jobs better.

Brookfield makes the point that seeing oneself through the eyes of student learners would surprise many community college instructors. Seeing one's teaching behaviors and practices through student eyes can assist teachers in teaching more responsively and more efficiently. "As work on classroom research demonstrates, checking teachers' assumptions about teaching practices against students' perceptions of those same practices can alert them to those assumptions they can depend on and those they need to reframe" (Brookfield as cited in Outcalt, 2002, p. 36).

A 31-study review conducted by Feldman (1988, as cited in Cashin, 1995) found students' view and faculty's view of effective teaching to be very similar with a .71 average correlation. Obviously the two groups showed some differences in emphasis. Students perceived that interesting instructor, good speaking skills, and availability to help were most important; whereas, faculty perceived intellectual challenge, motivating students, high set standards, and fostering student-initiated learning most important (Cashin, 1995).

Marsh and Bailey (1993, page 122, as cited in Miller, Finley, and Vancko, 2000) state that student evaluation of teaching effectiveness is supported by empirical research for reliability and validity. It was concluded that student evaluation of teaching effectiveness is reliable and stable and relatively valid set against a variety of effective teaching indicators.

Teaching Culture in Higher Education

It is students, not colleagues or administrators, who see the every-day-of-class teacher attitudes and behaviors of those instructors who teach them. The question is then this: Who can better give feedback concerning teacher effectiveness than the students who are actually being taught? Shulman (1999) (as cited in Dant, 2000) agrees that "in order to take learning seriously, we have to take learners seriously" (p. 2).

It is this idea of taking learners seriously that supports the investigation of effective teaching behaviors from the perspective of students as well as faculty and that compels a comparing and contrasting look at results of this project.

The American Council on Education reported in 1996 that 50% of all colleges have increased attention on the teaching and learning process in the decade preceding the report (El-Khawas & Knopp, 1996).

To determine if an instructor's teaching style makes any difference in the learning of students, Conti (1990) said that "teachers must first identify their teaching style and then critically reflect upon the classroom actions related to that style" (Conti, 1990, as cited in McCollin, 2000, p. 5). Many institutions of higher education have teacher

centers and other faculty development that use instruments identifying teaching behaviors to use to improve student learning.

The emergent teaching culture brings with it emerging challenges for higher education. Many interwoven and interacting developments over the past 30 years have produced and or still producing the culture of teaching in post-secondary education. Some of these developments are the following: greater access to post-secondary education via open admissions, outreach to adult learners, and affirmative action; remedial and other developmental education; changes in student values that reflect changes in general society values; demographic shifts in post-secondary population; the idea of multiculturalism and commitments to diversity; market demands; state accountability and accreditation requirements; new technologies; and competition from outside-the-academy providers (DeZure, 2000).

Travis (1995) (as cited in Barker, Sturdivant, & Smith, 1999) points out the "lack of preparation for teaching encountered by college professors" (p. 14). Little attention is given by institutions of higher education to faculty ill prepared for teaching in the classroom.

Effective teaching in the higher education classroom is central to the issue of NTS. Emphasis on quality must be there. Two observations are appropriate here. Nesbit (1998) makes the point that research has neglected what goes on inside the classroom while concentrating on what goes in and what comes out of it. DeZure (2000) suggests that enormous strides in promoting a culture of teaching in higher education have been made in the last thirty years. A redefining of faculty roles and a re-conceptualization of the scholarship of teaching has occurred. A paradigm shift from teaching to learning has

occurred. Evaluation of teaching has become more systematic than sporadic in nature. However, this emergent culture of teaching lies within the larger culture of higher education, presenting a challenge to the traditionalists who are mainly committed to the other missions of higher education—research, cultural diversity, and other specific field scholarship. The hope is that the larger culture will not swallow up the emergent culture that is so vital to the survival of its larger counterpart, particularly in this time of vast numbers of non-traditional students (DeZure, 2000).

Changes in higher education teaching methods and course delivery strategies have incorporated many of the needs and characteristics of non-traditional students according to adult learning theories being advanced as current best practices in the teaching of adult students. Obviously Malcolm Knowles' andragogy has fit here for a number of years. Knowles moved the emphasis from teaching adults to helping adults learn. Mezirow (1991) and his ideas about transformational learning, Brookfield (1986) and his ideas on interactive learning, and Freire (1972) and his ideas for attaining social change are just some of the theorists concerned with adult learning and the needs and characteristics of adult learners/NTS. There are many other theorists in the adult education arena.

Knowles introduced the idea of andragogy in the United States. He defined it as "the art and science of helping adults learn" (Knowles, 1970; 1980, as cited in Cyr, 1999, p. 2). His four primary assumptions concerning characteristics of adult learners were that they do the following:

- Become increasingly independent and self-directing,
- Accumulate experience which becomes a resource for learning,

- Orient their formal and informal learning around the developmental tasks of their social and work roles, and
- Orient their learning toward performance rather than subject (Knowles, 1970; 1980, as cited in Cyr, 1999, p. 2).

Knowles conceptualized that adults prefer active learning situations and that adults' self-direction makes them into pro-active learners during this stage of their lives (a fifth assumption added later). Individual learning activities and total programs for adult learners should involve the following:

- The establishment of a climate conducive to adult learning,
- The creation of an organizational structure for participative planning,
- The diagnosis of needs for learning,
- The formulation of directions of learning (objectives),
- The development of a design of activities,
- The operation of the activities, and
- The re-diagnosis of needs for learning (evaluation) (Knowles, 1970; 1980, as cited in Cyr, 1999, p. 2).

Andragogy shows the need for more focus to be on the process of teaching and learning than just merely the content to be learned. When one considers the myriad definitions of NTS, one can see the implications for teaching and learning that andragogical assumptions hold. The NTS is different in many ways from the TS who comes straight from high school to higher education. One of the major differences is the greater number of and higher complexity of life experiences that the NTS brings as baggage. "The basic

format of the andragogical model is a process design that uses life experiences" (Harris, 2003, p.38).

Bruner (1966) posits that the adult learner learns through discovery. Discovery is "in its essence a matter of rearranging or transforming evidence in such a way that one is enabled to go beyond the evidence so reassembled to additional new insights" (Bruner, 1966, p. 608). Learning is an active process. The learner builds new ideas and concepts on past knowledge. The learner gets and transforms information and then constructs hypotheses and can make decisions on cognitive structure. This concept is Bruner's constructivist theory.

Knowles says that Bruner's theory is founded on a learning theory that involves "three almost simultaneous processes: (1) acquisition of new information . . .; (2) transformation, or the process of manipulating knowledge to make it fit new tasks; and (3) evaluation, or checking whether the way we have manipulated information is adequate to the task" (Merriam and Caffarella, 1999, p. 255).

Bruner (1966) emphasizes the need for student and instructor to engage in active discourse and questioning. The instructor must see his or her task to change the information to be mastered or learned into an appropriate format for the learner's present state of understanding. Curriculum must be organized in a manner the student can utilize to build continually upon what is already learned. His constructivist theory provides a general instruction framework based upon cognition.

CTC proponents hail their institutions as "teaching institutions." Many CTCs do little with the aim of the improvement of instruction. Many CTC proponents say that faculty there choose to teach in CTCs because they have a greater interest in teaching

than in research and publishing. Teaching quality probably matters most to those students at CTCs that are most academically underprepared (Grubb, 1999).

CTC instructors do not devote much time to research. They have much more time to devote to instructional processes of teaching. Many CTC proponents argue that instruction was better in CTCs than in universities because of the wide range of student abilities and the undistinguished student records required good teaching (Cohen and Brawer, 2003).

Many instructors in post-secondary institutions simply reject the importance of any kind of pedagogy or andragogy while emphasizing content. Also, many staff development programs emphasize content through institutional support of subject area conferences and specialized study (Grubb, 1999).

"Faculty development has been a definitive movement in higher education for at least 30 years; the effects, however, are hardly visible in college classrooms" (Murray, 1995; Schuster, Wheeler, & Associates, 1990, as cited in Murray, 1999, p. 1). Why has impact been so nil? Most programs do not have cohesiveness and are little more than an isolated single effort as a single agenda or a series of disparate efforts with no set objectives. Murray (1999) investigated faculty development at 130 CTCs and found that there exists lack of commitment from leadership in the area of faculty development. The literature review produced a list of effective faculty development components. These components are the following: institutional support, establishment of a formal, structured program with specific activities, connection of faculty development with a reward structure, faculty ownership, and investments in teaching.

For many CTC students the instructor is the key to their learning. Several factors distinguish effective teachers from ineffective teachers. These factors should be investigated further in educational research (Kanu, 2000).

The higher education teaching culture is cognizant of the changing student demographics in the student populations of post-secondary institutions, particularly in the CTCs where the largest numbers of NTS are enrolled.

NTS Needs in the Classroom

Because of their complex nature and life experiences, NTS have needs that differ from TS, who have come almost immediately from secondary school into post-secondary learning institutions. The special needs of the NTS range from physical facilities to remediation and from class scheduling to instructional preferences. For NTS to be successful in post-secondary education, institutions of higher learning must take a closer look at NTS issues and concerns and how they are different from TS issues and concerns.

Kerka (1995) says that a recurring theme in many studies of retention of adult learners in programs ranging from adult basic education through higher education "is the crucial importance of the first few weeks, especially the first class" (p. 1). Inadequate attention from the teacher is one factor declared by many who dropped out after a few weeks of class. Another cause of early leaving is a gap between what the learner expected and what the course and classroom was in reality. D'Amico-Samuels (1990) (as cited in Kerka, 1995) says that past negative educational experiences sometimes were too strong to shed, particularly in instances with instructors that remind these students of those negative experiences. This negative experience factor is particularly overwhelming

to students that had had culturally insensitive or racist teachers and/ or curriculum, to students that had been labeled failures, and to students with families and community situations demonstrating that an education does not always improve mobility.

Basic strategies for adult learners whether as learners in adult basic education or NTS in higher education always include high-quality instruction (Tracy-Mumford et al, 1994; as cited in Kerka, 1995).

"Despite varying levels of connection to the academic world, faculty members across disciplines hold to traditional instructional approaches," says J. Palmer (Outcalt, 2002, p. 12). A total of 88% overall use lecture/discussion as the primary method of instruction in all or some of their courses. Vocational and career-related program teachers use the lecture/discussion method less frequently than their colleagues in liberal arts divisions.

Courses designed for NTS should capitalize on the adult students' learning strengths. The courses should emphasize learning through interpretation, synthesis, and knowledge application instead of the traditional presentation of large amounts of new information (Howell, 2001).

Imel (2001) points out that research findings in the area of instructors and instruction reveals important information concerning NTS in post-secondary classrooms. It is found that those instructors that assist NTS in connecting their real-world experiences and previous learning to what is being learned are perceived as the most effective and motivating (Donaldson et al., 2000; Kasworm and Blowers, 1994, as cited in Imel, 2001). Strategies of instruction that are especially meaningful are the ones that provide the following: explanations and examples helping with connection to previous

knowledge, class discussions of topics, and involvement in small-group projects. A significant number of students indicated instructors actually interfered with their learning because the instructors assumed homogeneity of students, did not understand different learning approaches, and wanted students to learn subject matter the students themselves thought to be irrelevant (Donaldson et al 2000 as cited in Imel 2001). NTS show special concerns and needs in the classroom that should be addressed by post-secondary institutions considering the individual needs of each of the NTS.

C. Bishop-Clark and J. M. Lynch (1992) state their literature review of likeness and differences of TS and NTS indicate several differences. NTS have a tendency to look upon professors as peers, are more intrinsically motivated to learn, like informal learning, and tend to be more goal-oriented than TS. Bishop-Clark and Lynch used focus groups to investigate NTS' learning experiences. Use of focus groups in research is effective for generating perceptions and opinions (Krueger, 1988, as cited in Bishop-Clark and Lynch, 1992). This investigation concludes that NTS are motivated in a different way and like different learning styles than their TS counterparts. TS were found to be more tolerant of examples that were not practical. Lecturing tended to be their preferred teaching technique (Bishop-Clark and Lynch, 1992).

NTS taking chemistry courses often do not comprehend words casually used by the instructor or the jargon of the field. Many times traditional teaching methods are ineffective because of the NTS different background, level of preparedness, and general learning behaviors (Shiber, 1999).

The Final Report of the Women's Needs Assessment Study Group of 1992 points out that problems exist for women in the classroom at Stanford University. Stanford

women undergraduate students indicate a feeling of not being able to fit into the traditional male-centered academic model. Women in general are less assertive and less forceful in classroom discussions and tend not to derive as much from these discussions as do most men because of women's different communications patterns and learning styles (Romano, 1994).

Bovell and Ansalone (2001) state that significant research (Nordstrom, 1989) has underscored that adult students differ from traditional students by reason of how they learn. Price (1996, as cited in Bovell and Ansalone, 2001) suggests that adults have distinct learning styles. With the increasing percentage of NTS enrolling in post-secondary institutions, it becomes quite obviously necessary for these institutions to know adult learning styles and NTS perceptions of effective teaching behaviors.

The 1997 findings of the Commission for a Nation of Lifelong Learners pointed out that many of the current practices in post-secondary education, including instructional modes, are ill-adapted to adult learner' needs (Mancuso, 2001).

Bowden and Merritt tell educators of adults to keep in mind four aspects of the adult learners: goals, desires, needs, and age. They believe that post-secondary institutions can genuinely educate adults based upon those four elements. (Bowden and Merritt, 1995)

Nancy B. Meyer advocates the enhancement of self-esteem and self-concept of NTS to foster and increase their academic success (Meyer, 1991).

Craig E. Nelson states that traditional teaching methods are biased unintentionally against many non-traditional students and for the traditional elite students (Nelson, 1996).

Adult education theories and practices have not been applied in any comprehensive fashion to higher education faculty development. However, higher education professional faculty development is moving beyond traditional practices and is now focused on effective teaching and classroom methodology (Lawler and King, 2000).

Even though there is much growth in the NTS population in CTCs, a large segment of faculty is not aware of NTS characteristics and motivations returning to formal education institutions. Faculty accustomed to instructing TS in day classes are generally not knowledgeable of teaching methods and strategies effective for NTS (Kelly, 1992).

> In summary, teaching the NTS requires that the instructor recognize that the motivations of such students differ from those of the TS who just finished his high school career. The instructor must seek to learn how those differences affect his teaching methods and the learning experience. Then he must modify procedures both inside and outside the classroom, so that those students obtain the maximum benefit from their academic efforts (Hofinger and Lehman, 1995, p. 5).

A research focus on instructional practices/effective teaching behaviors in areas where little research has been undertaken will enlighten post-secondary instructors and administrators from 4-year universities to 2-year community/technical colleges.

Study Justification

Determining the teaching behaviors instructors and students perceive most important can obviously be enlightening and instructive as to how to improve the quality of teaching. The perceptions of faculty members and different groups of students—TS and NTS—should be meaningful in terms of reflective practice of instructors.

Walsh and Maffei (1994, as cited in Miley and Gonsalves, 2003) used undergraduate students for an investigation. A survey was done concerning faculty-student relationship. Teaching behaviors were rated on a 7-point Likert scale. Students listed the following behaviors as greatly enhancing teaching: smiles and displays a friendly demeanor, treats students as equals, is available before and after class, greets students encountered outside of class, and is accessible outside of office hours. Faculty listed the following behaviors as greatly enhancing teaching: explains grading criteria, gives individual attention to students having difficulty, and applies the same evaluation criteria to all students. It is noted that instructors emphasized the mechanics of courses and that students emphasized social dynamics. It is noted that instructors and students have different perspectives as to the teaching process and that instructors may not be aware of the different perceptions. The investigators call for additional research to determine if students in different academic divisions or areas of a school perceive instructors in a different manner (Miley and Gonsalves, 2003).

E. McCollin in a paper presented at the 2000 Annual Meeting of the Mid-South Educational Research Association states, "There is a dearth of research comparing how traditional and nontraditional students are taught in a college or university setting" (p. 9). McCollin says that there is limited research that compares "perceptions of the teaching-learning transaction from both the instructors' and students' points of view" (p. 9). Beder and Darkenwald (1982) and Gorham (1985) investigated differences in teaching adults (NTS) and pre-adults (TS) (as cited in McCollin, 2000). Beder and Darkenwald found that teachers emphasized learner-centered behaviors when teaching adults and downplayed controlling behaviors. Teachers taught differently due to their perceived

differences as to learning-related characteristics of adults and pre-adults. Gorham's observations produced little evidence of emphasis on student-centered approaches in teaching adults. Some studies that compared the perceptions of NTS and instructors as to effective teaching yielded conflicting findings. Baum and Brown (1990) (as cited in McCollin, 2000) investigated college teaching effectiveness and revealed that students and faculty used basically different criteria in the evaluation of teaching effectiveness. Clow (1986) and Gifford (1992) (as cited in McCollin, 2000) used The Principles of Adult Learning Scale (PALS) and found differences in student and faculty perception of teaching style. Brooks (1988) and Mulholland (1996) (as cited in McCollin, 2000) produced investigational findings that revealed that students and faculty held similar views as to teaching effectiveness. Wilson (1994) (as cited in McCollin, 2000) showed like preferences as to effective teaching in students and instructors.

Pascarella (1997, as cited in Kanu, 2000) points out that not much research is done on the CTC level and that more research is needed there because CTCs are widely attended. Research is required to determine their success in effectively meeting the needs of their diverse students.

Kanu (2000) recommends further research concerning the perceptions of instructors and students regarding teaching effectiveness. She advocates additional studies in the CTC area to explore the complexities of the teaching process.

More empirical research about adult NTS and how these students learn in the fast-paced global society should be undertaken. Past theories should be re-examined in the light of new research and may require testing and revision. Teaching strategies and

methods must be developed to address the needs of NTS (Barker, Sturdivant, and Smith, 1999).

There is a growing need for sustained and in-depth research for validation of prior positions and theories of adult learning. Expansion of the knowledge about the distinctive facets of andragogy is a must for higher education. A need exists for examination of andragogical theories and principles to determine which are not exclusive to the adult NTS and may be applicable to any learner depending upon the learning situation and learner developmental level (Cyr, 1999).

Post-secondary institutions are putting greater attention and energy on teaching and learning issues. This fact is a result of two factors—public demands for accountability in teaching and public criticism of the dominant research culture. The entire issue of teaching and learning has morphed because of the changing and diverse population seeking post-secondary learning. Faculty in higher education must assist students with a growing multitude of problems and obstacles (Travis, 1995).

Howard R. D. Gordon's study of perceived teaching effectiveness of apprenticeship trainers of allied trades in the United States and Canada used a two-part questionnaire to determine perceptions of teaching effectiveness. A group of experts—business and industry representatives, community college administrators, and university faculty—established the face and content validity of the survey instrument. Reliability of the survey instrument was based upon the specifically chosen adult and technical education graduate students. The study revealed that apprenticeship trainers held the following items as "very important" concerning teaching effectiveness: present at all classes, fairness and impartiality regarding all requests, enthusiasm for subject matter and

students, listening to student comments and opinions, being exact concerning acceptable and unacceptable behavior, stating topics and objectives at start of classes, and giving considerate and appropriate responses to questions. The apprenticeship trainers held the following perceived factors of teaching effectiveness "highly significant": feedback and communication, student-instructor interaction, and explanation of procedures and policies (Gordon, 2003).

