EDUCATING FOR SOCIETAL CONTRIBUTION AND POSITIVE DIVERSITY

AT A TWO-YEAR COMMUNITY COLLEGE

A Dissertation

Submitted to the Graduate School

of

Tennessee State University

in

Partial Fulfillment of the Requirements

for the Degree of

Doctor of Education

Graduate Research Series No. _____

David J. B. Gerth, Sr.

May 2014

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To the Graduate School:

We are submitting a dissertation by David J. B. Gerth, Sr. entitled "Educating for Societal Contribution and Positive Diversity at a Two-Year Community College." We recommend that it be accepted in partial fulfillment of the requirements for the degree, Doctor of Education in Curriculum and Instruction with concentration in Curriculum Planning.

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ABSTRACT

DAVID J. B. GERTH, SR. Educating for Societal Contribution and Positive Diversity at a Two-Year Community College (under the direction of DR. CHARLES D. DICKENS.)

This study investigates whether there were statistically significant differences of academic performance and student satisfaction between students treated with Educating for Human Greatness (EfHG)-inspired strategies and non-EfHG comparison groups in a course at a Southeastern community college. Student satisfaction, a precursor of student retention, was measured as a substitute for student retention because of time constraints. The research design held institutional variables and the instructor constant while academic performance and student satisfaction were measured in the different groups. Students were enrolled in both onground and online sections of the course. The study attempted to determine the effectiveness of the course designs influenced by the Stoddard model (2010). The study found that academic performance was the same in the four comparison groups. However, student satisfaction was greater in the onground EfHG group than in the onground non-EfHG group. There was no significant difference in student satisfaction in the online EfHG and the online non-EfHG groups.

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CHAPTER I

INTRODUCTION

Important topics to educators at two-year community colleges and other institutions of postsecondary education as well as stakeholders in the community are academic performance and student retention. One important contributor to student retention, which is more readily measured in a limited time frame, is student satisfaction (Herbert, 2006; Roberts & Styron Jr., 2009; Schreiner, 2009). This study examined academic performance and student satisfaction and how they were affected by course design strategies developed primarily from concepts found in the writing of Lynn Stoddard (2010) by the researcher for an introductory marketing course at a two-year community college.

Early in the twentieth century university leaders created community colleges in order to provide students with greater access to higher education (Topper & Powers, 2013). Community colleges offer remedial, vocational, recreational, and transfer opportunities (Hugo, 2012). The first community colleges, called junior colleges, were located in high schools (Topper & Powers, 2013).

Community colleges provide a gateway for many students into higher education (Bueschel, 2003). Many young people would have been denied access to higher education if not for community colleges (Kasper, 2002). In 2011 it was reported that 43 percent of the undergraduate students in the United States are served by community colleges (The White House, 2011). Community college students comprise a disproportionate percent-

age of low-income, minority, non-traditional, working, parent, and first generation students. The community college and the adult school are two of the few places in our society where the poor are able to become more publicly visible and demonstrate what they have to contribute (Rose, 2013). The completion rates in 2012 for full-time community college students of the fall 2009 cohort seeking a degree for the first time were 9.68% and 35.11% for the National Community College Benchmark Project (NCCBP) 10th and 90th percentiles respectively (NCCBP-2012, 2012). The same measures for part-time, first-time students were 2.73% and 20.26%. Community colleges in many states provide most of the expensive postsecondary academic remediation needed by students to complete an associate's or bachelor's degree (Bueschel, 2003). Historically community colleges have collaborated with high schools to further each other's mission. A new program called "dual enrollment" allows high school students to take community college courses, consequently improving their chances of being admitted to a baccalaureate college or university (Kasper, 2002). During unfavorable economic times, more people turn to the community college for training and postsecondary education (Bueschel, 2003).

The commitment to being open access institutions has defined community colleges (Bueschel, 2003). Consequently community colleges get students from all backgrounds. Community colleges are required to balance a variety of missions while encountering dynamically changing demographics, increasing accountability, and a stressed state and national economic environment (Topper & Powers, 2013). Community colleges provide a wide range of academic, service, and training functions and change regularly to respond to the needs of the community (Bueschel, 2003). The mission of community col-

leges is a matter for debate. Proponents maintain that community colleges should continue offering a wide, and frequently growing, set of services and programs. Some critics contend that community colleges should limit their focus and provide enhanced service in fewer areas (Bueschel, 2003).

Community colleges have been more responsive to the workforce needs of communities than any other segment of postsecondary education (Kasper, 2002). Students can learn during any phase of their lives while taking advantage of convenient locations, low tuition, comprehensive course offerings, and open admissions. Community colleges provide associate degrees that train students for careers. Increasingly, community colleges offer career training by means of vocationally oriented courses that lead to a certificate (Kasper, 2002). In addition, community colleges work with industry, businesses, labor, and government to create customized training programs to meet specific economic needs (The White House, 2011).

Community colleges also grant two-year associate degrees that consist of traditional college-level courses that prepare students for additional study toward a bachelor's degree (Kasper, 2002). Over the past thirty years, the total cost of higher education has risen more than four times the cost of living (The White House, 2011). However, community college tuition is much less than the cost of other institutions. The community college can serve as a low-cost launching pad from which students can pursue traditional academic programs in four-year colleges and universities (Kasper, 2002). Many community colleges have transfer agreements with baccalaureate colleges and universities,

which permit students to complete the first two years of a four-year degree at a lower-cost community college.

In January 2010 the State of Tennessee passed the Complete College Tennessee Act (CCTA) (State of Tennessee, 2010). This act seeks to transform public higher education by changing academic, fiscal, and administrative policies at the governmental and institutional levels. Central to the reforms is the need to better educate and train Tennesseans at a time when the state has a reduced fiscal capacity to support higher education. The CCTA of 2010 directly affects how community colleges in the state are funded. An outcomes-based funding formula bases an entire institution's allocation of state appropriations on outcomes such as degree production, graduation rates, and job placements (State of Tennessee, 2010). Student satisfaction, retention, academic performance, and degree completion have become much more than wishful thinking. Positive institutional outcomes now determine funding (State of Tennessee, 2010).

Background of the Study

Stoddard (2010) wrote that the purpose of public education is to develop great human beings who contribute to society. His *educating for human greatness* (EfHG) concept differs from conventional education in three primary ways: First, teachers and parents work together to help students contribute at home, at school, and in the community. They unite to promote student growth in seven dimensions of human greatness: Identity, Inquiry, Interaction, Initiative, Imagination, Intuition, and Integrity. In conventional education parents are not significantly involved. On the other hand, parents are full and equal partners with teachers with the aim of helping students grow in the qualities of greatness

when following Stoddard's paradigm (Stoddard, 2010). Research has indicated that parental involvement leads to increased motivation, better self-esteem, better school attendance, lower rates of suspension, decreased use of alcohol and drugs, fewer occurrences of violent behavior, and higher test scores, grades, and graduation rates (Michigan Department of Education, 2002). Family participation in education predicted student academic success twice as much or more than family socioeconomic status. The more that parents participated in schooling consistently at every level, the greater was student achievement (Michigan Department of Education, 2002).

Second, teachers do not attempt to standardize students (Stoddard, 2010). Instead, they nurture positive differences. The attempt to hold teachers accountable for producing standardized students who are each a unique creation, an impossible task, is less than ideal. The goal is to help students discover and develop their unique gifts and talents. High standards for developing student individuality are adopted. Holding teachers accountable for doing things that are possible rather than making them responsible for standardizing students can lead to a renaissance of improvement. Using this approach, students can perform very well when their academic achievement is evaluated by standardized testing (Stoddard, 2010).