James A. Leach (1996) reported a study of business and industry trainers with the objective of describing characteristics of exemplary instructors. Leach points out some background studies for his work. Wotruba and Wright (1975, as cited in Leach, 1996) in a summation of 21 studies of good teaching characteristics found the most frequently mentioned qualities included the following: good speaking skills, encouraging, flexibility, fairness, enthusiasm, organizational ability, knowledge, positive attitude, and communication skills. Irby (1978, as cited in Leach, 1996) summarized 16 studies about student perceptions of effective teaching behaviors and found likenesses in four general categories: group interaction skill, instructor knowledge, enthusiasm/stimulation, and organization/clarity. Leach's study attempted to delineate characteristics that differentiated the exemplary instructors. Trainer participants in the study described characteristics they thought helpful in being effective instructors. The following behaviors were identified as being effective: tolerance, enthusiasm/high energy, flexibility, responsiveness, humor, and sincerity/honesty (Leach, 1996).

Technical instructors in two-year colleges and technical trainers in the business and industry workforce participated in a study by Olson (1994). Olson reviewed literature of the field regarding instructor competencies to develop an instrument for the

investigation comparing perceptions of the two groups of professionals. The study found 119 competencies common between the two groups with no statistically significant differences. Of the top ten competencies, seven were perceived to be "very important and performed often" by both groups. These behaviors were the following: subject matter knowledge, problem-solving ability, effective communication skills, group facilitation and discussion skills, effective writing ability, ability to use time effectively and to set priorities, and adult learning theory knowledge. This study calls for more investigation to be undertaken on a larger scale to determine teaching behavior competencies of technical trainers and technical college instructors (Olson, 1994).

A study of CTC business instructors and their students reports that in the business education field there has been no research that addresses matching teaching styles of business instructors and learning styles of students. The study concluded that additional research is warranted to help instructors teach more effectively in business/office educational programs (Tucker, Stewart, and Schmidt, 2003).

Almost 20% of CTC students are seeking technical or computer training, and more than 25% of those taking non-credit courses at CTCs possess a bachelor's degree or higher. As to computer literacy, CTCs play a leading role in educating the country (Lords, 2000).

The study was justified and warranted because of the paucity of research concerning the learning issues of traditional and non-traditional students in higher education settings. Because of the newness of the recently consolidated Louisiana Community and Technical College System, no research has been completed as to the differences in teaching and learning of NTS and TS in the Louisiana Technical College

setting. This study examined specifically the perceptions of TS and NTS and faculty in regard to effective teaching behaviors in the office systems technology programs of the Louisiana Technical College.

This project holds significance because of the lack of research about TS and NTS concerning teaching behavior effectiveness in higher education settings, particularly in Louisiana and especially in the Louisiana Community and Technical College System. No known research about the TS and the NTS in the Louisiana Community and Technical College System has been found; yet considerable attention has been given in public discussion about quality teaching in every level of public education in Louisiana. The 1998 Louisiana constitutional amendment that led to the recent reconfiguration of the community and vocational institutions of Louisiana into the LCTCS has given rise to other suggestions as to improving this facet of Louisiana higher education.

In W. Bumphus' The Executive Summary of the "Louisiana Community and Technical College System Strategic Plan for Quality Improvement 2002-03 to 2006-07" (Bumphus, 2002) several elements are relevant to this project. These elements include teaching what is needed when needed where needed using available resources, teaching excellence, on-going improvement of services and programs, using innovative class placement instruction and programs, and maintaining professional development programs to meet new and changing student needs. One of the directives guiding Louisiana Community and Technical College System improvement calls for maximizing use of facilities, faculties, and other current resources. How better to maximize faculties than to investigate what the students and the instructors perceive as effective teaching and effective teaching behaviors and then use the results to capitalize upon faculty teaching

strengths and to strengthen areas of concern or weakness! Herein lies the significance of this project.

Summary

Research has shown that student ratings feedback is of value for teaching improvement, especially when used with consultation of peers or special teaching consultants (L'Hommedieu, Menges, and Brinko, 1990, as cited in Paulsen and Feldman, 1995).

Teaching behaviors exhibited by teachers determine to a large degree classroom effectiveness (Stronge, 2002).

Seeing oneself as a teacher through the eyes of learners is a prime way to learn something as a teacher. Instructors, after receiving and analyzing students' perceptions of their teaching can teach much more responsively and effectively. Comparing instructors' assumptions and beliefs about effective teaching practices with students' perceptions can inform instructors as to which teaching behaviors and practices to depend upon and continue to use and which ones that need to be discarded or revamped (Outcalt, 2002).

The literature review yielded information about teaching effectiveness and perceptions of effective teaching behaviors by students and faculty in undergraduate education. The majority of the information has been derived from 4-year institutions and from faculty there and mostly from TS. Some investigations examined NTS as well. NTS are shown to have unique characteristics and to favor certain types of instructional

methodologies and teaching behaviors. NTS do have a decided impact on the demographics of the student populations.

Little research has been done concerning NTS and their perceptions of effective teaching behaviors in the CTC setting, where the largest percentage of NTS is enrolled. Practically no research has been done in the Louisiana Technical College setting of the Louisiana Community and Technical College System. Given the lack of research in the Louisiana Technical College setting and with NTS, a need for a closer look at Louisiana Technical College office systems technology programs and NTS is indicated as a measure of addressing the general gap in research concerning teaching and learning of NTS. NTS perceptions of effective teaching behaviors would, as pointed out earlier by Outcalt (2002), be a prime avenue for reflective practice for instructors to improve the quality of teaching in post-secondary education.

CHAPTER THREE

Introduction

Students witness daily the teaching behaviors of their instructors. "Who better to give feedback in regard to teacher effectiveness than the students being taught?" (Dant, 2000, p. 2). Shulman (1999) (as cited in Dant, 2000) upholds this idea by stating "in order to take learning seriously, we have to take learners seriously"(Dant, 2000, p. 2). Teaching effectiveness should get the spotlight of professional growth in post-secondary institutions. Listening to the learners—both TS and NTS—is one facet of faculty development.

Purpose of the Study

The purpose of this investigation was to ascertain NTS, TS, and faculty perceptions as to effective teaching behaviors in response to the ever-increasing number of NTS on post-secondary campuses today. Investigation results give reason for looking at instructional modification. This chapter describes the pre-dissertation pilot study that shaped the principal survey and the survey's subsequent use for the overall purpose of this study. This chapter also describes the methodology of the study, including the participant selection, collection of data, and data analysis regarding Louisiana Technical College faculty, NTS, and TS as to their respective perceptions of effective teaching behaviors.

Pilot Study

The pilot study project was an integral part of this investigation. A search of literature regarding teaching behaviors identified previously utilized instruments that measure effective and non-effective teaching behaviors and that identify teaching behaviors acknowledged by noted educational theorists and researchers. From the literature review forty teaching behaviors were selected as the basis of the survey questionnaire to explore the following questions:

- What is different about teaching non-traditional students (NTS) than teaching traditional students (TS)?
- What differences if any, are necessary in teaching NTS and TS?
- What are the important teaching behaviors to NTS and TS?

A search of literature regarding teaching behaviors identified previously utilized instruments that measure effective and non-effective teaching behaviors and identified teaching behaviors acknowledged by noted educational theorists and researchers. A total of 127 teaching behaviors were identified. The top 40 most repeated teaching behaviors were selected to use in the pilot study. Appendices of compiled 127 teaching behaviors and the 40 most repeated teaching behaviors are attached.

For purposes of the pilot study a campus of the Louisiana Technical College, a member institution of the Louisiana Community and Technical College System, was selected for conducting the research. Groups of full-time and part-time instructors and NTS and TS were identified to participate in the project. These participants were randomly chosen from groups recommended by the institution's administration. The

particular institution chosen for the pre-dissertation project was selected on the basis of geographic location near the investigator. The administration of the overall Louisiana Community and Technical College System and the local institution were engaged for permission to conduct the pilot study project.

The forty teaching behaviors identified and selected from the literature review were compiled into a source list of teaching behaviors for use in a simple Q-Sort method procedure that determined perceptions of faculty and students as to similarities and differences in effective teaching behaviors. The teaching behaviors revealed by the search of literature logically categorized themselves into two general groups: instructional and interpersonal.

Examples of instructional teaching behaviors included the following: knows subject matter, feedback on student work timely and helpful, use humor/jokes/anecdotes effectively, enthusiastic about subject, communicates effectively/explains clearly, and put outline of lecture/presentation on board/screen/handout. Examples of interpersonal teaching behaviors included the following: addresses students by name, relates to students as individuals, respects students, exhibits professionalism, makes eye contact, and knows background information about students.

The participants were four full-time and four part-time faculty and eight NTS and eight TS. Each participant was asked to sort teaching behaviors as to his/her perceptions of effectiveness. An examination and analysis of this data determined the teaching behaviors with the greatest difference ratings that were generated by the groups of participants. The top twenty teaching behaviors as to rated effectiveness were then

presented to the same participants for another Q-Sort procedure that was done as the initial Q-Sort procedure to determine the highest rated teaching behaviors for each group.

These data were then analyzed to determine the perceived effectiveness of teaching behaviors for each group and overall. From the data patterns that emerged from an examination of the data in the pilot study, some overall generalizations were made. TS rated interpersonal teaching behaviors as more important than instructional teaching behaviors. NTS rated instructional teaching behaviors as more important than interpersonal teaching behaviors. Full-time faculty rated instructional teaching behaviors as more important than interpersonal teaching behaviors. Part-time faculty rated instructional teaching behaviors as more important than interpersonal teaching behaviors.

The data showed that TS and NTS have different perceptions of effective teaching behaviors, although there are some commonalities. The data also showed that students and faculty have different perceptions of what are the most effective teaching behaviors. The pilot study revealed that the perceptions of desired effective teaching behaviors of TS and NTS are different in the teaching and learning process and that instructors need to address the learning needs of the two groups by teaching in varying manners.

Further research was indicated in order to understand all the differences between NTS and TS in the arena of instruction and their respective perceptions and needs. Implications are that faculty and administration should listen to student concerns and evaluations and perspectives of most effective teaching behaviors in order to be more competent and capable of teaching both TS and NTS in the best manner possible. Given the limitation of this pilot study, it served as a guide for reframing its study for a more in-

depth investigation of the larger system involving TS and NTS and their perceptions of effective teaching behaviors, as well as the perceptions of instructors.

Research Questions and Hypotheses

On the basis of the pilot study and literature review, the following research questions were investigated.

- What are the relationships between faculty of TS perceptions of effective teaching behaviors and TS perceptions of effective teaching behaviors?
- What are the relationships between faculty of NTS perceptions of effective teaching behaviors and NTS perceptions of effective teaching behaviors?
- What are the relationships between faculty of TS perceptions of effective teaching behaviors and faculty of NTS perceptions of effective teaching behaviors?
- What are the relationships between TS perceptions of effective teaching behaviors and NTS perceptions of effective teaching behaviors?

These questions were investigated on the basis of these hypotheses.

H 1 : There is no difference in perceived effective teaching behaviors between faculty of TS and TS in office systems technology programs.

H 2 : There is no difference in perceived effective teaching behaviors between faculty of NTS and NTS in office systems technology programs.

H 3 : There is no difference in perceived effective teaching behaviors between faculty of TS and faculty of NTS in office systems technology programs.

H 4 : There is no difference in perceived effective teaching behaviors between TS and NTS in office systems technology programs.

Instrumentation

The pilot study teaching behaviors, data, analysis, and overall literature search provided the teaching behaviors for the larger investigation of perceptions of TS, NTS, and faculty at six Louisiana Technical College campuses regarding effective teaching behaviors.

Many research-based instruments for determining instructors' and students' perceptions of teaching and learning styles exist. Some of them are Principles of Adult Learning Scale (PALS), Adapted PALS, Teacher Behaviors Inventory (developed by Harry G. Murray), Brescia University Observable Teaching Behaviors Inventory, Berkeley Faculty Self-Description of Teaching, and Berkeley Student Description of Teaching. The use of these and other teaching behavior inventories to assemble a list of frequently occurring teaching behaviors for possible use in the survey questionnaire and the cooperation of this student's doctoral committee as a validation content jury provide content validity for the final survey questionnaire instrument.

The investigator compiled a list of frequently occurring teaching behaviors from various inventories. A total of 127 teaching behaviors (See Appendix B.) were gathered from the literature. The 40 most frequently occurring teaching behaviors (See Appendix A.) used in the pilot study became the evaluation survey items. Because the evaluation instrument items were gleaned from a thorough review of literature on effective teaching, there is theoretical support for the construct validity of the instrument. (Sheehan and

Duprey, 1999). Draft survey instruments for students and faculty composed of the 40 teaching behaviors were presented to the validation content jury, the doctoral committee, requesting that the members consider any that would unlikely appear in a typical effective teaching behavior inventory for post-secondary education and suggest removal. Any teaching behavior suggested for removal from the list by more than one of the jury would have been taken from the survey instrument; however, no teaching behavior was suggested for removal. The completed juried list was then arranged into the survey instruments for distribution to selected Louisiana Technical College sites for administration to TS, NTS, and faculty. One survey instrument was developed for students, and one survey instrument was developed for faculty from the teaching behaviors submitted to the doctoral committee jury.

The two survey instruments used in this investigation are of like format. The initial survey instrument was distributed to students. The second survey instrument evolved from the initial one; it was a reduced list of effective teaching behaviors. The questionnaire instruments with prior state administration and local institution consent for the investigation were distributed in the office technology systems programs at 6 campuses of the Louisiana Technical College, based on program offerings and TS and NTS enrollment in those programs. A total of 320 student surveys were administered. The 7-point Likert-scale survey questionnaire for rating of effective teaching behaviors was administered and was returned completed by 299 students (127 TS and 172 NTS) in the selected programs at the respective campuses. Twenty-one of the student surveys were incomplete or unusable. In order to enhance the response efforts of the faculty, the student responses were reduced to one-half of their original size for inclusion in the

faculty survey. The faculty survey, a reduced list of effective teaching behaviors from the student survey responses, was sent to each of the female faculty members at the selected campuses. The instrument was distributed to all female faculty members (27) in the selected discipline—office systems technology programs—with participating students taking the survey questionnaire.

The survey asked for demographic information from the student and female faculty participants and gained information on perceptions of effective teaching behaviors. Questionnaire distribution provided a sample large enough to ensure generalizability to the general population of the faculty and students—both NTS and TS—in the Louisiana Technical College. Also, generalizability to other community and technical college groups in other states, particularly in the South, was sought.

Background demographic information of the student participants included age, gender, grade expected in course, and information relevant to initial enrollment in post-secondary education. Background demographic information of the female faculty participants included the following: age, highest degree held, adjunct or full-time, year degree attained, years of teaching experience, number of years employed in business/industry outside education, and teacher of predominantly TS or NTS. This demographic information was used for analysis purposes to answer the stated research questions and to test the hypotheses of the investigation as well as to identify and evaluate any relevant patterns of significance regarding modifications of instruction pertinent to issues and characteristics of the NTS that are different from characteristics of the TS.

Criteria for inclusion in the groups were based on instructor and student characteristics and on availability of subjects at the time of the distribution of the survey questionnaires and the willingness of each to participate in the study.

Data Collection

Participants were faculty, TS, and NTS of 6 selected Louisiana Technical College campuses. Surveys were given to 320 students. Twenty-one student surveys were incomplete or unusable. Also, surveys were given to all 27 female (who teach participating students) faculty members. Fourteen were returned. All participants were volunteers.

Surveys and directions were delivered to each selected Louisiana Technical College campus after consent was obtained from the central administrative offices. Key administrative persons on each respective campus and/or this study's investigator administered the student surveys. At most campuses the investigator was allowed to administer the surveys himself. After all student surveys were administered and student responses compiled, faculty questionnaires were made based upon the top twenty student-rated teaching behaviors. Faculty surveys were then mailed to campus faculty representatives for administration to faculty.

The survey packet given to each individual student and instructor consisted of the following: introductory letter, directions for questionnaire, survey, informed consent form, and participation thank-you incentive drawing form/request for summary of research findings.

Faculty packets were mailed to each female faculty member after the student data was initially assessed and organized. An e-mail reminder was sent to the contact person of each Louisiana Technical College campus after two weeks. The contact person was asked to thank those instructors who had sent in the surveys and remind those who had not. A mail-back deadline for participation in the study and the incentive drawing was set previously.

Data Analysis

Because of the nature of the data collected, several methods for statistical analysis were used for this investigation. They were Mann-Whitney U Statistical Procedure, t-Test for Independent Samples, and Spearman Correlation. The Mann-Whitney U Statistical Procedure was used to test for significance between independent samples that had extremely marked non-normal distributions—the student sample of 299 and the instructor sample of 14. The T-Test for Independent Samples was used for the student groups and then the instructor groups. These analyses allowed for all investigations appropriate to the pairings of the four samples.

The testing of each hypothesis negated or substantiated the relationship expressed in each hypothesis. From an inferential perspective, generalization of the findings to the overall student and faculty populations was the objective. This transformation of descriptive statistics into inferential statistics yielded the ideas and findings for practical application of the data to help in filling gaps of knowledge in the field of effective teaching behaviors research. This investigation was “non-experimental” in nature. It did not use random assignment or selection of individuals; rather the study used students as

members of intact groups—those in office systems technology programs in the Louisiana Technical College.

General descriptive statistics derived from the surveys were put into the Statistical Package for the Social Sciences (SPSS) for data analysis. Various data items were rank-ordered for ease of interpretation. Frequency distribution and mean scores were examined. Scoring patterns were identified and used for prediction and correlation purposes to produce statistical data used for inferential purposes for generalization to the overall populations. Correlation of the results for the groups provided indications of the degree of similarity between and among students and faculty across the various components of effective teaching behaviors.

Summary and Conclusions

The purpose of this investigation was to determine the perceptions of NTS, TS, and faculty in office systems programs at selected Louisiana Technical College campuses as to effective teaching behaviors. A pre-dissertation pilot study using the Q-Sort technique as to the rating of effective teaching behaviors shaped the main investigation for this study. Teaching behaviors from the pilot study were used to form the main survey instruments for students and faculty. The student surveys were delivered to the specific campus locations in the Louisiana Technical College and administered to office systems technology program students. The faculty surveys were later mailed to all female office systems technology program instructors at the same selected campuses for completion and return by mail to the investigator. Data analysis was used to derive any

patterns or trends in the comparison data. Generalization to the overall student population have been made when applicable.

CHAPTER 4

Introduction

This chapter presents the research questions, a description of the study participants, and the descriptive results for the two surveys used in this study. This information is followed by data findings to test the hypotheses and answer the four research questions of the study.

.

Research Questions

This study was designed to investigate relationships among various perceptions of traditional students (TS) and non-traditional students (NTS) and their faculty with respect to effective teaching behaviors. On the basis of the pilot study and literature review, the following research questions were investigated.

- What are the relationships between faculty of TS perceptions of effective teaching behaviors and TS perceptions of effective teaching behaviors?
- What are the relationships between faculty of NTS perceptions of effective teaching behaviors and NTS perceptions of effective teaching behaviors?
- What are the relationships between faculty of TS perceptions of effective teaching behaviors and faculty of NTS perceptions of effective teaching behaviors?
- What are the relationships between TS perceptions of effective teaching behaviors and NTS perceptions of effective teaching behaviors?

These questions were investigated on the basis of the following hypotheses.

H 1 : There is no difference in perceived effective teaching behaviors between faculty of

TS and TS in office systems technology programs.

H 2 : There is no difference in perceived effective teaching behaviors between faculty of NTS and NTS in office systems technology programs.

H 3 : There is no difference in perceived effective teaching behaviors between faculty of TS and faculty of NTS in office systems technology programs.

H 4 : There is no difference in perceived effective teaching behaviors between TS and NTS in office systems technology programs.

Study Participants

The study was conducted at the six campuses of the Louisiana Technical College with the highest enrollment in office systems technology programs in October 2004. The Louisiana Technical College campuses included locations across the state and were in rural and urban settings. Student surveys administered numbered 320. Student participants who fully completed the survey numbered 299 out of a total Office Systems Technology Program student population of 576. Twenty-one student surveys were not included in the data analysis because they were not usable as a result of double marking of many items and/or incompleteness. Faculty surveys were mailed to 27 female (full- and part-time) instructors in the office systems technology programs at the selected campuses. Fourteen faculty members returned completed usable surveys. The student sample size of completed responses is 299, and the faculty sample size of correctly completed responses is 14. Table 1 presents the number of surveys distributed and returned within the two response groups for each campus.

Table 1

Surveys Distributed and Returned

	Students		Faculty	
Campus	Distributed	Returned	Distributed	Returned
A	64	52	4	3
B	49	48	5	2
C	35	31	6	2
D	65	63	6	2
E	61	60	3	3
F	46	45	3	2
Totals	320	299	27	14

Descriptive Statistics

Six demographic factors were collected for students: TS or NTS, gender, college degree earned already, first in family to enter post-secondary education or not, expected grade in course, and reason for attending. [See Tables 2 and 3.]

Table 2

Descriptive Statistics of Background Characteristics of Students: Frequencies

Background demographics	Number of participants	% of sample population
Traditional or non-traditional		
Traditional	127	42.5
Non-traditional	172	57.5
Gender		
Male	23	7.7
Female	276	92.3
College degree earned already		
Yes	17	5.7
No	282	94.3
First in family to enter post-sec ed		
Yes	104	34.8
No	195	65.2

Table 3

Additional Descriptive Statistics of Background Characteristics of Students: Frequencies

Background demographics	Number of participants	% of sample population
Expected grade in course		
A	133	44.5
B	154	51.5
C	12	4.0
D	0	0.0
F	0	0.0
Reason for attending		
Career change	165	55.5
Personal knowledge	48	16.1
Skills update	31	10.4
Other	55	18.4

The number of students in the sample studied was 299. The number of male participants in the sample of office systems technology program students is obviously small in ratio compared with the female students because the program enrolls more females than males. None of the students expected a grade in the particular course in which they filled out the survey of less than a "C"; in fact, 96% anticipated a grade of "A" or "B." This grade expectation is typical across the six campuses programs where surveys were administered as per conservations with several instructors in each program.

The student sample consisted of 98 students (32.8%) 21 years of age and under, 29 students (9.7%) who were over 21 but had entered post-secondary education

immediately after high school, and 172 (57.5%) students who were over 21 and had delayed entry into post-secondary education for a time after high school.

Seven demographic factors were collected for faculty: teaches majority TS or NTS classes, age of instructor, highest degree held by instructor, full-time or part-time status, years of teaching experience, years employed outside education in business/ industry, and TS or NTS when entered post-secondary education. [See Tables 4 and 5.]

Table 4

Descriptive Statistics of Background Characteristics of Instructors: Frequencies

Background demographics	Number of participants	% of sample population
Teaches majority TS or NTS classes		
Traditional	5	35.7
Non-traditional	9	64.3
Age of instructor		
25 and under	0	00.0
26-35	2	14.3
36-45	0	00.0
46-55	7	50.0
56 and over	5	35.7
Highest degree held		
BA/BS	7	50.0
MA/MS/MEd/MBA	7	50.0
PhD	0	00.0
Other	0	00.0

Table 5

Additional Descriptive Statistics of Background Characteristics of Instructors: Frequencies

Background demographics	*Number of participants*	*% of sample population*
Full-time or part-time		
Full-time	13	92.9
Part-time	1	7.1
Years of teaching experience		
1-5	4	28.6
6-10	1	7.1
11-15	1	7.1
16-20	2	14.3
21-25	4	28.6
26-30	1	7.1
31 and over	1	7.1
Years employed outside education in business/industry		
1-10	8	57.1
11-20	4	28.6
21 and over	2	14.3
TS or NTS when entered post-secondary education		
Traditional	8	57.1
Non-traditional	6	42.9

The number of instructors in the sample was 14. All of the instructors in the sample were female instructors who taught at least one office systems technology program course.

In the sample studied, 85.7% of the instructors were over 45 years of age. None of the instructors in the sample held a Ph.D. Over 50% of the instructors had taught for 16 years or more. All of the instructors had at least one year of work employed outside education in business or industry.

Teaching Behaviors

The top twenty teaching behaviors selected by the students from the forty teaching behaviors on the student survey (determined by the sum total of ratings for each teaching behavior by all student surveys that had complete teaching behavior ratings) are in Table 6. These student-top-twenty teaching behaviors were then included in the instructor survey for rating by female instructors in the office systems technology programs at the six LTC campuses.

Table 6

Top Twenty Teaching Behaviors Derived from Student Questionnaires—Rank and Mean

Teaching behavior	Rank	Mean
1. Knows subject matter	6	6.3645
3. Asks content/concept questions of class	17	6.1538
6. Speaks at appropriate volume	1	6.4482
7. Uses class time efficiently	3	6.3946
8. Holds students' attention and interest/interesting style	20	6.0635
11. Repeats difficult ideas	14-tie	6.2475
12. Summarizes major points	13	6.2542
16. Gives multiple examples	19	6.1137
17. Friendly/easy to talk with/approachable	2	6.4148
18. Encourages/responsive to questions/comments	10	6.3278
19. Well prepared/organized	7-tie	6.3311
21. Stresses important points/emphasizes principles	11	6.3211
23. Assignments clear/interesting/stimulating	16	6.2241
27. Respects students	5	6.3645
28. States course objectives/describes work	12	6.2843
29. Uses clear/concrete examples/illustrations	14-tie	6.2475
31. Exhibits professionalism	7-tie	6.3311
38. Communicates effectively/explains clearly	7-tie	6.3311
39. Enthusiastic about subject	18	6.1271
40. Helpful to individual students	4	6.3712

The range of the means of all forty of the teaching behaviors submitted to students for rating of perceived effectiveness was from a high of 6.4482 to a low of 4.6355. The top-twenty rated teaching behaviors ranged from the high of 6.4482 to 6.0635. The other twenty teaching behaviors (not used in the faculty survey) rated by students ranged from the high of 6.0600 to the low of 4.6355.

The student survey instructed the students to rate 40 teaching behaviors as to their effectiveness on a scale of 1 to 7. The scale was as follows: 1—totally ineffective, 2—significantly ineffective, 3—slightly ineffective, 4—neutral, 5—slightly effective, 6—significantly effective, and 7—totally effective.

As a note of interest about the 40 teaching behaviors, the lowest student-rated teaching behavior was teaching behavior 26—knows background information about students (interpersonal). It had a mean of 4.6355, the only teaching behavior rated lower than 5.6221 (the next lowest). Table 7 shows the other 20 teaching behaviors not included in the top-twenty student rated teaching behaviors used on the faculty surveys.

Table 7

Additional Teaching Behaviors Not Ranked in the Top Twenty by Students

Teaching behavior	Mean
2. Makes eye contact	6.0600
4. Feedback on student work timely and helpful	6.0234
5. Puts outline of lecture/presentation on board/screen/handout	5.8562
9. Pace of presentation/teaching matches class comprehension	6.0598
10. Accessible/available to students outside of class	5.9064
13. Uses a variety of instructional strategies/media	5.7324
14. Uses humor/jokes/anecdotes effectively	5.6221
15. Addresses students by name	6.0237
20. Points out practical applications	6.0121
22. Tolerant of/discusses other viewpoints	6.0602
24. Does not digress from theme/main topic	5.7826
25. Explains how each topic fits in/integrates material into a coherent whole	6.0167
26. Knows background information about students	4.6355
30. Discusses recent developments in the field	5.6990
32. Gives preliminary overview of lecture/presentation at beginning of class	5.9532
33. Moves while lecturing/presenting	5.7659
34. Relates to students as individuals	6.0536
35. Uses visual aids (videos, pictures, maps, artifacts, etc.)	5.7258
36. Asks students directly if they understand before proceeding	6.0401
37. Defines new or unfamiliar terms/provides vocabulary lists	5.8595

All of the original teaching behaviors generated by the literature review logically categorized themselves into two general groups: instructional and interpersonal. Examples of instructional teaching behaviors included the following: knows subject matter, communicates effectively/explains clearly, and enthusiastic about subject. Examples of interpersonal teaching behaviors included the following: respects students, friendly/easy to talk with/approachable, and helpful to individual students. The student-top-twenty teaching behaviors included 15 instructional teaching behaviors and 5 interpersonal teaching behaviors. Table 8 shows the breakdown.

Table 8

Top Twenty Teaching Behaviors in Categories

Teaching behavior	General category
1. Knows subject matter	instructional
3. Asks content/concept questions of class	instructional
6. Speaks at appropriate volume	interpersonal
7. Uses class time efficiently	instructional
8. Holds students' attention and interest	instructional
11. Repeats difficult ideas	instructional
12. Summarizes major points	instructional
16. Gives multiple examples	instructional
17. Friendly/easy to talk with/approachable	interpersonal
18. Encourages/responsive to questions/comments	instructional
19. Well prepared/organized	instructional
21. Stresses important points/emphasizes principles	instructional
23. Assignments clear/interesting/stimulating	instructional
27. Respects students	interpersonal
28. States course objectives/describes work	instructional
29. Uses clear/concrete examples/illustrations	instructional
31. Exhibits professionalism	interpersonal
38. Communicates effectively/explains clearly	instructional
39. Enthusiastic about subject	instructional
40. Helpful to individual students	interpersonal

Data Findings

The data with respect to the research questions and related hypotheses are drawn from the final sample size as follows: 127 traditional students (TS), 172 non-traditional students (NTS), 5 TS faculty members, and 9 NTS faculty members. A cursory look at the means of the teaching behaviors for each group of subjects rating the teaching behaviors provided an interesting beginning point. Of the student-top-twenty rated teaching behaviors, the TS top-three-rated teaching behaviors were teaching behavior 17—friendly/easy to talk with/ approachable (interpersonal), teaching behavior 40—helpful to individual students (interpersonal), and teaching behavior 6—speaks at appropriate volume (interpersonal); the NTS top-three-rated teaching behaviors were teaching behavior 6—speaks at appropriate volume (interpersonal), teaching behavior 7—uses class time efficiently (instructional), and teaching behavior 1—knows subject matter (instructional). The TS faculty top-two-rated teaching behaviors were teaching behavior 1—knows subject matter (instructional) and 19—well prepared/organized (instructional); the NTS faculty top-two-rated teaching behaviors were teaching behavior 40—helpful to individual students (interpersonal) and teaching behavior 11—repeats difficult ideas (instructional).

An appropriate number of part-time instructors did not respond to the questionnaires for adequate comparison of perceptions of full- and part-time instructors; however, the following information leads the researcher to think that full-time instructors perceive instructional teaching behaviors of greater significance than interpersonal teaching behaviors and that part-time instructors tend to perceive interpersonal teaching behaviors to be highly valued—perhaps even more on a par with instructional teaching

behaviors. The full-time instructor top-three-rated teaching behaviors were teaching behavior 1—knows subject matter (instructional), teaching behavior 19—well prepared/organized (instructional), and teaching behavior 40—helpful to individual students (interpersonal); and the only part-time instructor in the sample top-rated teaching behaviors were teaching behavior 7 (instructional), teaching behavior 8 (instructional), teaching behavior 11 (instructional), teaching behavior 16 (instructional), teaching behavior 17 (interpersonal), teaching behavior 23 (instructional), teaching behavior 27 (interpersonal), teaching behavior 28 (instructional), teaching behavior 29 (instructional), teaching behavior 31 (interpersonal), teaching behavior 38 (instructional), teaching behavior 39 (instructional), and teaching behavior 40 (interpersonal). This part-time instructor rated 4 of the 5 interpersonal teaching behaviors in the student top twenty the highest possible rating, a "7." The only other interpersonal teaching behavior the instructor rated a "6."

Table 9 shows the top-twenty student rated teaching behaviors, their rank, their means, and whether each is "instructional" or "interpersonal" as to category. This table provides background general information for comparing the top 20 teaching behaviors with the various student and faculty groups.

Table 9

Top Twenty Teaching Behaviors from Student Questionnaires—Rank, Mean, Category

Teaching behavior	Rank	Mean	Interpersonal or Instructional
1. Know subject matter	6	6.3645	instructional
3. Asks content/concept questions	17	6.1538	instructional
6. Speaks at appropriate volume	1	6.4482	interpersonal
7. Uses class time efficiently	3	6.3946	instructional
8. Holds students' attention/interest	20	6.0635	instructional
11. Repeats difficult ideas	14	6.2475	instructional
12. Summarizes major points	13	6.2542	instructional
16. Gives multiple examples	19	6.1137	instructional
17. Friendly/easy to talk with	2	6.4148	interpersonal
18. Encourages/respon. to questions	10	6.3278	instructional
19. Well prepared/organized	7	6.3311	instructional
21. Stresses important points	11	6.3211	instructional
23. Assignments clear/interesting	16	6.2241	instructional
27. Respects students	5	6.3645	interpersonal
28. States course objectives	12	6.2843	instructional
29. Uses clear/concrete examples	14	6.2475	instructional
31. Exhibits professionalism	7	6.3311	interpersonal
38. Communicates effectively	7	6.3311	instructional
39. Enthusiastic about subject	18	6.1271	instructional
40. Helpful to individual students	4	6.3712	interpersonal

Table 10 shows the groups (including part- and full-time faculty), top teaching behaviors, and means. The TS top three teaching behaviors all fell into the interpersonal category. The NTS top three had one interpersonal and two instructional teaching behaviors. The full-time faculty top three had two instructional teaching behaviors and one interpersonal teaching behavior. Only one part-time faculty member responded to the survey. Her top three rated teaching behaviors could not be determined.

Table 10

Top Teaching Behaviors of Student and Faculty Groups

Group	Teaching behavior	Mean
TS	17	6.4331
	40	6.3622
	6	6.3543
NTS	6	6.5174
	7	6.4535
	1	6.4360
TS faculty	1	6.8000
	19	6.8000
NTS faculty	40	6.8889
	11	6.7778
Full-time instructors	1	6.7692
	19	6.7692
	40	6.6923
Part-time instructors	Only one in sample group. See narrative.	

Table 11 shows the means and ranks for each teaching behavior by groups—TS, NTS, TS faulty, and NTS faculty. For TS the mode for all teaching behaviors was 7. For NTS the mode for all teaching behaviors was 7. For TS faculty the mode for 11 teaching behaviors was 7 and for 7 teaching behaviors was 6 with teaching behavior 16 and teaching behavior 29 having dual modes of 6 and 7. For NTS faculty the mode for 12 teaching behaviors was 7 and for 7 teaching behaviors was 6 with teaching behavior 8 having dual modes of 6 and 7. For both TS faculty and NTS faculty the only interpersonal teaching behavior with a modal response of 6 was teaching behavior 6—speaks at appropriate volume.

Because of the nature of the data gathered, several methods for statistical analysis were used for this study. They include the Mann-Whitney U Statistical Procedure, T-Tests for Independent Samples, and Spearman Correlation Coefficients. The Mann-Whitney U Statistical Procedure, T-Tests for Independent Samples, and Spearman Correlation Coefficients were used to address the investigation's hypotheses. The student sample is greater than 100 (n=299), so normality assumptions did not cause concern. The faculty sample is less than 100 (n=14), so normality assumptions were a cause of concern, particularly when comparing student and faculty groups. This concern required the researcher to use different data analysis techniques for certain statistical data runs for yielding data from large and small groups. Reasons for utilizing various statistical data techniques are provided with the discussions of the analyses.

Table 11

Group Means and Ranks of Teaching Behaviors (Using the 7-Point Scale)

Teaching behavior	TS (rank)	NTS (rank)	TS fac (rank)	NTS fac (rank)
1	6.2677 (6)	6.4360 (3)	6.8000 (1)	6.6667 (3)
3	6.0157 (12)	6.2558 (13)	6.2000 (4)	6.3333 (6)
6	6.3543 (3)	6.5174 (1)	6.4000 (3)	6.0000 (9)
7	6.3150 (5)	6.4535 (2)	6.2000 (4)	6.4444 (5)
8	5.8504 (14)	6.2209 (15)	6.4000 (3)	6.3333 (6)
11	6.1654 (11)	6.3081 (11)	6.4000 (3)	6.7778 (2)
12	6.2047 (10)	6.2907 (12)	6.2000 (4)	5.8889 (10)
16	6.0079 (12)	6.1919 (16)	6.0000 (5)	6.1111 (8)
17	6.4331 (1)	6.4070 (4)	6.4000 (3)	6.5556 (4)
18	6.2362 (8)	6.3953 (6)	6.2000 (4)	6.2222 (7)
19	6.2677 (6)	6.3779 (8)	6.8000 (1)	6.6667 (3)
21	6.3386 (4)	6.3081 (11)	6.4000 (3)	5.8889 (10)
23	6.2283 (9)	6.2209 (15)	6.0000 (5)	6.2222 (7)
27	6.3150 (5)	6.4012 (5)	6.4000 (3)	6.6667 (3)
28	6.2362 (8)	6.3198 (10)	5.6000 (6)	6.4444 (5)
29	6.1654 (11)	6.3081 (11)	6.2000 (4)	6.5556 (4)
31	6.2835 (5)	6.3663 (9)	6.6000 (2)	6.5556 (4)
38	6.2598 (7)	6.3837 (7)	6.6000 (2)	6.5556 (4)
39	5.9764 (13)	6.2384 (14)	6.4000 (3)	6.6667 (3)
40	6.3622 (2)	6.3779 (8)	6.4000 (3)	6.8889 (1)

The Mann-Whitney U Statistical Procedure was selected to test for significance between independent samples that have extremely marked non-normal distributions—the student sample of 299 and the instructor sample of 14. Breakdown into subgroups are similar in participant ratio. Table 12 shows analysis results for each teaching behavior for faculty of TS and TS themselves. Table 13 shows analysis results for each teaching behavior for faculty of NTS and NTS themselves.