An early proponent of standards and standardized testing and a later critic, Diane Ravitch, wrote that standards and testing threaten to dumb down public education (McKenna, 2009). Students are asked to identify a date in history, for example, rather than being asked to critically analyze the significant event that corresponds to the date. In

his commentary, McKenna (2009) suggested that it is time to cast aside the foolishness of standardized education and trust teachers to do what is right.

Finally, the curriculum is taught and learned as a tool instead of a goal, to help students grow and develop in the qualities of human greatness. As a consequence of this methodology, teachers are empowered to act as skilled professionals to make the curriculum fit the needs of individual students; and parents become meaningfully involved in their children's education (Stoddard, 2010).

Stoddard's EfHG concept can be applied in the community college setting with some minor modifications. Though instructors and parents may work together to assist community college students to become contributors to society, the use of other relatives, subject matter experts, community leaders, and peers can fill the parental role. Designing the learning experience to encourage and cultivate positive diversity instead of strict standardization works well in community colleges. Last, utilizing the curriculum as a tool to help students develop the qualities of human greatness can be effectively applied in community colleges as well.

Six pivotal principles provide planks in the platform of EfHG: (1) the need to *value positive human diversity*, (2) the principle of *drawing forth* the *potential* of students as opposed to trying to fill them with information, (3) the *respect* for student *autonomy*, (4) deep and enduring learning through *personal inquiry*, (5) the *support* of teacher *professionalism*, and (6) *"CommUNITY" for great schools* (Stoddard, 2010). Educating to enhance students' societal contributions in addition to positive diversity using these principles is characterized by parental involvement, the respect for student individuality and the

need to help students develop their unique talents and gifts, the use of curriculum as a tool to help students grow in the dimensions of greatness that make them greater contributors to society, and deeper and more enduring learning that results from students inquiring for answers to their own questions and interacting with others as learners who know themselves to be of great worth.

Statement of the Problem

Relying on a high school diploma to gain access to a middle-class lifestyle is over (The White House, 2011). In a world economy that is increasingly competitive, the nation's strength depends on the education and skills of its workers. Nearly eighty percent of new jobs in the next ten years will require workforce training or higher education after high school. In order to satisfy this need, President Obama set two national goals to be reached by 2020: (1) The United States will again have the highest proportion of college graduates in the world, and (2) Community colleges in the United States will produce an additional five million graduates (The White House, 2011).

Community colleges are confronted with the challenging task of educating students with acutely diverse levels of academic preparedness. Approximately sixty percent of community college students are referred to at least one developmental course, and less than twenty-five percent of those who were referred have completed a degree or certificate within eight years (The White House, 2011). Community colleges must find a way to help less-prepared students move forward and upward to the realization of academic achievement. In addition, community college students commonly work significant hours at their employment while attempting to complete their course and degree requirements.

Many work over 30 hours a week and attend to family duties (Adams, 2012). These environmental factors coupled with the average student's less-than-ideal preparation for higher education can work together to limit retention and consequently academic achievement.

Fewer than thirty percent of full-time students who seek a two-year degree finish the requirements within three years (The White House, 2011). Part-time students graduate at even lower rates. Fewer than fifty percent of degree seeking or transfer students reach their goal in six years (The White House, 2011).

The student retention, measured by percentage of full-time students who complete their degree in three years, at one Southeastern community college is less than the median community college metrics nationally as reported by the National Community College Benchmark Project: Report of 2012 Aggregate Data (NCCBP-2012, 2012). Only 8.24% of the community college's full-time, first-time students completed their associate's degree in three years. Nationally the median percentage for full-time, first-time community college students was 20.16%. This college was ranked in the 7th percentile of full-time, first-time students nationwide completing their associate's degree in three years (NCCBP-2012, 2012). These statistics clearly point out the need for improved student academic performance and retention in our community colleges.

The Purpose of the Study

The purpose of this study was to determine if there were statistically significant differences of academic performance and student satisfaction between students treated with EfHG-inspired strategies and non-EfHG comparison groups in a two-year communi-

ty college course. The research design held institutional variables and the instructor constant while academic performance and student satisfaction were measured in the different groups. Students were enrolled in both onground and online sections of the course. The study attempted to determine the effectiveness of the course designs influenced by the Stoddard model (2010).

The Significance of the Study

Improving student retention in higher education has a number of important benefits, which are cumulative over time (Ackerman & Schibrowsky, 2007). More specifically, the advantages of enhanced retention include increased enrollment, higher graduation rates, additional tuition and fee revenue, reduced costs per student and greater student "profitability," and potentially increased financial support from graduates. A study of over 27,000 students in 65 institutions found that satisfaction indicators added significantly to the predictability of student retention (Schreiner, 2009). Thus, increased satisfaction can lead to improved retention and consequently enhanced academic performance as measured by higher graduation rates as well as the other benefits listed above. If EfHG proved to be useful and is implemented generally, the many fruits of augmented academic achievement and retention could be realized.

We are living in an era of standardized academic outcomes. Once again, there is a call for education reform. However, higher standards is the motto—not a call for redesign (Stoddard, 2010). Leaders are seeking to standardize students at a higher level. This study may have demonstrated a better, more enlightened way. The EfHG course designs attempted to educate for societal contribution and positive diversity and to accomplish high

standard academic outcomes concurrently. Successfully doing this would be significant. This approach would satisfy the needs and wants of students, educational leaders, the community, and society in general.

Finally, though Stoddard (2010) has presented a compelling model that may increase student retention and academic achievement, this strategy had not previously been validated empirically at any level that an exhaustive review of literature could uncover. Ideally a longitudinal study over several years would establish whether the EfHG model positively affects student retention and performance in a college course. This shorter-term study was able to ascertain whether EfHG as adapted by the researcher improved academic performance and student satisfaction, an important determinant of student retention (Herbert, 2006; Roberts & Styron Jr., 2009; Schreiner, 2009).

Research Questions

The following research questions guided this study.

1. Is there a statistically significant difference between the academic performance of students treated with educating for human greatness (EfHG) strategies and non-EfHG comparison groups?
2. Is there a statistically significant difference between the student satisfaction of students treated with EfHG strategies and non-EfHG comparison groups?
3. Is there a statistically significant difference between the academic performance of students treated with EfHG strategies and a non-EfHG comparison group using the onground mode of delivery?
4. Is there a statistically significant difference between the student satisfaction of students treated with EfHG strategies and a non-EfHG comparison group using the onground mode of delivery?
5. Is there a statistically significant difference between the academic performance of students treated with EfHG strategies and a non-EfHG comparison group using the online mode of delivery?
6. *Is there a statistically significant difference between the student satisfaction of students treated with EfHG strategies and a non-EfHG comparison group using the online mode of delivery?*

Limitations of the Study

Limitations to this study should be noted. The study did not look at randomly selected samples. The students studied self-selected themselves by enrolling in various sections of a controlled two-year community college course over two academic terms. Results of the study narrowly inferred differences of samples found in the course on the campus studied. Findings of the study are not generally valid to more global populations. Furthermore, a number of intervening variables may have biased the results. These include institutional variables that may affect different comparison groups in disparate ways and may vary from semester to semester. In addition, even though the instructor was the same for each comparison group, he did not act exactly the same when interacting with students in different groups. Lastly, the self-selection into one of the two different modes of delivery could have introduced additional intervening variables. Students selected a mode for a reason. These reasons could have been the consequence of diverse circumstances, needs, wants, and expectations, which could have affected student satisfaction and academic performance for a particular type of curriculum and confounded the outcomes.