Table 12

Mann-Whitney U Results for 5 TS Faculty and 127 TS

Teaching behavior (instructional not marked, interpersonal marked)	2-tailed p
1 knows subject matter	.2381
3 asks content/concept questions of class to check understanding	.9648
6 speaks at appropriate volume—interpersonal	.6255
7 uses class time efficiently	.9301
8 holds students' attention and interest/interesting style	.3224
11 repeats difficult ideas	.9477
12 summarizes major points	.4454
16 gives multiple examples	.9798
17 friendly/easy to talk with/approachable—interpersonal	.8050
18 encourages/responsive to questions and comments/encou. discuss	.9845
19 well prepared/organized	.2523
21 stresses important points/emphasizes prin. and generalizations	.6892
23 assignments clear/interesting/stimulating	.3710
27 respects students—interpersonal	.9499
28 states course objectives/describes work to be done	.1337
29 uses clear/concrete examples/illustrations of concepts	.9286
31 exhibits professionalism—interpersonal	.7114
38 communicates effectively/explains clearly	.6190
39 enthusiastic about subject	.4884
40 helpful to individual students—interpersonal	.9237

Table 13

Mann-Whitney U Results for 9 NTS Faculty and 172 NTS

	Teaching behavior (instructional not marked, interpersonal marked)	2-tailed p
1	knows subject matter	.7622
3	asks content/concept questions of class to check understanding	.6042
6	speaks at appropriate volume—*interpersonal*	.0060
7	uses class time efficiently	.7523
8	holds students' attention and interest/interesting style	.8968
11	repeats difficult ideas	.2301
12	summarizes major points	.0665
16	gives multiple examples	.5072
17	friendly/easy to talk with/approachable—*interpersonal*	.6821
18	encourages/responsive to questions and comments/encou. discuss	.2657
19	well prepared/organized	.5353
21	stresses important points/emphasizes prin. and generalizations	.0202
23	assignments clear/interesting/stimulating	.5478
27	respects students—*interpersonal*	.7680
28	states course objectives/describes work to be done	.9040
29	uses clear/concrete examples/illustrations of concepts	.6397
31	exhibits professionalism—*interpersonal*	.6843
38	communicates effectively/explains clearly	.6562
39	enthusiastic about subject	.3258
40	helpful to individual students—*interpersonal*	.1398

Hypothesis testing using Mann-Whitney U Statistical Procedure was performed to determine any statistical differences in perceptions of TS faculty and TS and in perceptions of NTS faculty and NTS. The Mann-Whitney U Statistical Procedure was used to test for significance because of the two samples so different in sample numbers—one a large number and the other a small number in both instances involving TS faculty and TS and NTS faculty and NTS.

Table 12—Mann-Whitney U Results for 5 TS Faculty and 127 TS—provides data for addressing Hypothesis One: There is no difference in perceived effective teaching behaviors between faculty of TS and TS in office systems technology programs. The "2-Tailed P" is 0.05 or greater for every teaching behavior. Therefore, there is a significant difference between the responses of the sample groups, and the null hypothesis is rejected.

Table 13—Mann-Whitney U Results for 9 NTS Faculty and 172 NTS—provides data for address Hypothesis Two: There is no difference in perceived effective teaching behaviors between faculty of NTS and NTS in office systems technology programs. The "2-Tailed P" is 0.05 or greater for all teaching behaviors except two—teaching behavior 6 with .0060 and teaching behavior 21 with .0202. Therefore, there is a significant difference between the responses of the sample groups, and the null hypothesis is rejected.

Hypothesis testing using Independent Samples T-Tests was performed to determine any statistical differences in perceptions of TS faculty and NTS faculty and in perceptions of TS and NTS. The same test was performed for grouped instructional and interpersonal teaching behaviors.

Table 14—Independent Samples T-Test for 5 Faculty of TS and 9 Faculty of NTS—provides data for addressing Hypothesis Three: There is no difference in perceived effective teaching behaviors between faculty of TS and faculty of NTS in office systems technology programs. The "2-Tail Sig" is 0.05 or greater for every teaching behavior. Therefore, there is a significant difference between the responses of the sample groups, and the null hypothesis is rejected.

Table 14

Independent Samples T-Test for Faculty of 5 TS and 9 Faculty of NTS

	Teaching behavior (instructional not marked, interpersonal marked)	2-tailed sig
1	knows subject matter	.621
3	asks content/concept questions of class to check understanding	.621
6	speaks at appropriate volume—*interpersonal*	.266
7	uses class time efficiently	.713
8	holds students' attention and interest/interesting style	.890
11	repeats difficult ideas	.228
12	summarizes major points	.362
16	gives multiple examples	.861
17	friendly/easy to talk with/approachable—*interpersonal*	.735
18	encourages/responsive to questions and comments/encou. discuss	.968
19	well prepared/organized	.621
21	stresses important points/emphasizes prin. and generalizations	.109
23	assignments clear/interesting/stimulating	.548
27	respects students—*interpersonal*	.563
28	states course objectives/describes work to be done	.186
29	uses clear/concrete examples/illustrations of concepts	.424
31	exhibits professionalism—*interpersonal*	.900
38	communicates effectively/explains clearly	.900
39	enthusiastic about subject	.563
40	helpful to individual students—*interpersonal*	.296

Table 15—Independent Samples T-Test for 127 TS and 172 NTS—provides data to address Hypothesis Four: There is no difference in perceived effective teaching behaviors between TS and NTS in office systems technology programs. The "2-Tail Sig" is equal to or greater than 0.05 for all teaching behaviors except one—teaching behavior 8 with .006. Therefore, there is a significant difference between the responses of the sample groups, and the null hypothesis is rejected.

Table 15

Independent Samples T-Test for 127 TS and 172 NTS

	Teaching behavior (instructional not marked, interpersonal marked)	2-tailed sig
1	knows subject matter	.162
3	asks content/concept questions of class to check understanding	.051
6	speaks at appropriate volume—*interpersonal*	.154
7	uses class time efficiently	.221
8	holds students' attention and interest/interesting style	.006
11	repeats difficult ideas	.288
12	summarizes major points	.496
16	gives multiple examples	.153
17	friendly/easy to talk with/approachable—*interpersonal*	.829
18	encourages/responsive to questions and comments/encou. discuss	.121
19	well prepared/organized	.360
21	stresses important points/emphasizes prin. and generalizations	.784
23	assignments clear/interesting/stimulating	.946
27	respects students—*interpersonal*	.489
28	states course objectives/describes work to be done	.464
29	uses clear/concrete examples/illustrations of concepts	.195
31	exhibits professionalism—*interpersonal*	.500
38	communicates effectively/explains clearly	.288
39	enthusiastic about subject	.063
40	helpful to individual students—*interpersonal*	.901

Table 16—Independent Samples T-Test for Instructional and Interpersonal Teaching Behaviors—provides additional data. The "2-Tailed Sig" shows that faculty and student group responses were significantly different from one another as to the teaching behavior groups of interpersonal and instructional categories. Table 17—Independent Samples T-Test for Grouped Instructional and Interpersonal Teaching Behaviors—also gives additional data. Both TS faculty (those with classes with a majority of TS) and NTS faculty (those with classes with a majority of NTS) rated interpersonal group teaching behaviors higher (means—6.4400 and 6.5333 respectively) than they rated instructional group teaching behaviors. In addition, both TS and NTS rated interpersonal group teaching behaviors higher (means—6.3496 and 6.4140 respectively) than they rated instructional group teaching behaviors. In the case of the students it must be noted that of the original 40 teaching behaviors submitted to them on the student survey, the students placed only 5 interpersonal group teaching behaviors in their top twenty rated teaching behaviors (15 instructional).

Table 16

Independent Samples T-Test for Grouped Instructional/Interpersonal Teaching Behaviors for All Faculty and All Students

Sample group	Number of participants	Instr/interp	2-tailed sig
All faculty	14	interpersonal	.778
All faculty	14	instructional	.723
All students	299	interpersonal	.480
All students	299	instructional	.090

Table 17

Independent Samples T-Test for Grouped Instructional/Interpersonal Teaching Behaviors for TS and NTS Faculty and TS and NTS Groups

Sample group	Number of participants	Instr/interp	Mean
TS faculty	5	interpersonal	6.4400
NTS faculty	9	interpersonal	6.5333
TS faculty	5	instructional	6.2933
NTS faculty	9	instructional	6.3852
TS	127	interpersonal	6.3496
NTS	172	interpersonal	6.4140
TS	127	instructional	6.1690
NTS	172	instructional	6.3140

The Spearman Correlation Coefficients derived from the data analysis seeking correlations between the teaching behavior group categories of instructional and interpersonal provide a few significant results. Tables 18 and 19 show the rather few significant correlations for faculty and their demographic data items. There were no significant correlations for TS and NTS and their demographic data items.

Table 18

Spearman Correlation Coefficients for Faculty of TS—Greater than –.70 or +.70

Teaching behavior (*=interpersonal)	Age of instructor	Degree held by instructor	Years of teaching experience	Years in bus/ industry	Inst/TS/NTS
8					-.968
11	-.913		-.889		
16					-.761
17*				-.968	
18				-1.000	
21	-.913		-.889		
28	-.865		-.921		

Table 19

Spearman Correlation Coefficients for Faculty of NTS—Greater than -.70 and +.70

Teaching behavior (*=interpersonal)	Age of instructor	Degree held by instructor	Years of teaching experience	Years in bus/ industry	Inst/TS/NTS
12		.741			
16		.787			

Summary of Findings

Data was generated from a student and a faculty survey administered on six selected LTC campuses to students enrolled in the office systems technology program and to instructors in the office systems technology program. The student sample was 299—127 TS and 172 NTS. The faculty sample was 14—5 TS faculty and 9 NTS faculty.

Students were given surveys consisting of 40 teaching behaviors (generated from a literature review) to rate as to their perceived effectiveness. The top twenty-rated student teaching behaviors were then submitted as a survey to the faculty. The student top twenty teaching behaviors consisted of 15 instructional teaching behaviors and 5 interpersonal teaching behaviors. The interpersonal teaching behaviors were rated higher in means but more instructional teaching behaviors were in the student top twenty teaching behaviors.

Data analysis rejected the four hypotheses used by the investigator. Fundamental findings suggest there are differences in perceived effectiveness of teaching behaviors between faculty of TS and TS in the office systems technology program at selected LTC campuses, differences in perceived effectiveness of teaching behaviors between faculty of NTS and NTS, differences in perceived effectiveness of teaching behaviors between faculty of TS and faculty of NTS, and differences in perceived effectiveness of teaching behaviors between TS and NTS. Chapter Five contains a discussion of the findings on each hypothesis and the research questions. Implications and suggestions for additional research and practice are also discussed.

CHAPTER 5

Introduction

The purpose of this research project was to examine differences in perceptions of effective teaching behaviors from the perspectives of TS, NTS, and their faculty. Basic questions for discussion, exploration, and conjecture from the study conducted on six of the LTC campuses included the following:

- What is different about teaching non-traditional students (NTS) than teaching traditional students (TS)?
- What differences if any, are necessary in teaching NTS and TS?
- What are the important teaching behaviors to NTS and TS?

These questions, as well as significant research findings, are addressed and analyzed in this chapter.

Research Questions and Hypotheses

On the basis of the pilot study and literature review, the following research questions were specifically investigated in this project.

- What are the relationships between faculty of TS perceptions of effective teaching behaviors and TS perceptions of effective teaching behaviors?
- What are the relationships between faculty of NTS perceptions of effective teaching behaviors and NTS perceptions of effective teaching behaviors?
- What are the relationships between faculty of TS perceptions of effective teaching behaviors and faculty of NTS perceptions of effective teaching behaviors?
- What are the relationships between TS perceptions of effective teaching

behaviors and NTS perceptions of effective teaching behaviors?

These questions were investigated on the basis of these hypotheses.

H 1 : There is no difference in perceived effective teaching behaviors between faculty of TS and TS in office systems technology programs.

H 2 : There is no difference in perceived effective teaching behaviors between faculty of NTS and NTS in office systems technology programs.

H 3 : There is no difference in perceived effective teaching behaviors between faculty of TS and faculty of NTS in office systems technology programs.

H 4 : There is no difference in perceived effective teaching behaviors between TS and NTS in office systems technology programs.

Summary of the Research Procedures

A non-experimental descriptive design was used for this investigation. No variables were manipulated, and no attempt was made to control the research setting. An instrument was developed by the investigator using teaching behaviors of instructors generated from a literature review and a pilot study using the Q-Sort Procedure. Forty teaching behaviors made up the student survey instrument that was administered on 6 Louisiana Technical College campuses to office systems technology program students. From the student responses an instructor survey instrument was developed consisting of the top twenty rated teaching behaviors from the student data. The instructor survey was mailed to the same Louisiana Technical College campuses for distribution to the office systems technology program instructors. The student sample was 299 (127 TS and 172

NTS), and the faculty sample was 14 (5 TS faculty and 9 NTS faculty) [13 full-time and 1 part-time].

Completed questionnaire information was entered into the SPSS package for data analysis. The data analysis procedures used were the Mann-Whitney U Statistical Procedure, the Independent Samples T-Test, and the Spearman Correlation Coefficient.

Limitations of the Study

This investigation confined itself to the office systems technology programs on 6 campuses in the Louisiana Technical College of the Louisiana Community and Technical College System and to faculty and students enrolled in the programs of the selected campuses. Some demographic classifications were poorly represented in the samples—particularly part-time faculty. All survey participation was voluntary. Perhaps direct administration of the faculty survey by the investigator, instead of mail-back through a campus contact person, would have generated a higher percentage of faculty response.

Analysis of Data Findings

The teaching behaviors in the study fell into two categories—interpersonal and instructional. Of the 20 top-rated teaching behaviors by students, 5 were included in the interpersonal category and 15 were included in the instructional category. The 5 interpersonal teaching behaviors were ranked (by mean) 1, 2, 4, 5, and 7 (tie with an instructional teaching behavior) of the 20 teaching behaviors.

The top three rated teaching behaviors for TS were all interpersonal. The top three rated teaching behaviors for NTS included 1 interpersonal and 2 instructional. TS

faculty top-rated teaching behaviors included only 1 interpersonal in the top four. NTS faculty top-rated teaching behaviors included 2 interpersonal in the top six. (For TS faculty and NTS faculty a top three could not be determined because of ties in the group means.) The top three rated teaching behaviors for full-time faculty included 1 interpersonal and 2 instructional. Only one part-time faculty completed a survey so a top-three rated set could not be determined based on the questionnaire responses.

The information in the above two paragraphs concerning top-rated teaching behaviors by students and faculty revealed important differences in perceived effectiveness of teaching behaviors by students and faculty. Students rated interpersonal teaching behaviors generally as of greater significance in the teaching-learning situation than did faculty. If perception of teaching behavior effectiveness is integral to more effective student learning, faculty (as well as administration) should at least attempt to place greater emphasis—while not reducing or neglecting attention to instructional teaching behaviors—on interpersonal teaching behaviors in order to heighten the facilitation of student learning.

As Marano (2002, as cited in Perterson, 2002) said, "College is no longer an elite place. College populations are more like real life"(p. D1). Real life—the real world—consists of individuals with a complete range of abilities and talents and intellects. College populations are not made up of only the highly capable or intellectual elite any longer. To teach effectively a student population with a wide range of abilities requires a look at what all students perceive as significant teaching behaviors. Since the paradigm of higher educational undergraduate instruction is and has been in a shifting mode for the past several years from a teacher-centered focus to a student-centered focus, what

students think about classroom practices becomes more vital to success in the teaching-learning process. McCollin (2000) laments the fact of limited research in comparing the perceptions of students and instructors. Alignment of effective teaching practices with student ideas of successful teaching makes sense.

This investigation's information also showed a difference in the perceptions of TS and NTS as well. McCollin (2000) cites the lack of research in comparing the teaching of TS and NTS, too. This study helps to illuminate perceived differences. Differences that are significant in that, according to Donaldson and Graham (1999, as cited in Guzman, 2000), about half of the college population is over 25 years of age, and in that, according to Evelyn (2002), 73% of college undergraduates are in some way classified as NTS.

Perceptions of the groups of TS, NTS, TS faculty, and NTS faculty warrant investigation. This study narrowed in on a segment of community and technical college (CTC) population—the office systems technology programs at 6 selected campuses of the Louisiana Technical College. The investigation's collected data and findings contribute to enlarging the research in the areas of comparing perceptions of students and faculty and of comparing perceptions of TS and NTS.

The first research question was "What are the relationships between faculty of TS perceptions of effective teaching behaviors and TS perceptions of effective teaching behaviors?" Faculty of TS had only 2 interpersonal TBs in their top seven. TS had 5 interpersonal teaching behaviors in their top seven—with their top three all interpersonal.

Matney (2001) said that discussions on undergraduate teaching generally lack an empirical foundation. With the paradigm shift from a teacher-focus to a student-focus, an

empirical base of research is definitely needed to advance the elements of discussion as to what are perceived to be effective teaching behaviors by all student types and all faculty. Further research—like the research in this investigation—adds to the empirical base in question and helps to provide direction for further study in various facets of the teaching-learning situation and in other areas of higher education rather than just in four-year university settings.

The first research question, as were the others, was investigated through hypothesis testing using different data analysis techniques. Hypothesis One—There is no difference in perceived effective teaching behaviors between faculty of TS and TS in office systems technology programs—was addressed by the Mann-Whitney U Statistical Procedure. The results of a "2-Tailed P" equal to or greater than 0.05 for every teaching behavior indicates a significant difference between the responses of the sample groups, and thus the null hypothesis is rejected. There is a difference in perceived effective teaching behaviors between faculty of TS and TS in office systems technology programs.

Cashin (1995) found similarities in student and faculty view of effective teaching but findings realized a different emphasis in perception. Faculty values did not match student values. This study has similar results.

The second research question was "What are the relationships between faculty of NTS perceptions of effective teaching behaviors and NTS perceptions of effective teaching behaviors?" Faculty of NTS had 4 interpersonal teaching behaviors in their top ten. NTS had all 5 interpersonal teaching behaviors in their top ten.

Nesbit (1998) said adult education researchers frequently ignore what goes on within the classroom setting. This investigation looks at the perceptions of TS, NTS, TS

faculty, and NTS faculty as to effective teaching behaviors, most of which occur within the classroom. This study helps to add to the empirical base of research.

The second research question was investigated through hypothesis testing. Hypothesis Two—There is no difference in perceived effective teaching behaviors between faculty of NTS and NTS in office systems technology programs—was also addressed by the Mann-Whitney U Statistical Procedure. The results of a "2-Tailed P" equal to or greater for all teaching behaviors but two indicates a significant difference between the responses of the sample groups, and thus the null hypothesis is rejected. There is a difference in perceived effective teaching behaviors between faculty of NTS and NTS in office systems technology programs.