Definition of Terms

The following definitions of terms are provided for clarity, as they were used in this study:

Educating for human greatness (EfHG). A philosophy of education whose primary goal is human greatness. Teachers and parents work together as full and equal partners to help students become important contributors to society. The curriculum is a

tool chosen, adapted, and utilized by parents and teachers to embrace a variety of student needs. The aim is to assist students to discover and develop their unique talents and gifts. High standards are set for the development of student individuality. This philosophy recognizes unlimited potential in every student and acknowledges that human intelligence is not numerically measurable. Student growth is assessed in the qualities of human greatness and contributive behavior (Stoddard, 2010).

Onground course section. A section of a college course where students meet in a physical classroom with the instructor for the amount of time required by an accrediting body for the credit hours assigned to the course. This type of course may be enhanced by a variety of offline and online resources.

Online course section. A section of a college course where students "attend" the course on the World Wide Web. The course is found in an online course management system and is designed to help students accomplish course learning objectives. Course designs vary greatly with differing degrees of interaction between students, content, and the instructor. Students may participate both synchronously and asynchronously, depending on course requirements.

Student academic performance. Student performance was measured by the score on a final exam that covered standard course learning objectives for the second half of the course, adjusted by the score on a pretest that covered the course learning objectives for the entire course.

Student retention. In a community college, the percentage of full-time students who com-

plete their associate's degree in three years (NCCBP-2012, 2012).

Student satisfaction. The degree to which student expectations of a college course are met

or exceeded.

CHAPTER II

REVIEW OF THE RELATED LITERATURE

Overview

Significant topics to educators at two-year community colleges and other institutions of postsecondary education as well as stakeholders in the community are academic performance and student retention. An important contributor to student retention, which is more readily measured in a short time frame, is student satisfaction (Herbert, 2006; Roberts & Styron Jr., 2009; Schreiner, 2009). This study investigated academic performance and student satisfaction and how they were influenced by course design strategies developed by the researcher primarily from concepts found in the writing of Lynn Stoddard (2010) in an introductory marketing course at a two-year community college. Institutional variables as well as the instructor influenced student performance and satisfaction. These factors were considered intervening variables in the study and held constant. Mode of course delivery also affected students and introduced possible effects that could have influenced the study. Comparison groups in the study experienced the course in onground and online modes.

Community colleges are a portal for many students into higher education (Bueschel, 2003). A number of young students would have been denied admittance to higher education if not for community colleges (Kasper, 2002). Forty-three percent of the undergraduate students in the United States are served by community colleges (The

White House, 2011). Community college students include a disparate proportion of low-income, minority, non-traditional, working, parent, and first generation students. Community colleges in many states provide most of the costly postsecondary academic remediation required by some students to complete an associate's or bachelor's degree. Historically community colleges have collaborated with high schools (Bueschel, 2003). During adverse economic times, more people turn to the community college for training and postsecondary education.

The study examined the efficacy of the *educating for human greatness* (EfHG) concept as it applies to academic performance and retention, measured by student satisfaction. The hypothesis was that the utilization of EfHG strategies could improve student satisfaction and retention without reducing academic performance. In fact, academic performance could possibly have been enhanced (Stoddard, 2010).

The review will initially examine six pivotal principles of EfHG from the literature. This will be followed largely by Stoddard's explanation of EfHG including the *seven dimensions of human greatness*. Some examples of EfHG in practice will be discussed next. Academic performance, student retention, and student satisfaction will be reviewed afterwards. Mode of course delivery and related outcomes will conclude the review.

Six Foundational Principles

Valuing Positive Human Diversity

Being different is one meaning of diversity (Barkman & Speaker, 1999). Diversity can be described as being made up of two main dimensions: primary and secondary. Things that cannot be changed such as ethnicity and race, gender, and physical qualities

are primary dimensions. Secondary dimensions encompass areas like education, income, religious beliefs, military experience, marital and parental status, and geographic location. Typically people are less sensitive with regard to secondary dimensions because they have some influence over them (Barkman & Speaker, 1999).

Diversity can also be considered with regard to levels (Robbins & Judge, 2013). Easily perceived differences in characteristics such as gender, ethnicity, race, disability, or age are called surface-level diversity. On the other hand, differences in personality, values, and work preferences become progressively more important for determining similarity as individuals get to know one another better. Differences in these areas are called deep-level diversity. People are less interested in demographic differences when they realize that deep-level diversity is shared (Robbins & Judge, 2013).

Sometimes difference is celebrated, and in other cases it is feared as another excuse for thinking simplistically and possibly adversely about others (Walters, 1999). The acknowledgment of diversity is applauded for the richness it brings, and it is also a cause of concern over the possibility to marginalize.

We can encounter dilemmas when considering the topic of diversity (Walters, 1999). Two such predicaments include: (1) the issue of maintaining standards of behavior if everyone is accepted; and (2) the tension between the apparent unimportance of real differences and multiple perspectives brought about by the elimination of categories and the perpetuation of inequalities we want to eliminate through our acceptance of diversity if categories are maintained.

Historically the United States has been referred to as a "melting pot," "salad bowl," and a "kaleidoscope" (Barkman & Speaker, 1999). The notion of people of different ethnicities and races blending together and losing distinctions over time after close contact characterizes the melting pot. The salad bowl describes a blending of different ethnic characteristics that do not change when they are mixed together. The kaleidoscope metaphor seems to reflect more precisely what happens in a diverse society. The interaction between cultural groups results in the continual emergence of new possibilities while the cultures maintain their basic characteristics. Valuing diversity acknowledges differences between individuals and recognizes that these distinctions are a valued asset. Valuing diversity can be measured at three levels: cognitive, affective, and behavioral (Barkman & Speaker, 1999).

In the workplace diversity means having a staff made up of two or more groups of employees with various ethnic, national origin, cultural, racial, gender, handicap, religious, or age backgrounds (Dessler, 2013). A diverse workforce provides threats and benefits for employers. Potential problems of diversity include stereotyping, discrimination, tokenism, and ethnocentrism. What's important is to manage the potential threats and allow diversity to become a benefit (Dessler, 2013). Some managers in U.S. companies define a diverse workforce as a competitive advantage that provides a broader pool of talent and enhanced understanding of the behaviors and needs of their diverse customers (Noe, Hollenbeck, Gerhart, & Wright, 2014). They say they have a policy of valuing diversity. The practice of valuing diversity has many forms and is intended to make all individuals feel respected and to cultivate an environment where individuals feel wel-

come and able to perform as well as they possibly can (Noe, Hollenbeck, Gerhart, & Wright, 2014).

Valuing positive human diversity means that you care deeply about yourself and all the other people in the world (Stoddard, 2010). You recognize the value of your own unique talents as well as those of everyone else. Collaborating often with others and blending their gifts with yours to create original ideas, products, or situations demonstrate this principle. When positive human diversity is promoted, positive qualities or traits that benefit humanity are developed. You find some good in others, regardless of their apparent negative attributes, their religion, race, or political persuasion. Valuing diversity means loving and cherishing every person in the human family as they are (Stoddard, 2010).