Cashin (1995) found similarities in student and faculty view of effective teaching but findings realized a different emphasis in perception. Faculty values did not match student values. This study has similar results as indicated earlier.

Siebert (2000) says that teaching adult learners necessitates advanced and additional skills. In other words, faculty who are trained to teach TS in the traditional ways are lacking these additional skills (capitalizing upon prior knowledge and experiences of the adult learner, realizing adult learners focus more on immediate application of knowledge, etc.) when it comes to teaching NTS. This investigation through its finding that there is a difference in perceived effective teaching behaviors between faculty of NTS and NTS in this specific program area supports the idea that teaching adult learners is different from teaching TS and requires additional, advanced teaching skills. The study showed a difference in perceptions of effective teaching behaviors of NTS faculty and NTS. Old training for teaching and traditional ways to

teach exhibited by traditional instructors are not necessarily perceived as effective teaching behaviors by NTS. Kanu (2000) points out that CTC instructors that teach many NTS with varied academic, economic, social, and cultural backgrounds face difficult teaching times before them and that student perceptions found on student evaluations of instructors are significant to classroom learning. NTS perceptions of effective teaching behaviors are shown by this investigation to be different from those of TS, TS faculty, and NTS faculty.

The emerging teaching culture, as evidenced by teacher centers at many institutions and increasing emphasis on faculty development that use instruments identifying teaching behaviors for improvement of teaching, shows that the idea of taking learners and their learning seriously is critical to maximizing learning for NTS. DeZure (2000) highlights recent years' strides in promoting a culture of teaching in higher education. DeZure points out that a re-conceptualization of the scholarship of teaching has occurred with the paradigm shift from a teacher-centered focus to a student-centered focus. This study showed differences in perceived effective teaching behaviors among student groups and faculty groups and connects with the idea of a re-conceptualization of teaching.

The third research question was "What are the relationships between faculty of TS perceptions of effective teaching behaviors and faculty of NTS perceptions of effective teaching behaviors?" Faculty of TS had all 5 interpersonal teaching behaviors in their top twelve. Faculty of NTS had 4 interpersonal teaching behaviors in their top twelve. Interpersonal teaching behaviors were ranked higher than instructional TBs in general by NTS faculty.

The third research question was investigated through hypothesis testing as well. Hypothesis Three—There is no difference in perceived effective teaching behaviors between faculty of TS and faculty of NTS in office systems technology programs—was addressed by the Independent Samples T-Test. The results of a "2-Tail Sig" equal to or greater than 0.05 for every teaching behavior indicates a significant difference between the responses of the sample groups, and thus the null hypothesis is rejected. There is a difference in perceived effective teaching behaviors between faculty of TS and faculty of NTS in office systems programs.

Many faculty of NTS, knowingly or unknowingly, ascribe to or use Knowles's ideas about andragogy (1970) when it comes to teaching their NTS. Andragogy calls for more focus to be on the process of teaching and learning than just focusing on the content to be learned. The same can be said for the ideas of Bruner (1966) being used by NTS faculty and for the teaching-learning process to be in the spotlight with content subject matter. This study revealed differences in perceived effective teaching behaviors of TS faculty and NTS faculty.

The fourth research question was "What are the relationships between TS perceptions of effective teaching behaviors and NTS perceptions of effective teaching behaviors?" TS had all 5 interpersonal teaching behaviors in their top seven. NTS had 3 interpersonal teaching behaviors in their top seven.

NTS have a more consumer-oriented approach to higher education than do TS ("The Changing Demographics of the Classroom," 2002). This investigation shows that TS value interpersonal teaching behaviors more than instructional teaching behaviors; whereas, NTS do not value interpersonal teaching behaviors as highly as do their TS

counterparts. NTS rank higher more instructional teaching behaviors than do the TS. This study supports the NTS consumer orientation view of the NTS in that returning to higher education NTS are more interested in instruction than in interpersonal relationships in order to upgrade skills and meeting credentialing requirements. The old adage of "adult education students voting with their feet" comes to mind as to instructional effectiveness for NTS.

The fourth research question was investigated through hypothesis testing, also. Hypothesis Four—There is no difference in perceived effective teaching behaviors between TS and NTS in office systems technology programs—was addressed by the Independent Samples T-Test. The results of a "2-Tail Sig" equal to or greater than 0.05 for all teaching behaviors except one indicates a significant difference between the responses of the sample groups, and thus the null hypothesis is rejected. There is a difference in perceived effective teaching behaviors between TS and NTS in office systems technology programs.

Ross-Gordon (1991) ran a study to find out what undergraduate NTS perceived as effective teaching behaviors. His investigation found that NTS value several of the same teaching behaviors that TS desire in a teacher, but that there were some significant differences in the overall ratings of effective teaching behaviors. This study makes essentially the same findings and supports Ross-Gordon ideas and assumptions.

NTS are usually intrinsically motivated and return to higher education with specific goals in mind (Imel, 1994). Traditional classroom environments are often not conducive to NTS learning, and traditional methods of instruction often are not adequate for NTS.

The two theoretical frameworks of this study are Knowles' concept of andragogy (1970) and Bruner's constructivist theory (1966). Because there was a difference in perceived effective teaching behaviors between TS and NTS in this study, it justified the works of Knowles and Bruner in that TS and NTS should be instructed differently because of the inclusion of experience to build learning upon and immediacy for learning from Knowles and experiential learning and active learning and construction of new learning on past knowledge from Bruner.

Changes in teaching for improvement of student learning must take into account the diverse NTS voices (Rallis, 1994). Instructors can use student ratings as a starting point in the search for most effective teaching behaviors and quality teaching in general. NTS presence in large numbers will continue to challenge the way higher education delivers instruction (Kasworm, Sandmann, and Sissel 2000, as cited in Imel, 2001). This study reveals significant differences in perceptions of effective teaching behaviors of TS and NTS in the selected program area. This study agrees with the idea that instructors can use student ratings to help determine the most effective teaching behaviors in particular and quality teaching in general.

The Spearman Correlation Coefficients obtained from the data analysis looking for correlations between the teaching behavior interpersonal and instructional categories provided only a few noteworthy results revealing no pattern or trend to follow up on in the area of faculty demographic information.

Implications of the Study

This study has implications for LTC office technology programs as well as for other LTC programs, other LCTCS fields of study, and higher education in general. Student evaluations of teaching can provide food for thought and direction for individual instructors and educational administrators for the improvement of teaching and addressing individual needs of a diverse student body.

This Study and Links to Other Studies

The "Condition of Education 2000 Report" (2000) said that students' perception of learning quality and teaching behaviors is an extremely valuable perspective. This study contributes to that perspective and connects with the idea that student evaluations can be invaluable when used with other data to improve the quality of instruction.

As Cross (2001) stated, there are four main developments that highlight the need for focusing attention on student learning in post-secondary education: the increasing demand for accountability from all stakeholders, research that shows students are the active locus for learning, the in-pouring of underprepared/unprepared students in higher education, and the increasing tendency of students to attend several institutions of higher education. These four developments connect with this study about perceptions of effective teaching behaviors of TS, NTS, TS faculty, and NTS faculty in that students—especially NTS—demand accountability and their success while being consumer-oriented shoppers of academe, in that

- all students have their own perceptions of effective teaching and what works for them,

- post-secondary education is matriculating more and more students—particularly NTS—who are ill-prepared or long-time away from formal learning situations, and
- to find student success many students—especially NTS—attend several post-secondary institutions.

This study shows the difference in perceptions of effective teaching behaviors among students and faculty. Student perceptions reveal much information. Student perceptions

- are a gauge of accountability,
- show students considered themselves as the prime focus for learning,
- show whether students think they are being reached by the instructors no matter what they (the students) bring or do not bring to higher education in the veins of ability and preparation, and
- prove to be the basis of student judgment as to whether or not a particular higher education institution is meeting their needs or not and the basis of decisions to remain in one place or attend another school.

These implications coincide with what several researchers say. Post-secondary faculty is impacted by what NTS thinks of as traits of effective instructors (Imel, 1995). Better preparation is required for NTS faculty (Benshoff and Lewis, 1992). Educational research is a constant saying what is effective for some students may not be effective for other students (Baxter, Terenzini, and Hutchings, 1999).

Many educational institutions utilize student evaluations for teaching evaluation. Solomon (1966, as cited in Murray, 1997) found "that perceived teaching effectiveness is predictable from specific classroom behaviors of the instructor" (p. 178). Tom and

Cushman (1975, as cited in Murray, 1997) also produced findings that student learning is significantly related to teacher classroom behaviors. Mintzes (1979, as cited in Murray, 1997) found a positive relationship as well. Murray (1983, 1985, as cited in Murray, 1997) investigated student ratings used to measure teaching effectiveness. Significant correlations between teaching behaviors and instructional outcomes were found. Erdle and Murray (1986, as cited in Murray, 1997) found correlations across academic disciplines between student ratings and teaching behaviors. Roberts and Becker (1976, as cited in Murray, 1997) studied teaching behaviors in vocational and technical courses in both secondary and post-secondary schools and found that specific teaching behaviors correlated to student outcomes. Murray (1997) after reviewing many experimental and observational studies says that classroom instructor behaviors can predict college teaching effectiveness. Knowledge of what respective student groups—TS and NTS—perceive as effective teaching behaviors helps administration in planning professional development for TS instructors, NTS instructors, full-time faculty, and part-time faculty. Assignment of instructors to courses consisting predominantly of TS or NTS comes into the picture. Matching instructors with certain classes of student groups needing specific instructional strengths is logical. Evening classes or other applicable classes with a majority of NTS can best be served by instructors with similar perceptions of effective teaching to those of NTS.

Effective teaching behaviors as identified and used in this study are valuable to students and teachers in all other areas of higher education. This study reveals difference in the perceptions of students and faculty as to effective teaching behaviors. Teaching behaviors can be made more effective by the application of theory and research to

professional development opportunities for faculty. Teaching can be improved or strengthened in post-secondary institutions of all types. Teaching is multi-dimensional as indicated by theory and by research (d'Apolliana and Abrami, 1997; Marsh and Roche, 1997, as cited in Delucchi and Pelowski, 2000). Teaching brings into play personal traits and qualities of the instructor and other characteristics known as benchmarks of good pedagogy. Even though a high quality teacher possesses several different styles and characteristic combinations, teaching can be enhanced, strengthened, or simply improved by looking at research and application of theory that works (Palmer, 2000).

J. Palmer (Outcalt, 2002, p. 12) states, "Despite varying levels of connection to the academic world, faculty members across disciplines hold to traditional instructional approaches." With post-secondary education keenly aware of the changing demographics of the student population, implications are that if the student demographics are changing, instructional approaches should be changing in response. This study's findings of the differences in perceptions of effective teaching behaviors agree with the practice of changing instructional approaches to match learning styles of the changing student population. Howell (2001), for example, says that courses designed for NTS should capitalize on the learning strengths of the adult students. A significant number of students indicated some faculty actually interfered with their learning as a result of the instructors assumptions of student homogeneity, of the instructors not understanding different learning approaches and styles, and of the instructors failure to make content material relevant to the students (Donaldson et al., 2000, as cited in Imel, 2001). This study's findings of perceived differences in effective teaching behaviors shows the need to recognize student perceptions of effective instructional practices.

Implications for Specific Groups

In summary, specific implications exist for various groups in post-secondary education just from the findings of this study of selected office systems technology programs in the Louisiana Technical College. Many of the implications are intertwined with one another. Implications cross disciplines and various levels of higher education.

TS and NTS

For TS and NTS there is the finding that these two student groups have different perceptions as to effective teaching behaviors and the implication is that the two groups have different learning styles and place different demands on instructors and other elements of post-secondary institutions. Both groups, in order to achieve the greatest academic success, should take the courses of instructors who have teaching styles that most nearly match their respective learning styles. The question begging for an answer is how does a TS or a NTS know which instructor fits him or her best in the teaching and learning process? Currently few mechanisms are in place to answer this question. Institutions should explore ways to inform students about teaching styles of instructors and learning styles of students.

Faculty

For faculty there are the findings that students rate effective teaching behaviors differently than instructors. Implications for faculty include the fact that student demographics have and are still changing and that different students—particularly TS and NTS—learn most successfully in different ways. Faculty must be aware of student groups' and individuals' differences and use appropriate teaching activities and instructor approaches to maximize student success. TS faculty and NTS faculty, as shown in this

study, have different perceptions of effective teaching behaviors. Instructors must be innovative, traditional, experimental, and practical in using educational theory in their teaching. Instructors must seek professional development based on student-centered instruction as well as on the old teacher-focused instruction. Understanding the relationships between learning styles and teaching styles for optimal student development is of prime importance.

Higher Education Campus and System Administrators

For higher education campus and system administrators there are implications from this study, also. Administrators at all levels should respect student differences

- in assignment of instructors to individual courses taught at particular times or of particular student makeup,
- in development of student support services,
- in determination of topics and themes for faculty professional development (both full- and part-time),
- in mandating professional development in acute areas of concern,
- in changing the nature of professional development from just attending subject matter conferences and publishing to active instructional improvement activities,
- in structuring reward systems for instructional improvement,
- in hiring decisions of faculty,
- in utilizing teacher centers to their fullest, and
- in developing genuine support for advancing teaching on campuses through articulation of mission and goals and through follow-through practices.

The findings of this study in office systems technology programs reveal differences in perceptions of effective teaching behaviors among students and faculty groups. All groups should be listened to. But who can give better feedback concerning the effectiveness of teachers than students who are actually being taught? Shulman (1999, as cited in Dant, 2000) says that "in order to take learning seriously, we have to take learners seriously" (p. 2). Administrators should take student evaluations seriously and acquire, handle, analyze, and report student evaluation information in more than just a perfunctory fashion while keeping in mind the common pitfalls of student evaluation of instructors.

Policy Makers

For policy makers (including boards of specific institutions, state governing boards, legislative committees, etc.) this study with its findings of different perceptions of effective teaching behaviors from students and faculty (and their respective groups), there are implications. Policy makers must look at the changing demographics of student population and the requisite needs of various student groups. The demands for accountability from all educational stakeholders will necessitate awareness of research in the field of post-secondary education teaching of the various student groups. Policy makers must consider effective teaching when it comes to class size limits, classroom environment, faculty development, and appropriations of funds.

Graduate Programs That Train CTC Faculty

Graduate programs that train CTC faculty have implications from this study. Obviously, student group types have various teaching and learning needs and perceive effective teaching behaviors in different light and of different value. CTC faculty must

be schooled in appropriate theories and practices to address the perceived needs of different learning styles and in applicable teaching styles to match student learning styles. Graduate programs must not only teach theory or educate CTC faculty the way they have been educated. Graduate preparation must be responsive to TS and NTS and their educational needs in the CTCs.

Field of Teaching and Education in General

In general the field of teaching and education should see implications in this study and its findings. This study shows that students and instructors perceive effective teaching behaviors differently. Educational practice in general—from pre-k through doctoral programs—should be to match instructor teaching styles as closely as possible to student learning styles.

Recommendations for Future Studies

The Louisiana Technical College, a part of the Louisiana Community and Technical College System, is an area in which little research as to teaching has been done. Few studies have focused on what goes on in the classroom as to effective teaching behaviors. The survey instrument used in this investigation could be used with appropriate revision in conducting other investigations in other programs of studies in the LTC.

Future investigations should seek to have greater faculty input—perhaps by direct investigator administration of the instructor survey. With greater numbers of faculty in the samples, subgroup demographic information could be correlated with category or individual teaching behaviors. Larger student samples should be investigated as well.

Further studies should be made in other program disciplines in the LTC. Student and faculty perceptions in other respective subject areas are worthy of investigation to cross-reference findings and to determine common elements for faculty development and other institutional practices.

Investigations of student and faculty perceptions of effective teaching behaviors that cross subject areas should be examined as well. Student perceptions in several programs could be compared. Faculty perceptions in several programs could be done likewise.

The idea of differences in TS and NTS perceptions in various programs and with larger samples should be examined, too. Larger samples will yield more definitive findings and projections/assumptions having a larger database. The Ross-Gordon (1991) study mentioned previously recommends future studies encompass large samples of TS and NTS and various sub-populations of adult students. This investigation in the office systems technology program on a rather small scale shows the need for studies of larger samples and the need to examine NTS sub-populations as recommended by Ross-Gordon. Interdisciplinary investigations are need, too. The investigations could encompass TS faculty and NTS faculty—both full-time and part-time.

As has been stated previously, when researchers and practitioners examine the role of the community and technical college teacher and what makes effective teaching, traditional instructional practices often are criticized for being antiquated and limited as to the effective learning of community and technical college students. Instructional activities should be matched with the learning styles of students being taught ("Teaching and Learning in the Community College," 1998). This study shows perceptual

differences in effective teaching behaviors of TS and NTS. NTS should have instructional activities matched with their learning styles (as should TS). This study supports the idea of matching teaching and learning styles of faculty and students.

Effective teaching when seen through student evaluations in two-year and four-year colleges is similar (Miller, Finley, and Vancko, 2000). This study of office systems technology programs at selected campuses of the technical college arm of the Louisiana Community and Technical College System is a small link to that research. More investigations are needed in the CTC area and across disciplines.

CTC proponents hail their institutions as "teaching institutions." Many CTC faculty choose to teach in CTCs because they have a greater interest in teaching than in research and publishing. The quality of teaching probably matters most to CTC students who are non-traditional in nature (Grubb, 1999). Further investigations like this study would help fill the CTC research gap as well as the effective teaching behaviors research gap in many disciplines and elements of post-secondary education.

Many CTC instructors, particularly those teaching trade and technical skills, often do not have any pedagogical background—much less any andragogical background—because they come from business and industry into teaching at CTCs. Additional investigations concerning faculty perceptions of effective teaching behaviors are needed. This study because of the small number of faculty participating could not significantly address this area of research.

For a great number of CTC students (as well as for all students) the instructor is the key to successful individual learning. Several factors have been identified to distinguish effective teachers from ineffective teachers (Kanu, 2000). This study shows

differences in perceived effective teaching behaviors and suggests that additional research be done in the CTCs.

In summary, further research is needed to fill in gaps of knowledge. Various investigations may require follow-ups studies or in-depth research in specific areas.

For TS and NTS there needs to be much more investigations of their likenesses and differences—particularly in their perceptions of effective teaching behaviors. This research needs to cut across disciplines and go into all levels of higher education. Pressing needs are for research about what various minority groups and females perceive as effective teaching practices. Research is needed to determine exactly how similar views of effective teaching are as well as how different they are for categories of students. Research on specific population groups must always clearly establish group identity and concentrate on its specific qualities.

For faculty much more investigation should be done to determine how and why faculty and students rate effective teaching behaviors differently and when do they rate them similarly. TS faculty and NTS faculty perceptions of effective teaching behaviors should be examined more fully. Why do TS and NTS faculty teach the way they do? What teaching behaviors are successful and when and for what groups of students?

For higher education campus and system administrators there are intriguing areas of research that could be done—assignment of instructors to classes, hiring of instructors specifically trained to teach certain student types, changing practice of faculty development, voluntary or mandated professional development and use of teacher centers, and effective use of student evaluations. There must be a commitment to leadership in promoting specific avenues of faculty development. The effects of various

aspects of all these elements on student learning are the underlying reason for looking at further research in the above areas.

For policy makers there should be research to help make informed and educationally sound decisions for the most effective teaching when it comes to class size, classroom environment, faculty development, credentialing, funding, etc. Again the underlying assumption is that of how these facets of the educational process maximize student learning. Specifically for CTCs teaching for maximized learning is of prime importance if the United States will keep its place in educating workers with practical and technical skills. India and China, two of the America's biggest competitors, currently "train hundreds of thousands of workers with practical and technical skills each year" (Young, 2005, p. 89).

For graduate programs that train CTC faculty (and other faculty as well) additional research is warranted in the areas of perceptions of effective teaching behaviors by students and faculty. Research is needed to assess the impact of teaching theory and then practical application of that theory as a way to improve instructors and then student learning.

The field of education and teaching in general should have more investigations of effective teaching behaviors all the way from early childhood education to graduate programs. Matching the most effective teaching styles to student learning styles can be studied and refined.

Elbe (1988) bluntly says that "teaching can be taught" (p. 5) and that teaching skills can be acquired. If this is so, then more research will be of great value. The study of effective teaching behaviors will be one way to improve the teaching-learning process.

Conclusions and Summary

Based on the findings of this study, it may be concluded that there are important differences in the perceptions of TS, NTS, TS faculty, and NTS faculty in office systems technology programs as to effective teaching behaviors. Part-time and full-time faculty, also, have differences in perceptions of effective teaching behaviors.

Both TS and NTS valued interpersonal teaching behaviors highly; however, TS placed interpersonal teaching behaviors consistently higher in their rank-order of importance. NTS perceived instructional teaching behaviors as of greater importance than did TS. As to specific teaching behaviors being of importance, TS had in their top five teaching behaviors: 6—speaks at appropriate volume, 7—uses class time efficiently, 17—friendly/easy to talk with/approachable, 21—stresses important points/emphasizes principles and generalizations, and 40—helpful to individual students; and NTS had as their top five teaching behaviors: 1—knows subject matter, 6—speaks at appropriate volume, 7—uses class time efficiently, 17—friendly/easy to talk with/approachable, and 27—respects students.

Both TS faculty and NTS faculty perceived both interpersonal and instructional teaching behaviors as important with NTS faculty placing greater importance on interpersonal teaching behaviors. As to specific teaching behaviors being of importance, TS faculty had in their top five teaching behaviors: 1—knows subject matter, 6—speaks at appropriate volume, 19—well prepared/organized, 31—exhibits professionalism, and 38—communicates effectively/explains clearly; and NTS faculty had as their top five teaching behaviors: 1—knows subject matter, 11—repeats difficult ideas, 19—well prepared/organized, 27—respects students, and 40—helpful to individual students.

TS perceived interpersonal teaching behaviors of greater significance than did TS faculty. TS rated as its top three teaching behaviors three interpersonal teaching behaviors. The other two interpersonal teaching behaviors in the study were rated almost as high. TS faculty perceived a rather mixed bag of interpersonal and instructional as of highest value. As to specific teaching behaviors being of importance, the TS top five teaching behaviors were 6—speaks at appropriate volume, 7—uses class time efficiently, 17—friendly/easy to talk with/approachable, 21—stresses important points/emphasizes principles and generalizations, and 40—helpful to individual students; and the TS faculty top five teaching behaviors were 1—knows subject matter, 6—speaks at appropriate volume, 19—well prepared/organized, 31—exhibits professionalism, and 38—communicates effectively/explains clearly.

NTS valued interpersonal teaching behaviors greater than NTS faculty. But the NTS did not place interpersonal teaching behaviors in their top three ranked teaching behaviors as did the TS. As to specific teaching behaviors being of importance, the NTS top five teaching behaviors were 1—knows subject matter, 6—speaks at appropriate volume, 7—uses class time efficiently, 17—friendly/easy to talk with/approachable, and 27—respects students; and the NTS faculty top five teaching behaviors were 1—knows subject matter, 11—repeats difficult ideas, 19—well prepared/organized, 27—respects students, and 40—helpful to individual students.

No specific pattern or trend for individual teaching behaviors perceived as of significance was obvious. For example, no single teaching behavior was in the top five of all groups. Teaching behavior 1—knowledge of subject matter—was not in the TS top five; in fact, TS ranked it number 8. Even the rank-ordering teaching behaviors for the

groups of TS, NTS, TS faculty, and NTS faculty reveal the differences in perceived effective teaching behaviors as do the statistical analysis of the data using Mann-Whitney U, Independent Samples T-Tests, and Spearman Correlation Coefficient.

This research has shown differences in perceptions of effective teaching behaviors of student and faculty groups in office systems technology programs. By shedding light on the different perceptions of effective teaching behaviors, this study aids in filling the gap in research in the area of effective teaching and in the physical domain of the CTCs. Exploring perceptions of effective teaching behaviors can be a powerful impetus for improving student learning.

This study is unique in that it investigates the perceptions of students and faculty in the LTC office systems technology program of studies as to effective teaching behaviors. It used an instrument developed from literature review of teaching behaviors and a pilot study using a Q-Sort Procedure on an LTC campus. Perceptions as to effective teaching behaviors of TS, NTS, TS faculty, and NTS faculty were examined. Few investigations in the LTC have been conducted in the past. Findings of this study are useful for several areas of higher education, especially evaluation and training/professional development.

Teaching can best be improved by conducting research in what T. Nesbit deems the “black box” of teaching—the class setting where teaching actually takes place (Nesbit, 1998, p. 157). This study expands that location of research and provides some foundation for future studies of teaching TS and NTS and what these different student groups perceive as to effective teaching behaviors in higher education.

This study should stimulate discussion on the basic questions concerning the teaching behaviors important to TS and NTS, differences in teaching TS and NTS, and differences in approach in teaching TS and NTS. It calls attention, in its limited way, to the fact that TS and NTS are different and have different perceptions as to which teaching behaviors are effective and important.

REFERENCES

Adult Learning, ARIS Information Sheet, 1999. ERIC No. ED434223, Clearinghouse No. CE079208, National Languages and Literacy Institute of Australia, Melbourne (Australia), Adult Education Resource and Information Service. Retrieved 8/23/01 at http://fastweb?getdoc+ericdb2+ericdb+1000820+27 +wAAA+%28%28%27adult%26students%27%

Alfred, R. (2003, Apr/May). The wolf at the door: Where colleges could fail. *Community College Journal*, 73, (5), 16-24.

Baiocco, S. A. & DeWaters, J. N. (1998). *Successful college teaching: problem-solving strategies of distinguished professors*. Boston: Allyn and Bacon.

Banner, Jr., J. M. & Cannon, H. C. (1997). *The elements of teaching*. New Haven: Yale University Press.

Barker, T. S., Sturdivant, V. A., & Smith, Fr., H. W. (1999). Adult students in the college classroom. (Report No. HE032409). Northwestern State University Government Documents Repository Center. (ERIC Document Reproduction Service No. ED 434 631).

Bartlett, T. (2003, September 26). The first thing about teaching. *The Chronicle of Higher Education*, L, (5), A10-A11.

Bartlett, T. (2003, December 12). What makes a teacher great? *The Chronicle of Higher Education*, L, (16), A8-A9.

Baxter, M., Terenzini, P. T., & Hutchings, P. (1999). Learning and teaching in the 21st century: Trends and implications for practice. *ACPA—Higher Education Trends for the Next Century*. Retrieved 9/6/01 from http://www.acpa.nche.edu/seniorscholars/treands/trends4.htm

Bendixen-Noe, M. K. & Giebelhaus, C. (1998). Nontraditional students in higher education: Meeting their needs as learners. *Mid-Western Educational Researcher*, 11, 27-31.

Benshoff, J. M. & Lewis, H. A. (1992). *Nontraditional college students.* [5 pages]. ERIC Digests [On-line]. Available: http://www.ed.gov/databases/ERIC_Digests/ed347483.html

Bishop-Clark, C. & Lynch, J. M. (1992, summer). The mixed-age college classroom. *College Teaching*, 40, (3), 114-117.

Boggs, G. R. (2001, August/September). The meaning of scholarship in community colleges. *Community College Journal*, 72, (1), 23-26.

Bovell, C. & Ansalone, G. (2001, fall). An exploration of adult learning styles: Doesn't everyone learn similarly? *The Michigan Community College Journal*, 7, (2), 41-59.

Bowden, R. & Merritt, Jr., R. (1995, spring). The adult learner challenge: Instructionally and administratively. *Education*, 115, (3), 426-427.

Brookfield, S. (1986). *Understanding and facilitating adult learning: A Comprehensive analysis of principles and effective practices*. San Francisco: Jossey-Bass.

Bruner, J. (1966). *Toward a theory of instruction*. Cambridge, MA: Harvard University Press.

Bumphus, W. G. (2002). Louisiana Community and Technical College System strategic plan for quality improvement 2002-03 to 2006-07—Executive summary. Available at the Louisiana Community and Technical College System Web Site: http://www.lctcs.state.la.us

Carr, C. (1998). Abstract: assessing teaching style preferences and factors that influence teaching style preferences of registered dietitians. *Journal of the American Dietetics Association*. 98, (9). Retrieved 3/9/04 at http://www/bsu/edu/teachers/departments/edld/conf/carr/html

Cashin, W. E. (1995, September). Idea paper no. 32—Student ratings of teaching: The research revisited. Retrieved from Kansas State University, Division of Continuing Education, Center for Faculty Evaluation & Development Web site: http://www.idea/ksu.edu/papers/Idea_Paper_32.pdf

The changing demographics of the classroom. (2002, November). *Keying In—The Newsletter of the National Business Education Association*. 13, (2), 1-4.

Choy, S. P. (2002). Nontraditional undergraduates. *The Condition of Education 2002*. National Center for Education Statistics. Available: http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2000062

Cohen, A. M. & Brawer, F. B. (2003). *The american community college* (4th ed.). San Francisco: Jossey-Bass.

Condition of Education 2000, US Department of Education, National Center for Education Statistics, available at http://nces.ed.gov/pubs2001/2001072_5.pdf

Conti, G. (1985). Assessing teaching style in adult education: How and why. *Lifelong Learning: An Omnibus of Practice and Research*, 8, (8), 7-11, 28.

Cramer, K. M. & Alexitch, L. R. (2000). Student evaluation of college professors: Identifying sources of bias. *Canadian Journal of Higher Education*, 30 (2): 143-164.

Cross, K. P. (2001, July). Leading-edge efforts to improve teaching and learning: The Hesburgh awards. *Change*, 33, (4), 31.

Cross, K. P. (1977). Not can, but will college teaching be improved?. In J. A. Centra (ed.), *Renewing and evaluating teaching* (pp. 1-15). New Directions for Higher Education, No. 17. San Francisco: Jossey-Bass.

Cyr, A. V. (1999). Overview of theories and principles relating to characteristics of adult learners: 1970s-1999. (Report No. CE079352). Available: ERIC Document Reproduction Service No. ED 435 817).

Dant, J. H. (2000). Characteristics of effective teaching and principles of brain research: Do the two fit together? Retrieved October 9 2002, from http://www.coe.ilstu.edu/scienceed/jinks/ci538/papers/dant/htm

Davis, B. G. (1993). *Tools for teaching*. San Francisco: Jossey-Bass Publishers.

Delucchi, M. & Pelowski, S. (2000). Liking or learning?: The effect of instructor likeability and student perceptions of learning on overall ratings of teaching ability. *Radical Pedagogy*. Retrieved 11/25/03 from http://radicalpedagogy.icaap.org/content/issue2_2/delpel.html

DeZure, D. (2000, September). Three decades of lessons on teaching and learning [4 pages]. *AAHE Bulletin*. Retrieved 8/18/01 from http://www.aahe.org/Bulletin/sept2000_1.htm

Eble, K. E. (ed.) (1980). *Improving teaching styles*. San Francisco: Jossey-Bass Inc.

Eble, K. E. (1988). *The craft of teaching—A guide to mastering the professor's art (2nd ed.)*. San Francisco: Jossey-Bass Inc., Publishers.

El-Khawas, E., & Knopp, L. (1996). *Campus trends 1996*. Washington, DC: American Council on Education.

Evelyn, J. (2003, November 28). How community colleges measure up. *The Chronicle of Higher Education*, p. A36.

Evelyn, J. (2002, June 14). Nontraditional students dominate undergraduate enrollments, study finds. *The Chronicle of Higher Education*, p. A34.

Gaddis, B. (1999). *Research review of a published correlational research study*. Retrieved 10/9/02 at http://web.uccs.edu/bgaddis/leadership/corrcritiqueDs.htm

Gordon, H. R. D. (2003, Winter/Spring). Selected factors of teaching effectiveness: Perceptions of apprenticeship trainers. *The Journal of Technology Studies*, XXIX, (1). Retrieved 3/14/04, from http://scholar.libvt.edu/ejournals/JTS/Winter-Spring-2003/pdf/gordon.pdf

Gordon, H. R. D., & Yocke, R. (1999, fall). Relationship between personality characteristics and observable teaching effectiveness of selected beginning career and technical education teachers. *Journal of Vocational and Technical Education*, 16, (1). Retrieved 3/14/04, from http://scholar.libvt.edu/ejournals/JVTE/v161/gordon.html

Grubb, W. N. (1999). *Honored but invisible—An inside look at teaching in community colleges*. New York: Routledge.

Guzman, N. (2000). Applications of adult learning theories to constructivist learning environments [12 pages]. Topic Focus Paper #2 for course LEAD 755 Readings in Leadership. Available: http://web.uccs.edu/bgaddis/leadership/topicfocus2Dl.htm

Harris, S. (2003, fall). An andragogical model: Learning through life experiences. *Kappa Delta Pi Record*, 40, (1), 38-41.

Hofinger, R. J. & Lehman, F. R. (1995). Teaching the non-traditional student. Proceedings of the ASEE/IEEE FIE Conference [On-line report]. Retrieved 8/28/01 from http://fie/engrng.pitt.edu/fie95/4d3/4d34/4d34.htm

Horn, L., Peter, K., & Rooney, K. (2002). Undergraduate diversity and the risk of leaving postsecondary education. *Profile of undergraduates in u. s. postsecondary institutions: 1999-2000*. NPSAS. Retrieved 4.24.04 from http://nces.ed.gov/das/epubs/2002168/profile3.asp

Hornor, N. (2001). *The effectiveness of an application of some concepts from andragogical instruction as compared with traditional instruction in an introductory college algebra course*. Unpublished doctoral dissertation, The University of Southern Mississippi, Hattiesburg.

Howell, C. L. (2001). *Facilitating responsibility for adult community college students*. [4 pages]. ERIC Digests [On-line]. Available: http://www.gseis.ucla.edu/ERIC/digests/dig0103.html

Imel, S. (2001). *Adult learners in postsecondary education—Practice application brief no. 17*. ERIC/ACVE Publications. Retrieved 11/25/03, from http://ericacve.org/docgen.asp?tbl=pab&ID=107

Imel, S. (1994). *Guidelines for working with adult learners*. [5 pages]. ERIC Digests [On-line]. Available: http://www.ed.gov/databases/ERIC_Digests/ed377313.html

Imel, S. (1995). Teaching adults: Is it different? [5 pages]. ERIC Clearinghouse—Adult, Career and Vocational Education. [On-line report]. Available: http://ericacve.org/docs/teac-adu.htm

Jones, D. J. & Watson, B. C. (1990). High risk students and higher education: Future trends [4 pages]. Eric Digests [On-line]. Available: http://www.ed.gov/databases/ERIC_Digests/ed325033.html

Justice, E. M. & Dornan, T. M. (2001, May). Metacognitive differences between traditional-age and nontraditional-age college students. *Adult Education Quarterly*, 51, 236-248.

Kanu, A. M. (2000). *Evaluating teaching effectiveness in community college settings*. (JC 020 454). Available: ERIC Document Reproduction Service No. ED 466 251.

Kelly, D. (1992). *Part-time and evening faculty: Promoting teaching excellence for adult evening college students*. 1991/92 Fund for Instructional Improvement Grant Project Final Report. (ERIC Document Reproduction Service No. ED348088).

Kerekes, J. & Huber, M. T. (1998). *Exceptional teaching in community colleges: An analysis of nominations for the u. s. professors of the year program, 1995-1997*. A Report of The Carnegie Foundation for the Advancement of Teaching.

Kerka, S. (1995). *Adult learner retention revisited*. [5 pages]. ERIC Digests [On-line]. Available: http://www.ed.gov/databases/ERIC_Digests/ed389880.html

Kirby, D. M., & Chugh, U. (1993). Two views from the bridge: A comparison of the perceptions of students and instructors of elements in the audio-teleconferencing environment. *Journal of Distance Education*. Retrieved February 27, 2003, from http://cade.athabascau.ca/vol8.2/06_kirby_and_chugh.html

Knowles, M. S. (1970). *The modern practice of adult education: Andragogy versus pedagogy*. New York: Cambridge Books.

Lawler, P. A. & King, K. P. (2000). *Refocusing faculty development: The view from an adult learning perspective*. [7 pages]. 2000 AERC Proceedings. [On-line]. Available: http://www.edst.educ.ubc.ca/aerc/2000/lawlerp&kingk-web.htm

Leach, J. (1996, spring). Distinguishing characteristics among exemplary trainers in business and industry. *Journal of Vocational and Technical Education*, 12, (2). Retrieved 3/13/04, from http://scholar.lib.vt.edu/ejournals/JVTE/v122/leach.html

Lords, E. (2000, April 5). Many students are returning to 2-year colleges for technical training, a survey finds. *The Chronicle of Higher Education*. Retrieved 4/12/04 at http://chronicle.com/cgi2-bin/printable.cgi?article=http://chronicle.com/prm/daily/2000/04/2

Mancuso, S. (2001, spring). Adult-centered practices: Benchmarking study in higher Education. *Innovative Higher Education*, 25, (3), 165-181.

Marsh, H. W. & Dunkin, M. J. (1997). Students' evaluations of university teaching: A multidimensional perspective. In R. P. Perry & J. C. Smart (eds.), *Effective teaching in higher education: Research and practice* (241-320). New York: Agathon Press.

Matney, M. M. (2001). Institutional and department factors influencing faculty adoption of innovative teaching practices (Doctoral dissertation, University of Michigan, 2001). *Dissertations Abstracts International, 62,* (10), 3314, (UMI No. AAT 3029390).

McCollin, E. (2000, November). Faculty and student perceptions of teaching styles: Do teaching styles differ for traditional and nontraditional students? Paper presented at the Annual Meeting of the Mid-South Educational Research Association, Bowling Green, KY.