Research in a mid-sized, South-Central university in the U.S. studied pre-service teachers (Pope & Wilder, 2005). The participating students were completing their last course for the Teacher Education major and were all student teaching during the study. The research found that participants who were high in valuing diversity had more frequent personal interaction with diverse others across numerous social settings and were more likely to observe and appreciate diversity in their school and community social environments. Whether or not valuing diversity can be taught in the classroom and increased throughout teacher education programs remains to be answered (Pope & Wilder, 2005).

In education our job appears to be to facilitate the appreciation of diversity instead of attempting to mold students' attitudes toward difference (Walters, 1999). We can ex-

plicitly expose students to ubiquitous diversity and encourage their interest by exploiting their natural curiosity. We can cultivate the questioning of long-established beliefs in order to increase students' awareness that they are beliefs and that there are equally important beliefs held by others—rather than for the purpose of changing them (Walters, 1999).

Our society has trained us to devalue those different from us (Stoddard, 2010). Though most of this training is unintentional, it is complex, subtle, and is a very powerful tradition. In education most of us have been taught to forgo our talents and gifts in order to conform to an imposed curriculum. As we competed for grades, we learned that compliance was more important and valuable than diversity of ideas or creativity. As we were being produced on the educational assembly line, we were not permitted to express our distinctive need to mature in accordance with our internal blueprint. We were force-fed some subjects inappropriate for us at the expense of gifts and talents that were shouting out to be recognized and developed. For example, high school graduation requirements are mostly the same for everyone (Stoddard, 2010).

Things could be different if we nurtured individual diversity and held students responsible for their own learning and development (Stoddard, 2010). A requirement for graduation could be for students to prepare a comprehensive presentation to demonstrate their qualifications and plans for contributing to the world. The presentations would show courses taken, skills achieved, services performed, and most importantly, the students' plans to utilize their knowledge, gifts, and talents to be contributors to society. Gradua-

tion ceremonies would be personalized for each individual and would occur at various ages, times, and places throughout the year (Stoddard, 2010).

The above concept was introduced by Maurice Gibbons (1974) in an article in the *Phi Delta Kappan*. Gibbons had watched an Australian film, *Walkabout*, which provided him a haunting comment on education. Gibbons found a stark contrast between an aborigine's walkabout experience during which he was required to survive alone in the wilderness and return to his tribe as an adult, or to die in the attempt, and the test for readiness for adulthood provided our society's adolescents. The native in Australia faced a difficult, yet appropriate trial during which he had to demonstrate the knowledge and skills needed to make him a contributor to the tribe rather than a drain on its limited resources. On the contrary, young North Americans are faced with written examinations that test abilities far removed from the real life experiences they will encounter. Our students write rather than act. They solve familiar theoretical problems instead of applying what they know in strange but real situations. Our students are directed in a protected environment until the end of their education without having to go out into the world to demonstrate that they are prepared to survive in and contribute to society. Moreover, the aborigine's isolation during the walkabout challenges his inner or spiritual resources in addition to his competence. His Western counterparts, however, are presented with a crowd experience where they are seldom separated from their class, friends, or family. They have little occasion to confront their anxieties, discover their inner resources, and to come to terms with the world and their niche and future in it (Gibbons, 1974).

By honoring and developing positive human diversity, our public high schools would be quite a bit different than what is typical today (Stoddard, 2010). Students would be supported in a quest to develop their own unique interests and talents, thereby building a vision of a hopeful future by using their own assets to create a better world.

Drawing Forth the Potential of Students

Hillman (1996) used the metaphor of an acorn to explain each child's unique unseen potential. A small acorn possesses the coded instructions to grow into a mighty oak. In like manner children are endowed with the seed for some unique genius (Brendtro & Larson, 2004). Goethe asserted two centuries ago that the job of the educator was to find the germ of virtue hidden in the kernel of every fault. Our duty is to provide opportunities for children to discover their purpose and calling (Brendtro & Larson, 2004).

Individuals already possess the seeds of potential greatness (Anderson, 2005). These are a person's talents. Decades of research by The Gallup Organization have found that top achievers construct their personal and academic lives, and later their careers, on their talents. They cultivate their talents into strengths by refining them with knowledge and skill. Top achievers then apply those strengths and manage their weaknesses. They take advantage of their individual uniqueness as they learn (Anderson, 2005).

The predominant approach in education can be referred to as the deficit-remediation educational model (Anderson, 2005). This model is characterized by programs and services committed to "fixing" the student by diagnosing student needs, problems, concerns, ignorance, deficits, and defects and then by remediating with classes, workshops, programs and services. Typically students are informed that they must over-

come their deficiencies by a specific deadline. If unsuccessful, they are dismissed or notified that they are not suited for college. This approach has actually prevented students from becoming top achievers at the college level (Anderson, 2005).

Schools that have the highest standardized achievement test scores may be the ones that provide the least education (Stoddard, 2010). Though nearly everyone feels that schools are constructed to provide educational experiences, do they do this? Do public schools exist to develop human potential and to encourage purposeful, creative thought and action? The bureaucratic imposition of curriculum can oftentimes prevent teachers from engaging in the business of education. Though *educate* comes from the Latin, *educere*, or *educe*, which means to bring out or draw forth ability, American public school systems are apparently organized to pour facts into students' heads rather than draw forth anything. The word, *education*, suggests an opposite meaning to *educere*. *Education* is systematic instruction. These are two apparent opposites. One suggests that teaching is a process of drawing forth the student's latent potential. The other is a process of delivering information (Stoddard, 2010).

Apparently our system of public education has evolved over many years into one based primarily on the business of bringing a highly structured curriculum to students in a prolonged, formal process (Stoddard, 2010). This teach-and-test system consists of thirteen years of age-level grouping and an elaborate testing system that determines if the prescribed curriculum is assimilated. The results are temporary knowledge instead of deep, personal knowing (Stoddard, 2010).

If, on the other hand, American public education had originally been organized to draw forth the latent, potential existence of learners and had persisted for many years in improving on this purpose, an untold amount of unfulfilled potential that lies dormant today would have been realized instead (Stoddard, 2010). The failure to draw forth our students' potential is apparently a significant omission of public schools. The United States has an enormous human development deficit (Stoddard, 2010).

Educators have the opportunity to shift from deficit-reduction teaching to strengths-based teaching (Anderson, 2005). As students look within themselves to discover their own unique talents and transform these talents into strengths by adding knowledge and skill with their teachers' help, their self-identities and values become more clear; and they likely will become more optimistic, confident, and focused. As students achieve by means of their strengths, they will likely seek to achieve even higher goals (Anderson, 2005).

By developing a person's own assets, deficits can be overcome (Stoddard, 2010). Drawing forth an individual's talents and abilities and nurturing them automatically honors positive human diversity and validates the person's self. It gives him or her permission to exist as an individual. The discovery and development of one's latent potential opens the door to the acceptance of one's deficits and a desire to rectify them. People oftentimes see the need to overcome a deficit while pursuing and developing an asset. This approach is in stark contrast to public school systems obsessed with having students overcome their deficits and the consequential negative effect on their feelings of personal worth (Stoddard, 2010).

Respect for Student Autonomy

Student autonomy can be defined as students' belief that they have some sense of meaningful control (Sibthorp, Paisley, Gookin, & Furman, 2008). Respecting autonomy is a self-evident truth (Stoddard, 2010). The will of students is a very powerful force in accordance with the words of James Allen (1902). Allen wrote that the human will can reach any goal. If true, educators can assist learners to tap into a force which may be only superseded by the power of love (Stoddard, 2010).