Merriam, S. and Caffarella, R. (1999). *Learning in adulthood: A comprehensive guide*. (2nd Ed.). San Francisco: Jossey-Bass Publishers.

Meyer, N. B. (1991, May). *Andragogy and community college education: An analysis of the importance of enhancing self-concept/self-esteem in the nontraditional student*. Abstract available: ERIC Document Reproduction Service No. ED 343 621.

Miley, W. M. & Gonsalves, S. (2003, September). What you don't know can hurt you: Students' perceptions of professors' annoying teaching habits. *College Student Journal*. Retrieved 11/19/03 from http://www.findarticles.com/cf_0/m0FCR/3_37/108836910/print.jhtml

Miller, R. I., Finley, C., & Vancko, C. S. (2000). *Evaluating, improving, and judging faculty performance in two-year colleges*. Westport, CT: Bergin & Garvey.

Mollison, A. (2000, August 20). Colleges changing to meet needs of older students. Retrieved 7/16/02 from http://www.coxnews.com/washingtonbureau/staff/mollison/08-20-00ADULTSTUDENTS08

Murray, H. G. (1997). Effective teaching behaviors in the college classroom. In R. P. Perry & J. C. Smart (eds.), *Effective teaching in higher education: Research and Practice* (171-204). New York: Agathon Press.

Murray, J. P. (1999, Winter). Faculty development in a national sample of community colleges [13 pages]. *Community College Review*. [On-line]. Retrieved 9/4/01 from http://www.findarticles.com/cf_0/m0HCZ/3_27/60498501/print.jhtml

Nelson, C. E. (1996, Nov-Dec). Student diversity requires different approaches to college teaching, even in math and science. *American Behavioral Scientist*, 40, (2), 165-75.

Nesbit, T. (1998). Teaching in adult education: Opening the black box. Adult Education Quarterly, 48 (3), 157-170.

Olson, S. J. (1994). Competencies of two-year college technical instructors and technical trainers: Similarities and differences. *Journal of Industrial Teacher Education*, 32, (1). Retrieved 3/14/04m from http://scholar.lib.vt.edu/ejournals/JITE/v321/Olson.html

Outcalt, C. L. (ed.) (2002). *Community college faculty: Characteristics, practices, and challenges*. San Francisco: Jossey-Bass.

Palmer, D. (2000). Students' perceptions of good and bad university teaching. *Teaching Review*. Retrieved 3/13/04 from http://www.newcastle.edu.au/oldsite/services/iesd/publications/eunexus/articles/teachingreview

Paulsen, M. B. & Feldman, K. A. (1995). *Taking teaching seriously: Meeting the challenge of instructional improvement*. [4 pages]. ERIC Digests [On-line]. Available: http://www.ed.gov/databases/ERIC_Digests/ed396615.html

Perterson, K. S. (2002, May 26). College weighs on minds: Depression rates soaring for students. *The Sunday Town Talk*, p. D1.

Pew Higher Education Research Program. (1989, May). *The Business of the Business*. Policy Perspectives 1: 1-7.

Pope, J. (2004, May 3). Community colleges retrain unemployed. *The Town Talk*, p. B6.

Rallis, H. (1994). Creating teaching and learning partnerships with students: Helping faculty listen to student voices. *To Improve the Academy*, 13, 255-268.

Romano, R. (1994, Fall). Gender issues in teaching: Does nurturing academic success in women mean rethinking some of what we do in the classroom? *Speaking of Teaching—Stanford University Newsletter on Teaching*, 6, (1), 1-5.

Ross-Gordon, J. (1991). Critical incidents in the college classroom: What do adult undergraduates perceive as effective teaching? *Continuing Higher Education Review*, 55, (1/2), 14-33.

Roueche, J. E., Milliron, M. D., & Roueche, S. D. (2003). *Practical magic: On the front lines of teaching excellence*. Washington, D. C.: Community College Press.

Schuetz, P. (2002, August). *Emerging challenges for community colleges*. EDO-JC-02 -07, p.1.

Seldin, P. (1995). *Improving college teaching*. Retrieved 5/10/02 from http://www.olemiss.edu/depts/vc_academic_affairs/improve.html

Sensenbaugh, R. (1995). *How effective communication can enhance teaching at the college level*. [4 pages]. ERIC Digests [On-line]. Retrieved 12/23/03 at http://www.ericfacility.net/ericdigests/ed380847.html

Shaw, A. (2000, March 14). Adult students must make time for more than homework [4 pages]. Daily Kent Stater. [On-line]. Available: http://www/studentadvantage.lycos.com/lycos/article/0,4683, c4-i6-t54-a23944,00.html

Sheehan, E. P. & Duprey, T. (1999, September). Student evaluations of university Teaching. *Journal of Instructional Psychology*. Retrieved 11/19/03 from http://www.findarticles.com/cf_0/m0FCG/3_26/62980762/print.jhtml

Shek, K. (2002, February). New faculty learn community college needs. *Community College Times*. Retrieved on 12/30/03 from http://www.aacc.nche.edu/PrintTemplate.cfm?Section+Times_Articles&template=/Content

Shiber, J. G. (1999, December). Teaching nontraditional students (abstract). *Journal of Chemical Education*, 76, 1615.

Shroyer, Hillary. "Defining the 'Non-Traditional' Student Not So Simple," in *The Miscellany News*, September 23, 1999, retrieved on September 28, 2001, from http://www.studentadvantage.lycos.com/lycos/article/0,4683,c4-i6-t54-a16161,00.html

Siebert, A. (2000, May). *Teaching adult students the way they learn: The instructor's role in retaining adult learners and increasing their chances of success in college*. Paper presented at the National Conference on the Adult Learner, Atlanta, GA. Retrieved 9/27/02 from http://www.adultstudent.com/eds/articles/teaching.html

Special Analysis 2002. US Department of Education, National Center for Education Statistics. Retrieved 4/24/04 from http://nces.ed.gov/programs/coe/2002/analyses/nontraditional/sa03.asp

Stronge, J. H. (2002). *Qualities of effective teachers*. Alexandria, VA: Association for Supervision and Curriculum Development.

Szelenyi, K. (2001, February). Minority student retention and academic achievement in community colleges. ERIC Clearinghouse for Community Colleges, ED-JC-01-02.

"Teaching and Learning in the Community College, ERIC Clearinghouse for Community Colleges, Topical Bibliography" Fall 1998.

Torrey, E. J. (2002). *Faculty development centers in higher education: Incorporating diversity and technology*. Unpublished doctoral dissertation, Florida Atlantic University, Boca Raton, Florida.

Travis, J. E. (1995). *Models for improving college teaching: A faculty resource*. [3 pages]. ERIC Digests [On-line]. Retrieved 8/23/01 from http://www.ntlf.com/html.lib.bib/95-6dig.htm

Tucker, S. Y., Stewart, D., & Schmidt, B. J. (2003, spring). Teaching and learning styles of community college business instructors and their students: Relationships to student performance and instructor evaluations. *New Horizons in Adult Education*, 17, (2), 11-20.

Walsh, D. J. & Maffei, M. J. (1994). Never in a class by themselves: An examination of behaviors affecting the student-professor relationship. *Journal on Excellence in College Teaching*, 5, (2), 23-49.

Yates, K. (2002). Perceptions of nontraditional students about support services in public higher education institutions in Kentucky. *ProQuest Digital Dissertations*. (AAT 3039693).

Young, J. (2005, January). Make something happen: You can, and you should—five new year's resolutions for america. *Reader's Digest*, 87-91.

APPENDICES

APPENDIX A: FORTY TEACHING BEHAVIORS FROM LITERATURE REVIEW

The literature review yielded 127 teaching behaviors from 29 sources. Of the 127 teaching behaviors, the following 40 teaching behaviors were the most frequently recurring items:

1. encourages/responsive to questions and comments/encourages discussion—19
2. well prepared/organized—17
3. asks content/concept questions of class to check understanding—14
4. feedback on student work timely and helpful—12
5. communicates effectively/explains clearly—11
6. enthusiastic about subject—11
7. helpful to individual students—11
8. holds students' attention and interest/interesting style of presentation—10
9. pace of presentation/teaching matches class comprehension—10
10. accessible/available to students outside of class—10
11. repeats difficult ideas—10
12. summarizes major points—10
13. uses a variety of instructional strategies/media—10
14. uses humor/jokes/anecdotes effectively—9
15. addresses students by name—8
16. gives multiple examples—8
17. friendly/easy to talk with/approachable—7
18. knows subject matter—7
19. makes eye contact—7

20. points out practical applications—7
21. stresses important points/emphasizes principles and generalizations—7
22. tolerant of/discusses other viewpoints—7
23. assignments clear/interesting/stimulating—6
24. does not digress from theme/main topic of presentation/lecture—6
25. explains how each topic fits in/integrates material into a coherent whole—6
26. knows background information about students—6
27. respects students—6
28. states course objectives/describes work to be done—6
29. uses clear/concrete examples/illustrations of concepts—6
30. discusses recent developments in the field—5
31. exhibits professionalism—5
32. gives preliminary overview of lecture/presentation at beginning of class—5
33. moves while lecturing/presenting—5
34. relates to students as individuals—5
35. uses visual aids (videos, pictures, maps, artifacts, etc.)—5
36. asks students directly if they understand before proceeding—4
37. defines new or unfamiliar terms/provides vocabulary lists—4
38. puts outline of lecture/presentation on board/screen/handout—4
39. speaks at appropriate volume—4
40. uses class time efficiently—4

APPENDIX B: 127 TEACHING BEHAVIORS FROM LITERATURE REVIEW

Accessible/available to students outside of class

Addresses students by name

Advises students as to how to prepare for exams

Allows adequate time for course assignments

Always in control

Answers student questions thoroughly

Asks if students understand before proceeding

Asks questions of class to check understanding

Asks questions of individual students

Asks thought-provoking questions

Assignments clear, interesting, and stimulating

Avoids sarcasm and put-downs

Begins class on time

Builds on/teaches to previous experiences

Classroom climate effective

Clearly indicates transition from one topic to the next

Communicates effectively/explains clearly

Course materials relevant and well organized

Covers very little material in class sessions

Creates positive classroom atmosphere

Criticizes students when they make errors

Defers difficult, irrelevant, or time-consuming student questions for discussion outside of class

Defines new or unfamiliar terms/provides vocabulary list

Does not digress from theme of lecture/main topic

Discusses recent developments in the field

Dwells excessively on obvious points

Emphasizes conceptual understanding

Encourages/responsive to questions and comments/encourages class discussion

Ends class on time

Enthusiastic about subject

Exams clear and fair/reflect course content

Exhibits facial gestures or expressions

Exhibits professionalism

Exhibits self-control/not easily upset

Explains how each topic fits in/integrated material into a coherent whole

Explains material at an appropriate level

Explains subject matter in familiar colloquial language

Explication de texte (reading and analyzing passages from text aloud)

Extra point work given/opportunities to improve grade provided

Fair and impartial

Fair number of evaluations

Facilitates learning/motivates students to their best work

Feedback on student work timely and helpful

Friendly, easy to talk with/approachable

Gestures with hands and arms

Gestures with head and body

Gives multiple examples

Gives preliminary overview of lecture/presentation at beginning of class

Gives other references for various points/concepts

Gives understandable/clear/simple explanations and specific details

Grading clear and in writing

Has students apply concepts to demonstrate understanding

Holds students' attention and interest/interesting style of presentation

Helpful to individual students

Helps broaden students' interest/new viewpoints and appreciations

Incorporates students' ideas into lecture/presentation/class

Invites criticism of his/her own ideas

Involves student in mutual planning

Keeps discussion focused

Keeps students informed of their progress

Knows if class is understanding him/her or not

Knows background information about students

Knows subject matter

Lectures effectively/lectures easily outlined

Makes eye contact

Moves while lecturing/presenting

Pace of presentation matches class comprehension

Points out practical applications

Praises students for good ideas/work

Presents challenging, thought-provoking ideas

Proceeds at a rapid pace

Provides sample exam questions

Provides guides to support learning

Puts outline of lecture/presentation on blackboard, overhead screen, handout, etc.

Reads lecture verbatim from notes or text

Recognizes and admits own mistakes

Relates to students as individuals

Repeats difficult ideas

Repeats student questions so the entire class can hear

Respects students

Reviews topics covered in previous lectures at beginning of class

Rhetorical questions used

Says “um,” “ah,” “you know,” etc., excessively

Shows distracting mannerisms

Shows facial expressions

Signals transition to new topic

Small group discussion/work

Smiles or laughs while teaching

Speaks at appropriate pace

Speaks at appropriate volume

Speaks at rate that allows students to take notes

Speaks clearly

Speaks expressively/emphatically/dramatically

Speaks in monotone

Stats course objectives/describes work to be done

Sticks to the point in answering students' questions

Storytelling

Stresses important points/emphasizes principles and generalizations

Suggests ways of memorizing complicated ideas

Summarizes major points

Syllabus complete with all course requirements

Talks with students before or after class

Teaches at right pace

Tells students exactly what is expected of them on tests, assignments, etc.

Tolerant of/discusses other viewpoints

Treats all students equally

Uses alternate explanations when necessary

Uses brainstorming

Uses case studies

Uses collaborative learning techniques

Uses class time efficiently

Uses clear/concrete examples/illustrations of concepts

Uses graphs or diagrams

Uses handouts

Uses headings and subheadings to organize lectures

Uses humor/jokes/anecdotes effectively

Uses peer teaching

Uses role playing

Uses tutorial questions (analogies, reflections, predictions, etc.)

Uses a variety of instructional strategies/media

Uses a variety of evaluation types

Uses visual aids (videos, pictures, maps, artifacts, etc.)

Uses wait-time when questioning

Varies speed and tone of voice

Well prepared/organized

Willingness to go over tests

Writes key terms on blackboard or overhead screen

APPENDIX C: MATRIX FOR CORRELATION

For Individual Teaching Behaviors and Categories of Instructional and Interpersonal

Faculty of TS SUBGROUPS: teaches majority of 21 or under, teaches majority of over 21 but immediate entry, age, highest degree, full-time, part-time, years of teaching, years employed outside teaching	*TS* SUBGROUPS: 21 or under, over 21 but immediate entry, grade expected, gender
Faculty of NTS SUBGROUPS: teaches majority of over 21 but not immediate entry, age, highest degree, full-time, part-time, years of teaching, years employed outside teaching	NTS SUBGROUPS: Over 21 but not immediate entry, grade expected, gender

- Mann Whitney U Statistical Procedure
- Spearman Coefficient of Correlation
- T-Test for Independent Samples

APPENDIX D: STUDENT QUESTIONNAIRE

Which describes you?

( ) 21 years of age or under

( ) over 21 years of age but entered community/technical college immediately after high school

( ) over 21 but did not enter community/technical college until age 21 or older

What grade do you expect in the office systems technology course you are taking? _____

What is your gender? _____ female _____male

Do you have a college degree? _____ yes _____ now

What is your primary reason for entering this technical college?
_____ career change _____ personal knowledge _____ skills update _____ other

Are you the first in your family to enter post-secondary education?_____ yes _____ no

Instructions: Please rate the following 40 teaching behaviors as to their effectiveness according to the scale below:

1—totally ineffective **2**—significantly ineffective **3**—slightly ineffective

4—neutral

5—slightly effective **6**—significantly effective **7**—totally effective

---

1. Knows subject matter
   1 2 3 4 5 6 7

2. Makes eye contact
   1 2 3 4 5 6 7

3. Asks content/concept questions of class to check understanding
   1 2 3 4 5 6 7

4. Feedback on student work timely and helpful
   1 2 3 4 5 6 7

1—totally ineffective **2**—significantly ineffective **3**—slightly ineffective

4—neutral

5—slightly effective **6**—significantly effective **7**—totally effective

---

5. Puts outline of lecture/presentation on board/screen/handout
   1 2 3 4 5 6 7

6. Speaks at appropriate volume
   1 2 3 4 5 6 7

7. Uses class time efficiently
   1 2 3 4 5 6 7

8. Holds students' attention and interest/interesting style of presentation
   1 2 3 4 5 6 7

9. Pace of presentation/teaching matches class comprehension
   1 2 3 4 5 6 7

10. Accessible/available to students outside of class
    1 2 3 4 5 6 7

11. Repeats difficult ideas
    1 2 3 4 5 6 7

12. Summarizes major points
    1 2 3 4 5 6 7

13. Uses a variety of instructional strategies/media
    1 2 3 4 5 6 7

14. Uses humor/jokes/anecdotes effectively
    1 2 3 4 5 6 7

15. Addresses students by name
    1 2 3 4 5 6 7

16. Gives multiple examples
    1 2 3 4 5 6 7

17. Friendly/easy to talk with/approachable
    1 2 3 4 5 6 7

1—totally ineffective **2**—significantly ineffective **3**—slightly ineffective

4—neutral

5—slightly effective **6**—significantly effective **7**—totally effective

---

18. Encourages/responsive to questions and comments/encourages discussion
1 2 3 4 5 6 7

19. Well prepared/organized
1 2 3 4 5 6 7

20. Points out practical applications
1 2 3 4 5 6 7

21. Stresses important points/emphasizes principles and generalizations
1 2 3 4 5 6 7

22. Tolerant of/discusses other viewpoints
1 2 3 4 5 6 7

23. Assignments clear/interesting/stimulating
1 2 3 4 5 6 7

24. Does not digress from theme/main topic of presentation/lecture
1 2 3 4 5 6 7

25. Explains how each topic fits in/integrates material into a coherent whole
1 2 3 4 5 6 7

26. Knows background information about students
1 2 3 4 5 6 7

27. Respects students
1 2 3 4 5 6 7

28. States course objectives/describes work to be done
1 2 3 4 5 6 7

29. Uses clear/concrete examples/illustrations of concepts
1 2 3 4 5 6 7

30. Discusses recent developments in the field
1 2 3 4 5 6 7

1—totally ineffective **2**—significantly ineffective **3**—slightly ineffective

4—neutral

5—slightly effective **6**—significantly effective **7**—totally effective

---

31. Exhibits professionalism
1 2 3 4 5 6 7

32. Gives preliminary overview of lecture/presentation at beginning of class
1 2 3 4 5 6 7

33. Moves while lecturing/presenting
1 2 3 4 5 6 7

34. Relates to students as individuals
1 2 3 4 5 6 7

35. Uses visual aids (videos, pictures, maps, artifacts, etc.)
1 2 3 4 5 6 7

36. Asks students directly if they understand before proceeding
1 2 3 4 5 6 7

37. Defines new or unfamiliar terms/provides vocabulary lists
1 2 3 4 5 6 7

38. Communicates effectively/explains clearly
1 2 3 4 5 6 7

39. Enthusiastic about subject
1 2 3 4 5 6 7

40. Helpful to individual students
1 2 3 4 5 6 7

APPENDIX E: INSTRUCTOR QUESTIONNAIRE

Which describes the majority of your students?