Many studies have demonstrated that teacher support of student autonomy produces more effective cultivation of academic and developmental outcomes including self-esteem, perceived competence, creativity, and conceptual understanding (Reeve, 2002). The learning environment is considered to support autonomy when students are provided some choice with regard to the setting and process, an understanding of why they might desire to learn what is going to be taught, and a sense that their teachers grasp and empathize with students' viewpoints and challenges in learning and using a lesson's content (Sibthorp, Paisley, Gookin, & Furman, 2008).

Academic engagement has been identified as a primary predictor of high academic achievement (Park, Holloway, Arendtsz, Bempechat, & Li, 2012). A study of students from two northern California high schools serving an ethnically and socioeconomically diverse population found that students' engagement was increased when learning contexts met students' psychological needs for autonomy, competence, and relatedness. Environments that sustain autonomy have been associated with increased psychological adjustment and motivation (Hafen, Allen, Mikami, Gregory, Hamre, & Pianta, 2012). The

implications for practice derived from the California study are for teachers to enhance student engagement by supporting students' need for autonomy by reducing evaluative pressure, providing meaningful choices with academic activities, and giving students a meaningful rationale for why particular learning activities are useful (Park, Holloway, Arendtsz, Bempechat, & Li, 2012).

In recent times there has been much discussion among educators with regard to student engagement (Stoddard, 2010). Teachers have been faced with the problem of student motivation since the establishment of compulsory education many years ago. Teachers and parents have long labored over how they could shift children from extrinsic to intrinsic motivation. The buzzword utilized in the standards movement is "engagement." The motivation to learn is inherent within every human being in that we are all born curious. A standardized curriculum, however, where we are asked to learn others' knowledge, shuts down our curiosity. Consequently we are not engaged, or are only sufficiently engaged to learn enough to pass the test. By learning to respect autonomy, parents and teachers can change everything. The mighty power of free will can be harnessed to benefit us and our children (Stoddard, 2010).

Deep and Personal Learning through Personal Inquiry

In education, inquiry is known as an excellent method for helping students to learn that is difficult for teachers to apply (Wheeler & Bell, 2012). Inquiry comes in a variety of forms and can be adapted for any level of student. Inquiry can be defined as an active learning method in which students answer research questions by analyzing data (Bell, Smetana, & Binns, 2005). The five scientific practices of hypothesizing, investigat-

ing, observing, explaining, and evaluating are included in the inquiry process (NRC, 2011).

Inasmuch as everyone is born curious, it is easy to invite inquiry (Stoddard, 2010). This is something natural that we were born to do. Every person, place, event, or thing is filled with new information for us to ponder. Helping children learn to value good questions is how we can keep inquiry alive. The innate curiosity we have can be magnified by utilizing twenty-two question-starter words: *what, why, when, where, who, which, would, was, were, how, is, do, does, did, may, are, could, should, shall, will, can,* and *have*. Students can be challenged to investigate a known person, place, event, or thing using each question-starting word (Stoddard, 2010).

When considering inquiry as a pedagogical process, three caveats should be noted (Wheeler & Bell, 2012). First, hands-on activities may or may not be inquiry; and inquiry is not necessarily hands-on. Next, even though inquiry may be essential to a particular discipline, other learning activities are valuable. Last, while many teachers believe that all inquiry should be open-ended, this is not correct. The four different levels of inquiry: confirmation, structured, guided, and open, which differ by how much information is provided by the teacher, provide scaffolding to help support the success of students (Bell, Smetana, & Binns, 2005; Wheeler & Bell, 2012).

A review of over 300 activities from various curriculum resources identified eight common ways to implement inquiry (Meyer, Kubarek-Sandor, Kedvesh, Heitzman, Pan, & Faik, 2012). These are *protocols, design challenge, product testing, black boxes, intrinsic data space, discrepant event, taxonomy,* and *modeling*. A well-defined method

for collecting data is a *protocol*. Learning a protocol provides students with new technical

skills and an introduction to a way of perceiving the world. The information gathered

may also suggest what to investigate next. *Design challenge* activities focus on producing

a specific product. The task should require students to obtain the knowledge needed to

complete the challenge. Students assess and compare performance in *product testing*

activities. Students are required to develop and apply ways to consistently compare and

often quantify things. Product testing can often be made up of (1) determining an item's

desired attributes, (2) coming up with ways of testing the attributes consistently, and (3)

deciding how to combine the results to reach a conclusion. A *black box* activity is

designed to challenge students to discover the nature of things that cannot be seen.

Students are required to develop logical arguments in order to reach conclusions without

being able to directly observe the subject. A concept such as the difference between

observation and inference could be taught using a black box activity. Immersing students

in a data space that naturally implies a question characterizes *intrinsic data space*

activities. This type of activity provides easy exploration of the data and produces a

meaningful inquiry experience by presenting a natural challenge. An important subset of

intrinsic data space activities are simulated environments, which allow freedom to

explore and flexibility while reducing cognitive and technical barriers. A specific, non-

intuitive, unexpected, and often extraordinary event is the focus of a *discrepant event*

activity. It is important that students experience the incident as being inconsistent with

their understanding of things. Oftentimes teachers lead discrepant event demonstrations

for safety or technical reasons. *Taxonomy* activities provide students with a number of

various samples which students are asked to organize in a meaningful way. The variety

and quantity of samples must be sufficiently large so students find more than a few

predetermined groups. An essential element of the inquiry includes students' rationale

about how they categorized the samples. Last, *modeling* activities challenge students to

construct a working model of a natural phenomenon. The model does not need to be

physical. Modeling is beneficial when the thing being modeled is too intricate to permit

direct observation of key factors, and interrelationships are complex. Some activities

might combine or overlap the eight methods (Meyer, Kubarek-Sandor, Kedvesh,

Heitzman, Pan, & Faik, 2012).

The Internet is an excellent tool for inquiry (Grabe & Grabe, 2007). The easy access from classroom computers and large quantity of information resources on the Web

provide great potential for promoting inquiry. One inquiry-oriented activity that learners

participate in by interacting with resources on the Internet is the WebQuest (Dodge,

1997). WebQuests can be short- or longer-term and have several critical attributes. In order to achieve clarity of purpose and efficiency, at least the following parts should be

found in WebQuests:

1. An **introduction** that provides some background information and sets the stage.
2. A doable and interesting **task**.
3. A set of **information sources** that is required to complete the task. Many of the resources are included in the WebQuest document and point to information on the Web. Web documents, e-mail addresses of experts, searchable databases, and other documents physically accessible in the learner's environment might be included.
4. A description of the **process** for accomplishing the task that the learners should follow, detailed in clearly described steps.
5. Some **guidance** regarding how the information obtained should be organized.

6. A **conclusion** that provides closure to the WebQuest. It should remind learners about what they learned and might encourage them to extend the experience into other areas.

Non-critical attributes of a WebQuest might include group work on the quest and motivational elements such as giving learners a role to play during the activity, simulated people to correspond with using e-mail, and a scenario to work within. WebQuests can be interdisciplinary or designed within a single discipline as well (Dodge, 1997). The WebQuest is one type of Web-based inquiry task employing some degree of scaffolding by the teacher (Grabe & Grabe, 2007). It proposes a problem-solving, decision-making, or information-integration assignment and leads students to specific Webpages that supply the required resources. WebQuests provide an outstanding method for curriculum projects that can be accomplished within a reasonable period of time (Grabe & Grabe, 2007).

A pre- and post-test experiment design was utilized to evaluate the effects on critical thinking dispositions and skills as a result of WebQuest learning of chemistry topics by high school students in the Shaanxi province of China (Zhou, Ma, Huang, Liang, Yue, & Peng, 2012). The WebQuest experience enhanced several sub-scales of critical thinking disposition and skills.

Sustaining of Teacher Professionalism

Professionals gain respect because of their special skills and knowledge and their ability to exercise discretion when making decisions within their area of expertise (Grady, Helbling, & Lubeck, 2008). Professionals accept some authority for their own professional development as well.

In years past most teachers were dedicated professionals who practiced their art with considerable skill and love (Stoddard, 2010). Teachers were honored and respected by society. Since *A Nation at Risk* and No Child Left Behind many teachers have felt an erosion of their professionalism (Grady, Helbling, & Lubeck, 2008). High teacher attrition within the first three years is a symptom of the demanding nature of the profession. Some common reasons for teacher attrition are the systematic defeating of creativity and intellect, the threatened drought of personalities, and the erosion of self-respect (Kozol, 2007). Factors that nurture this environment include poor parenting, modest funding, overflowing classrooms, low-quality teachers, and the expectation that schools should correct all of society's problems (Grady, Helbling, & Lubeck, 2008). The content and pace of a teacher's schedule and the incomplete overlaying of a "factory model" have undermined the teaching profession.

Though *A Nation at Risk* and subsequent reports have appealed for the teaching profession to become more respected and rewarding, the level of professionalism has dropped as standards for high-quality teachers have risen (Grady, Helbling, & Lubeck, 2008). Administrators and others have subjected teachers to progressively close scrutiny rather than allowing them to rely on their own initiative and intelligence as is typically given to practicing professionals. The proliferation of standardized achievement testing and the talk of accountability have coincided with a gradual shift over time of how teachers are regarded (Stoddard, 2010). Teachers in general are no longer honored as competent professionals. Politics and the perception of the populace have excluded teachers from the ranks of professionals (Grady, Helbling, & Lubeck, 2008). The best-educated,

talented, and creative prospective teachers do not want to be monitored, micromanaged, doubted, and covered up with busywork. This situation has occurred primarily because teachers cannot produce the uniform product the legislators and business executives demand (Stoddard, 2010). The harder teachers have tried to shape students into a standard mold, the worse the situation has become. There has been great pressure to ignore the individuality of students in order to ensure that all students are able to do and know the same things. Consequently there has been a rapid decline in student cooperation and discipline. This has resulted in a call for more challenging standards. As students have rebelled from being treated like products on an assembly line, teachers have been blamed and asked to double their efforts to apply severe disciplinary measures and to standardize students. Gradually conditions worsened until Congress passed the No Child Left Behind Act of 2001. This education bill allocated federal money and assistance according to achievement test results and removed the last remnants of freedom for children and their teachers (Stoddard, 2010).

Standardized testing jeopardizes the professional control of teachers in four ways: (1) by deskilling the testing part of teachers' evaluation responsibility, (2) by enforcing a standard curriculum, (3) by taking away the right of teachers to assess the outcome of their own activity, and (4) by introducing new metrics of teacher productivity (Runte, 1998). Though eliminating duplication of designing tests by teachers might in theory lower education costs, the reduction of professional preparation and responsibility imply a reduction of professional status. The standard curriculum changes instruction from being student-centered to being curriculum-centered. This modification implies a decrease

in professional standing. Evaluating students on the basis of standardized testing removes the teacher's monopoly over standards. In the past teachers were responsible for determining acceptable levels of achievement for their students. Standardized testing seriously diminishes the teacher's control over the definition of knowledge and success for their students and in turn reduces their professional position. Last, standardized testing of students can be utilized to assess teachers. The fact that student achievement is affected by a variety of factors other than the teacher's effectiveness renders the use of standardized test results for performance evaluation unjust. The external accountability that standardized testing brings indirectly weakens the professional autonomy and status of teachers. The need for professionalism is removed when direct managerial oversight is made practical by the test (Runte, 1998).

Teachers, students, and parents have all become victims of misguided and well-meaning efforts to advance education (Stoddard, 2010). The downward spiral of degradation is as follows: (1) Politicians hold teachers accountable by means of standardized testing. (2) In response, teachers provide direct instruction that is unsolicited by students. (3) There is a decrease in students' personal inquiry. (4) There is an increase in student apathy, discipline problems, and dropouts. (5) Test scores fall. (6) Legislators demand increased rigor, higher standards, and more testing. (7) A standardized, teacher-proof curriculum is implemented. (8) As teachers obediently follow the new manuals, creative teaching disappears. (9) Many demoralized teachers leave the profession. (10) Test scores decline once again. (11) Student apathy and poor discipline increase yet again (Stoddard, 2010).

A way to get out of the above dilemma is to *support teacher professionalism* (Stoddard, 2010). This means restoring teaching to its time-honored place in society. Doing this may be the most effective and powerful way of reversing the downward trend in education and in implementing true reform. The teaching profession can be restored to a position of respect and trust by holding teachers responsible for things they *can* do rather than for doing the impossible task of standardizing children. The trust and respect will return because the results of this approach will be greatly different. It *is* possible to nurture and value Positive Human Diversity, to Draw Forth the Latent Potential of Learners, to Respect Student Autonomy, and to Invite Personal Inquiry. In essence, teachers can be sensitive to the needs of individual learners and meet those needs instead of attempting to deliver a set curriculum into the heads of a diverse group of children. This is much more complex, yet is many times more rewarding as well. If we would work as hard to develop a new system of education, as we have to perfect the information delivery system for a standardized curriculum, we would soon see great benefits (Stoddard, 2010).

"CommUNITY" for Great Schools

Education reform can be categorized as either large-scale reform projects known as structural reform or local reform (Patten, 2010). Structural reform is implemented across the board to all schools and all districts; whereas, communities and schools determining their own needs, developing ideas for addressing those needs, and creating plans to put their ideas into practice, characterize local reform. A current example of structural reform is Race to the Top. The local reform paradigm is more difficult to implement than the structural model; however, it is more successful in creating positive changes with re-

gard to improving instruction. The local reform model demands greater participation and a full understanding of what is required in contemporary education by a group of people who in large part do not have a strong background in pedagogy (Patten, 2010).

Cuban (2010), a zealous public school reformer who believed that structural reforms would lead to enhanced classroom teaching, later admitted to being in error. His research of how teachers taught in the early 20th century and, later, in the early 21st century during a time characterized by standards-based and accountability-based reforms led him to acknowledge his mistake. Instead of advocating portfolios of schools, small high schools, national core standards, deploying 1:1 laptops, changing the governance of school districts from elected school boards to politicians, and evaluating and paying teachers based on raising students' test scores, Cuban has concluded from both his experience and research that working directly on teacher standards, knowledge, and skills at the classroom and school levels has a much better prospect for bettering teaching practices. He also suggested that policymakers, interested in supermarket models and rapid implementation, will find the slow local reform approach hard to accept—even when research challenges their beliefs (Cuban, 2010).