( ) 21 years of age or under

( ) over 21 years of age but entered community/technical college immediately after high school

( ) over 21 but did not enter community/technical college until age 21 or older

What is your age? _____ under 25 _____ 26 to 35 _____36 to 45 _____46 to 55 _____ 56 and over

What is the highest degree you hold? _____

What are you? _____ full-time faculty _____ part-time/adjunct faculty

How many years of teaching experience do you have? _____

How many years were you employed in business/industry outside education? _____

Which describes you best?

( ) entered post-secondary educational institution immediately after high school graduation

( ) entered post-secondary educational institution after age 21

Instructions: Please rate the following teaching behaviors as to their effectiveness according to the scale below:

1—totally ineffective **2**—significantly ineffective **3**—slightly ineffective

4—neutral

5—slightly effective **6**—significantly effective **7**—totally effective

---

1. (1.) Knows subject matter
1 2 3 4 5 6 7

2. (3.) Asks content/concept questions of class to check understanding
1 2 3 4 5 6 7

1—totally ineffective **2**—significantly ineffective **3**—slightly ineffective

4—neutral

5—slightly effective **6**—significantly effective **7**—totally effective

---

3. (6.) Speaks at appropriate volume
1 2 3 4 5 6 7

4. (7.) Uses class time efficiently
1 2 3 4 5 6 7

5. (8.) Holds students' attention and interest/interesting style of presentation
1 2 3 4 5 6 7

6. (11.) Repeats difficult ideas
1 2 3 4 5 6 7

7. (12.) Summarizes major points
1 2 3 4 5 6 7

8. (16.) Gives multiple examples
1 2 3 4 5 6 7

9. (17.) Friendly/easy to talk with/approachable
1 2 3 4 5 6 7

10. (18.) Encourages/responsive to questions and comments/encourages discussion
1 2 3 4 5 6 7

11. (19.) Well prepared/organized
1 2 3 4 5 6 7

12. (21.) Stresses important points/emphasizes principles and generalizations
1 2 3 4 5 6 7

13. (23.) Assignments clear/interesting/stimulating
1 2 3 4 5 6 7

14. (27.) Respects students
1 2 3 4 5 6 7

15. (28.) States course objectives/describes work to be done

1 2 3 4 5 6 7

1—totally ineffective **2**—significantly ineffective **3**—slightly ineffective

4—neutral

5—slightly effective **6**—significantly effective **7**—totally effective

---

16. (29.) Uses clear/concrete examples/illustrations of concepts
1 2 3 4 5 6 7

17. (31.) Exhibits professionalism
1 2 3 4 5 6 7

18. (38.) Communicates effectively/explains clearly
1 2 3 4 5 6 7

19. (39.) Enthusiastic about subject
1 2 3 4 5 6 7

20. (40.) Helpful to individual students
1 2 3 4 5 6 7

APPENDIX F: FORMAL PROTOCOL

1. Title

An Examination of the Perceptions of Louisiana Technical College Traditional and Non-Traditional Students and Faculty Regarding Effective Teaching Behaviors in Office Systems Technology Programs

2. Investigators

Principal Investigator: Thomas S. Smith, Doctoral Candidate
Department of Curriculum and Instruction, College of Education, University of New Orleans, New Orleans, Louisiana 70148

Faculty Supervisor: Dr. Jim Killacky, Associate Professor of Education, College of Education and Human Development, ED 348 F, University of New Orleans, New Orleans, Louisiana 70148. Telephone: (504) 280-6449. Fax: (504) 280-6453.

3. Introduction

The purpose of this study is to ascertain non-traditional students', traditional students', and faculty's perceptions as to effective teaching behaviors in response to the ever-increasing number of non-traditional students on college campuses. Non-traditional students pose an impact—both positive and negative—on post-secondary education. Limited research has been conducted concerning the perceptions of effective teaching behaviors of non-traditional students and traditional students. Non-traditional students (NTS) place unique demands upon the post-secondary instructor and possess a different perspective as to effective teaching than do traditional students (TS). Research reveals that teaching behaviors can be isolated and identified. Logic follows then that once identified, they can be improved or enhanced. This study will concentrate on non-traditional and traditional student perceptions and faculty perceptions of effective teaching behaviors in the office systems technology programs of selected campuses of the Louisiana Technical College (LTC) of the Louisiana Community and Technical College System (LCTCS). Little research has been completed in this specific area.

4. Participants

Participants in this investigation will be students enrolled in office systems technology programs in selected LTC campuses of the LCTCS. Sample sizes of NTS and TS are projected to number at least 120 each. Student demographics will be mixed as to age, gender, full-time, part-time, etc. Faculty sample size is estimated to be approximately 20. Faculty could be full-time and part-time. Only female faculty will be included in the study.

5. Justification for Using This Particular Population

This population was selected for participation in this study for several reasons. The aim of this investigation is to determine the perceptions of NTS and TS and their faculty as to the most effective teaching behaviors. The office systems technology program of the LTC is a prime example of a course of post-secondary study that has experienced a student demographic change that includes a large segment of NTS that can be compared with TS. This mix of NTS with TS provides fertile ground for research in perceptions of effective teaching behaviors. Faculty in this program of study can provide much useful data. This student population and its faculty are quite easily accessible to the principal investigator.

6. Subject Recruitment Procedures

Access to the target population for this study will be gained through contact with the Louisiana Community and Technical College System administration officials. Permission will be obtained to administer survey questionnaires on selected LTC campuses with the office systems technology program. The principal investigator will then contact and visit the selected campuses to administer the survey questionnaires to students and then mail questionnaires to faculty after initial student data analysis. All voluntary participants will be presented with introduction letters outlining the purpose of the study and asked to read and sign consent forms informing them of the parameters of the project and calling for permission to participate in the study.

7. General Experimental Procedure

Volunteers will be asked to participate in the study. Subjects will be asked to fill out survey questionnaires. Administration will be by the principal investigator in person for students and by mail for faculty.

8. Procedure for Obtaining Subject Consent

Copies of the Consent Form and Introduction Letter will be presented to each participant to garner consent from individuals for participation in the study. The principal investigator will review forms and questionnaires verbally with the participants, and they will be given adequate time to review the forms silently and pose questions before taking the survey questionnaire. After agreeing to participate, subjects will be asked to sign forms.

9. Discussion of Anonymity, Confidentiality, and Handling of Data Collected in the Study

Participants' identities, names, and school names will remain confidential throughout the research process and beyond, to include possible publication of the study. Participant names will not appear on the survey questionnaires. All materials utilized in this study including signed consent forms and questionnaires, etc., will be kept secure by the principal investigator to ensure confidentiality. Printed materials will be destroyed after the completion of the study.

10. Debriefing Procedures

Participants will be allowed to ask questions regarding the project study when handing in the forms and survey questionnaires. They will be reminded of the value of their participation in the study. The participants will be allowed to request study findings upon the completion of the study. The principal investigator's telephone number, mailing address, and e-mail address will be listed on the consent form for participants should they want to contact the investigator for summary results or other information.

11. Describe Potential Risks to Subjects and Measures That Will Be Taken to Minimize Risks (attach medial clearance form if appropriate).

Participation is entirely voluntary, and participants may withdraw consent and terminate participation at any time without consequence. No risks, other than some fatigue or boredom, are foreseen for participants. Breaks will be allowed if requested by participants.

12. Reference List

Cohen, A. M. & Brawer, F. B. (2003). *The american community college* (4th ed.). San Francisco: Jossey-Bass.

Cross, K. P. (2001, July). Leading-edge efforts to improve teaching and learning: The Hesburgh awards. *Change*, 33, (4), 31.

Cross, K. P. (1977). Not can, but will college teaching be improved?. In J. A. Centra (ed.), *Renewing and evaluating teaching*. New Directions for Higher Education, No. 17. San Francisco: Jossey-Bass.

Evelyn, J. (2003, November 28). How community colleges measure up. *The Chronicle of Higher Education*, p. A36.

Evelyn, J. (2002, June 14). Nontraditional students dominate undergraduate enrollments, study finds. *The Chronicle of Higher Education*, p. A34.

Justice, E. M. & Dornan, T. M. (2001, May). Metacognitive differences between traditional-age and nontraditional-age college students. *Adult Education Quarterly*, 51, (3), 236-248.

Kanu, A. M. (2000). *Evaluating teaching effectiveness in community college settings*. (JC 020 454). Available: ERIC Document Reproduction Service No. ED 466 251.

Lords, E. (2000, April 5). Many students are returning to 2-year colleges for technical training, a survey finds. *The Chronicle of Higher Education*. Retrieved 4/12/04 at http://chronicle.com/cgi2-bin/printable.cgi?article=http://chronicle.com/prm/daily/2000/04/2

Mancuso, S. (2001, spring). Adult-centered practices: Benchmarking study in higher Education. *Innovative Higher Education*, 25, (3), 165-181.

McCollin, E. (2000, November). Faculty and student perceptions of teaching styles: Do teaching styles differ for traditional and nontraditional students? Paper presented at the Annual Meeting of the Mid-South Educational Research Association, Bowling Green, KY.

Merriam, S. and Caffarella, R. (1999). *Learning in adulthood: A comprehensive guide*. (2nd Ed.). San Francisco: Jossey-Bass Publishers.

Olson, S. J. (1994). Competencies of two-year college technical instructors and technical trainers: Similarities and differences. *Journal of Industrial Teacher Education*, 32, (1). Retrieved 3/14/04m from http://scholar.lib.vt.edu/ejournals/JITE/v321/Olson.html

Outcalt, C. L. (ed.) (2002). *Community college faculty: Characteristics, practices, and challenges*. San Francisco: Jossey-Bass.

Romano, R. (1994, Fall). Gender issues in teaching: Does nurturing academic success in women mean rethinking some of what we do in the classroom? *Speaking of Teaching—Stanford University Newsletter on Teaching*, 6, (1), 1-5.

APPENDIX G: CONSENT FORM

1. Title of Research Study

An Examination of the Perceptions of Louisiana Technical College Traditional and Non-Traditional Students and Faculty Regarding Effective Teaching Behaviors in Office Systems Technology Programs

2. Project Director

Thomas S. Smith, Doctoral Candidate, Department of Curriculum and Instruction, College of Education, University of New Orleans, New Orleans, Louisiana 70148.
Phone: (248) 374-3587 E-Mail: tsmith3434@twmi.rr.com

Faculty Supervisor: Dr. Jim Killacky, Associate Professor of Education, College of Education and Human Development, ED 348 F, University of New Orleans, New Orleans, Louisiana 70148. Telephone: (504) 280-6449. Fax: (504) 280-6453.

3. Purpose of the Research

The purpose of this study is to ascertain non-traditional students', traditional students', and faculty's perceptions as to effective teaching behaviors in response to the ever-increasing number of non-traditional students on college campuses. Non-traditional students pose an impact—both positive and negative—on post-secondary education. Limited research has been conducted concerning the perceptions of effective teaching behaviors of non-traditional students and traditional students. Non-traditional students (NTS) place unique demands upon the post-secondary instructor and possess a different perspective as to effective teaching than do traditional students (TS). Research reveals that teaching behaviors can be isolated and identified. Logic follows then that once identified, they can be improved or enhanced. This study will concentrate on non-traditional and traditional student perceptions and faculty perceptions of effective teaching behaviors in the office systems technology programs of selected campuses of the Louisiana Technical College (LTC) of the Louisiana Community and Technical College System (LCTCS). Little research has been completed in this specific area. Understanding of the teaching and learning process and different perceptions by students and faculty of that process will lead to improvement of the instructional process.

4. Procedures for This Research

Participants will voluntarily participate in answering the survey questionnaire concerning effective teaching behaviors that will last approximately 15 minutes. Participants may spend an additional 5 minutes reading and having explained the consent forms and general procedure.

5. Potential Risks or Discomforts

It is possible that some individuals may become fatigued, bored, or impatient during the survey. Requested breaks will be allowed. If you wish to discuss these or any other discomforts you may experience, you may call the Project Director listed in #2 of this form.

6. Potential Benefits to You or Others

The results of this study may be used to assist institutions with faculty development in regard to improvement of instruction on non-traditional and traditional students. The results of this study may also benefit all students in the event of increased or reined institutional efforts in the area of instructional improvement.

7. Alternative Procedures

Your participation is entirely voluntary, and you may withdraw consent and terminate participation at any time without consequence. No alternative procedures exist for conducting the investigation.

8. Protection of Confidentiality

Your name and data will be kept confidential at all times. Your name will not be identified on any data. The principal investigator will analyze all data. The Project Director will maintain in a secure and confidential manner the signed consent forms, data, and any other materials related to this project. If the results of this study are published, your name and all data will remain confidential.

9. Signatures

I have been fully informed of the above-described procedure with its possible benefits and risks, and I have given permission for participation in this study.

_____	_____	_____
Signature of Subject	Name of Subject Printed	Date
_____	_____	_____
Signature of Person Obtaining Consent	Name of Person Obtaining Consent Printed	Date

APPENDIX H: LETTER TO LTC CHANCELLOR

August 30, 2004

Dr. Margaret Montgomery-Richard, Chancellor
Louisiana Technical College
150 3rd Street
Baton Rouge, LA 70801

Dear LTC Chancellor:

My name is Thomas S. Smith. I am a doctoral student at the University of New Orleans with major professors Dr. Jim Killacky (504-280-6449) and Dr. Charles Gifford (504-849-8014). I am working on a dissertation concerning perceptions of students and instructors regarding effective teaching behaviors. My research is concentrating on office systems technology programs and their students and instructors.

I am seeking permission to conduct research on selected campuses of the Louisiana Technical College. My research will consist of survey questionnaires distributed to students and faculty. I will visit selected campuses to administer the student questionnaires, and after initial data analysis I will mail faculty questionnaires to office systems technology instructors for their responses.

All responses and individual information will be kept confidential. I offer to all participants, site administrators, and you a summary of results if so requested. Thanks for your assistance with my doctoral study.

Sincerely,

Thomas S. Smith
23410 Little Rapids Court, Apt. 1909
Novi, MI 48375

(248) 374-3587
tsmith3434@twmi.rr.com

APPENDIX I: RESEARCH STUDY PARTICIPANT LETTER

Date _____

Dear Research Study Participant:

I am pleased to be conducting a research project based upon the perceptions of Louisiana Technical College students and faculty concerning effective teaching behaviors in order to enhance instructional procedures and behaviors. By learning more about your perceptions, attitudes, and beliefs, I hope to offer enhancement ideas to institutional attempts to improve instruction in general.

You may be aware that only limited attention has been given to studies in this area. I believe it to be a fertile area for exploration on the part of post-secondary institutions in general and the LTC element of the Louisiana Community and Technical College System in particular. Participation is strictly voluntary. I would hope that you would allow time to fill out the questionnaire as to your perceptions of effective teaching behaviors. I understand that you may be too busy or not interested in participating and may wish to decline inclusion in the project.

I hope that you will choose to be a part of this project, and I look forward to having your input in the project. I believe that sharing your beliefs, attitudes, and expertise will make a valuable contribution to this research project. All responses are strictly confidential. You are welcome to contact me at any time should you have any questions or concerns regarding this project. Thank you for your time and consideration.

Sincerely,

Thomas S. Smith
Doctoral Candidate
University of New Orleans
(248) 374-3587
tsmith3434@twmi.rr.com

APPENDIX J: RESEARCH STUDY LTC FACULTY PARTICIPANT LETTER REMINDER LETTER

Date _____

Dear LTC Faculty Research Participant:

This letter is a friendly reminder that I have not received your survey questionnaire for my research project. Please send me the completed questionnaire by _____ in order for me to run my data analysis and complete my project work.

Thank you for your assistance.

Sincerely,

Thomas S. Smith
23410 Little Rapids Court, Apt. 1909
Novi, MI 48375

(248) 374-3587
tsmith3434@twmi.rr.com

APPENDIX K: PARTICIPANTS INCENTIVE DRAWING FORM

Participant's Incentive Drawing Form

This information will be kept separate from the questionnaires, which are strictly confidential.

Name _____

Address _____

_____

E-mail Address _____

Drawings will be for four $25.00 gift certificates to Ryan's Steakhouse Restaurants.

Request for Summary Results of Project: Please circle this block of words if you wish to have a report of the study findings. Thank you for your participation.

APPENDIX L: LETTER TO LTC FACULTY REPRESENTATIVE FOR DISTRIBUTION OF FACULTY QUESTIONNAIRE

October 15, 2004

Thanks very much for all of your help with my research project. My visit to your campus was cordial and efficient.

This mailing contains the instructor surveys to be given to the persons listed below:

_____ _____

_____ _____

_____ _____

_____ _____

Each instructor is to get a packet containing the introductory letter, consent form, incentive drawing form, the survey, and a SASE for mailing everything back to me in Michigan. Please ask each instructor to complete the survey and mail it as soon as possible.

I appreciate your assistance. Thank you!

APPENDIX M: HUMAN SUBJECTS APPROVAL FORM

University Committee for the Protection
of Human Subjects in Research
University of New Orleans

Campus Correspondence

To: Thomas Smith, graduate student
C. James Killacky, faculty supervisor

From: Scott C. Bauer, Ph.D.
Associate Professor and Chair
University Committee for the Protection of Human Subjects in Research

Date: 7/19/04

RE: proposed study, "An examination of the perceptions…"

I assume based on a reading of your protocol (which was very well done, by the way) that the surveys you are using will be anonymous, i.e., you are not asking students or faculty to include their names or any other identifying information. As such, because of the anonymous nature of your project, it is exempt from committee review as stated in section 46.101 B, paragraph 2 of the OHRP guidelines.

VITA

Thomas Sullivan Smith, Sr., was born in Natchez, Mississippi, and grew up in Jonesville, Louisiana. He graduated from Block High School in 1967.

He earned a B.A. from Northeast Louisiana University in 1971, a M. Ed. from Louisiana State University in 1974, and a M. A. from Louisiana State University in 1994. He has taken graduate courses at Northwestern State University of Louisiana.

He retired after 33 years of service from the Avoyelles Parish School Board in Marksville, Louisiana, in 2004. He was a teacher of English and social studies and assistant principal at Hessmer High School, teacher of American history and assistant principal at Bunkie High School, assistant principal at Riverside Elementary, principal at Lafargue High School, principal at Bunkie Middle School, and English/Social Studies Resource Teacher/Grants Coordinator at the Avoyelles School Board Office during the 33 years he lived in Marksville. He taught as an adjunct instructor for Central Texas College for one quarter, for Northwestern State University for 8 1/2 years, and for Louisiana State University at Alexandria for 4 ½ years.

He was a 2003 United States Institute of Peace Summer Institute for Secondary School Teachers Fellow, a 2002 Goethe Institut Inter Nationes Trans-Atlantic Outreach Travel Study Seminar in Germany Fellow, a 1996 Gerald R. Ford Foundation Research Grant Recipient, and a 1995 Council for Basic Education Independent Study in the Humanities Fellow.

Thomas S. Smith, Sr., is currently an adjunct history instructor for Macomb Community College in Clinton Township, Michigan. He and his wife Sue now reside in Novi, Michigan.