Community-influenced education reform is characterized by the components of valuing of families and communities as well as successful strategies to bring about extensive participation of stakeholders in comprehensive planning and decision-making at both the local and policy-making levels (Rodriguez & Villarreal, 2003). Parent and community participation are necessary for achieving school reform. Schools and universities need to become more responsive and accountable to their local communities in order to elicit

and sustain family and community involvement. An effective strategy for bringing together parents and community-based organizations that represent the diversity of interests and needs of local communities necessary to influence positive educational reform is coalition building (Rodriguez & Villarreal, 2003).

According to Stoddard (2010), small groups of *united*, thinking citizens will initiate education reform when they persuasively demonstrate a superior purpose for public and private education. Currently many are fixated on a false purpose, *student achievement in curriculum*. This incorrect objective has effectively stopped true reform. People are striving harder and harder to do something that is both impossible and harmful— making students uniform and equal in knowledge and skills. Instead we could have a school system that nurtures positive human diversity and helps students excel in the areas they were born to be good at. If we try to make students the same in everything, we will rarely find one who will stand out in anything. The way to escape from our mental prison is to simplify and clarify the real purpose of education so that teachers and parents can form an alliance. When thousands of parents were surveyed in six school communities to determine their children's needs, the results surprisingly showed that student achievement in subject matter content was not the top priority. This research discovered some universal truths that placed students, parents, teachers, and subject matter content in a proper relationship with one another. These truths make possible a partnership that is impossible when schools are trying to standardize students. By adopting a purpose that explains the true reason for schools—a purpose that can unite parents and teachers—enormous change

will take place. An example of such a purpose is *to help every student develop the qualities of greatness and become a valuable contributor to society* (Stoddard, 2010).

Great power comes from having human greatness as the main purpose of education (Stoddard, 2010). Students, parents, and teachers can join in a partnership to grow greatness in each other. Curriculum must be harnessed in order to help students grow in the seven dimensions of greatness so they can become contributors to society. Curriculum becomes our servant; and Identity, Interaction, Inquiry, Initiative, Imagination, Intuition, and Integrity become the new goals. Parents and teachers will unite to fulfill seven deep desires of children if they want to develop contributors. The notion of curriculum as the means of accomplishing the higher goals of the seven dimensions of greatness is a revolutionary way of thinking about education. Student achievement in subject matter content is meaningless without this type of purpose (Stoddard, 2010).

Powerful political forces will undoubtedly resist the far-reaching changes implied by this different use of curriculum (Stoddard, 2010). Each group of thoughtful, committed citizens, who are proponents of Educating for Human Greatness, needs to be prepared for attacks by those who bought into No Child Left Behind or National Standards and invested a great deal of time and money to help perfect the assembly line system of education. Nevertheless, Educating for Human Greatness is a powerful idea that can tear down the walls of resistance (Stoddard, 2010).

There are several differences between schools that aim for student accomplishment in a required core curriculum and those whose goal is to help students become contributors to society (Stoddard, 2010). Parental involvement is the first difference. Parents

are more involved when they actively participate in helping their children grow in the seven dimensions of human greatness. The second difference concerns the choice between student individuality and uniformity. Schools Educating for Greatness make student Identity a priority. They help students develop their unique gifts and talents to contribute to the school, family, and community instead of trying to make students the same in knowledge or skills. Individual differences are respected. The role of the curriculum is the third major difference. Curriculum is a tool to help students grow to become contributors to society when Educating for Greatness—rather than being the primary goal. As students develop the seven dimensions, their contribution is made possible. Students can choose from thousands of topics to develop individual greatness, and they are assessed in their growth in the seven dimensions. The fourth primary difference is in student learning and achievement. Learning from Inquiry is deeper and more enduring than the imposed or required learning present in schools focusing on a core curriculum (Stoddard, 2010).

Community colleges typically utilize connections within the community to obtain guidance for their programs. At one Southeastern community college advisory committees in the Business, Applied Arts & Technologies Division advise the faculty and administration so they can optimally serve local business interests and improve the quality of the college's curriculum (Business, Applied Arts & Technologies Division, NSCC, 2013). Advisory committees play an important role in program development, the promotion of educational opportunities, and in determining the economic outlook for the region where the college is located. Programs at this community college need to be relevant to the needs of business and industry, designed to satisfy workforce demands, and sensitive

to the community served. An advisory committee in this division is a team of business experts chosen by the college (Business, Applied Arts & Technologies Division, NSCC, 2013).

Educating for Human Greatness (EfHG)

Stoddard (2010) wrote that the aim of public education is to develop great human beings who are contributors to society. His *educating for human greatness* (EfHG) hypothesis differs from conventional education in three key ways: First, teachers and parents work together to assist students to become contributors in the home, the school, and the community. They join to encourage student development in seven dimensions of human greatness: Identity, Inquiry, Interaction, Initiative, Imagination, Intuition, and Integrity. In conventional education, parents are not extensively involved. However, Stoddard's model makes parents full and equal partners with teachers with the goal of helping students increase in the qualities of greatness. Second, teachers do not attempt to standardize students. Instead, they cultivate positive differences. Asking teachers to produce standardized students who are each a unique creation is asking the impossible. The object is to facilitate the realization and development of students' own distinctive gifts and talents. High standards for the growth of student individuality are adopted. A resurgence of improvement can occur by holding teachers accountable for doing things that are possible rather than making them responsible for the impossible. Using this approach, students can perform very well when evaluated by standardized testing. Finally, the curriculum is taught and learned as a means, instead of as an end, to help students grow and develop in the qualities of human greatness. As a result of this method, teachers can per-

form their craft as skilled professionals by tailoring the curriculum to fit the needs of individual students; and parents can become involved in their children's education in a meaningful way.

Six pivotal principles make up the foundation for EfHG. These include (1) the necessity of *valuing positive human diversity*, (2) the concept of *drawing forth* the *potential* of students instead of trying to saturate them with information, (3) the *respect* for student *autonomy*, (4) deep and permanent learning through *personal inquiry*, (5) the *sustaining* of teacher *professionalism*, and (6) *"CommUNITY" for great schools* (Stoddard, 2010).

The Teacher and Parent Team

Educating for human greatness requires teachers to devise ways of engaging students in activities that help them grow in each of the seven dimensions of human greatness (Stoddard, 2010). The teacher becomes a mentor who facilitates the students' growth as individuals, each with distinctive needs, gifts, talents, and interests to be determined and developed. Instead of trying to fabricate a standard product, the teacher works with parents and caregivers to cultivate positive human diversity (Stoddard, 2010).

Parents, too, are mindful of the seven dimensions when involved in EfHG (Stoddard, 2010). They communicate their children's changing needs to the teacher and actively help to nurture growth in each dimension however they are able. An important thing parents can do is to help their children recognize their inherent value as individuals and to encourage the development of their unique gifts to contribute to the betterment of society. Parents can also work with their children as partners on inquiry-based research

projects for the purpose of promoting Interaction and Inquiry. They can serve as school volunteers as well (Stoddard, 2010).

Non-Standard Students and the Role of Curriculum

It is a self-evident truth that students are different; however, the way that educators address this fact varies widely. The "teaching to the middle" method is used in many classrooms (Hall, 2009). But, this approach does not offer the best learning opportunities for diverse student populations. One way of trying to deal with this student diversity is by means of differentiated instruction. Differentiated instruction modifies how the curriculum is taught—not what is taught. Teachers tailor instruction based on individual differences by creating suitably different experiences according to students' learning rate, depth of knowledge and understanding, and interests. Differentiated instruction blends a mixture of strategies that include a diversity of assignments, products, and pacing which let students work at their own level of challenge to achieve their own levels of accomplishment (Hall, 2009). Differentiated instruction is both curriculum-centered and student-centered. The standard curriculum is taught in different ways to account for student diversity.

EfHG, on the other hand, is student-centered dominant. The curriculum itself is modified to satisfy the needs, wants, and interests of students who possess unique talents, skills, and abilities (Stoddard, 2010). The positive differences of students are cultivated. The aim is to develop students' natural talents so they can become great and contribute to society. The curriculum is a tool, rather than the final goal, that is utilized to help students grow in the qualities of human greatness (Stoddard, 2010).

Seven Dimensions of Human Greatness

Identity is the first dimension of greatness (Stoddard, 2010). Identity is a strong, positive sense of self-worth in a student as a result of having developed individual talents, abilities, gifts, and interests. It is confidence, competence, and a deep-seated desire to contribute at home, in school, and in the community. When teachers cease trying to standardize students and nurture and value positive human diversity (phd), the most re-markable and fundamental change in education will come about. Nurturing phd is work-ing in harmony with nature; it liberates students to recognize and develop their unlimited potential. Students start building an identity of greatness when they begin to discover and cultivate their own unique sets of talents and gifts. As teachers help students find some-thing in which they excel, students' self-esteem increases. As self-worth is enhanced, classroom behavior and academic achievement can begin to improve. When teachers stop trying to help students overcome their deficits and instead emphasize the development of each one's unique assets, students' sense of worth is multiplied. To concentrate on help-ing students build their assets is nurturing and valuing positive human diversity. Attempt-ing to make students the same in knowledge and skills is just the opposite. According to Stoddard, our challenge is to assist every child to find something in which he or she can do extremely well. Focusing on developing positive differences is to recognize and em-brace the truth that each person is born to be unique and to play a contributing role in so-ciety, as no one else is able. Amazing things start happening when teachers help students become aware of, appreciate, and develop their wonderful uniqueness. Bad things occur, however, when we endeavor to standardize students. Aiming for Identity in teaching is

looking for the best in each child and calling forth the qualities of individual greatness (Stoddard, 2010).

The second dimension of greatness, which has already been discussed above, is *Inquiry* (Stoddard, 2010). Inquiry in a student is a curious attitude and the ability to ask insightful questions as well as pursue a quest for answers and better questions. Though inquiry is the natural thing we were born to do as a consequence of our curiosity, the state-imposed curriculum takes a lethal toll on inquiry soon after children start school (Stoddard, 2010).

Inquiry-based teaching is one of two common teaching styles in schools (Stoddard, 2010). Most teachers adhere to the other style, the direct teaching method. Teachers utilizing the direct method know their subject and have a sincere, strong desire to teach their knowledge to others. Many of these teachers are very adept at making their subject interesting to their students. They plaster knowledge so skillfully onto the brains of their children that some is absorbed and internalized for long-term use. The number of people who support this method is growing. They often substantiate their claim of the benefits of direct teaching by showing an increase in standardized achievement test scores as a consequence. The inquiry method, on the other hand, is used by a much smaller group of teachers. They give the impression that they are knowledgeable of their subject, but are also just as interested about learning more about their subject area as they are in teaching what they already know. You could say that they are as concerned with helping students discover what they, the teachers, don't know as they are in conveying the knowledge they already have acquired. Teachers using the inquiry method invite stu-

dent questions and often answer that they don't know the answer and that the teacher and students should find the answers together. They don't use standardized achievement test scores as evidence of student growth, principally because these tests don't correspond with the deep, creative or self-constructed learning that occurs with the inquiry method. The curriculum is closed with direct instruction; whereas, the inquiry method offers an open curriculum. Learning from inquiry is deeper and lasts longer than the mandated learning from direct instruction present in schools focusing on a core curriculum (Stoddard, 2010).

The third dimension of greatness is *Interaction* (Stoddard, 2010). Interaction as a student characteristic means respect for others. A learner who has progressed in this area is courteous, kind, caring, able to communicate, and cooperative. Though eight major world religions advocate the need for people to treat others as we would like to be treated, sadly this precept is apparently to a large extent neglected. The ability to interact with others may be directly related to growth in the first two dimensions: Identity and Inquiry. Interaction may be the most important way of manifesting human greatness. Contributive behavior is most often demonstrated through interaction. Schools play an essential role in helping students interact respectfully. If children learn to discover and develop their individual talents and to respectfully interact with others at home and in school, their self-esteem will be enhanced resulting in less bullying, dropouts, and gang membership (Stoddard, 2010).

Cooperative learning is superior to competitive learning (Stoddard, 2010). Students can build their powers of Interaction as well as Identity and Inquiry by working in

teams as they help each other work on problems, projects, and investigations. Parents and teachers can promote Interaction by setting an example of love and kindness and by often expressing appreciation (Stoddard, 2010).

Initiative is the fourth dimension of human greatness (Stoddard, 2010). It is self-directed learning, autonomy, confidence, and will power. The power of Initiative is closely related to that of Inquiry. When a student is determined to know something and exerts his or her resolve to become familiar with it, not much can be done to impede that student from learning that thing. This is the reason why classes based on the inquiry method are so effective. The human will is a powerful force that teachers can support by providing choices and freedom and by helping students be responsible for their own learning and behavior. The driving force to learn is an inherent characteristic of the human race. At the very least, we should not do anything to inhibit this motivation (Stoddard, 2010).

The fifth dimension of greatness is *Imagination* (Stoddard, 2010). Imagination is the ability of the mind to be resourceful and creative. Imagination is the source of creativity. It is the capacity to form ideas and images in the mind. The ability to imagine and create may be the most highly valued in any field of endeavor. It is another talent that is most important for teachers to foster (Stoddard, 2010).

Most teachers know of some of the connections between art, music, and science (Stoddard, 2010). Being able to sense pitch with the ears and perceive color with the eyes are fascinating areas for investigation that can cultivate imagination and creativity. When teachers seek to nurture their students' imagination and creativity by immersing them in art, music, and science experiences, they assist the development of the whole child in a

manner that can be done in no other way (Stoddard, 2010). Elliot Eisner, a professor of education at Stanford University wrote that the arts teach us to engage the imagination as a source of content and that this fact earns the arts a place in our schools' curriculum (Eisner, 1985).

Intuition is the sixth dimension of human greatness (Stoddard, 2010). Intuition is insight; it is emotional intelligence. It is humility. Intuition oftentimes is known as a sixth sense, or the ability to discern things spiritually with both the mind and the heart. Everyone is born with the ability to differentiate between good and evil, truth from falsehood, and right from wrong. Intuition is the ability to recognize the truth with the heart. If this power is nurtured and trusted, it can be enlarged. Giving equal time and effort to educating the heart as is given to educating the human mind would be a worthy undertaking (Stoddard, 2010).

Parker J. Palmer (2007) wrote of the need for higher education to humanize students and develop their emotional intelligence. He decided to become a professor in part because of his belief that education can humanize us. However, that belief was severely shaken when he learned of the German academy's complicity in the Holocaust. Palmer wrote that we have not yet uprooted the myth of "value-free" knowledge. As a consequence, we turn our graduates loose on the world as people who know, but who do not have ethical autonomy and the courage to act upon it. He stated that higher education must insist that knowing alone is not sufficient if humane purposes are to be served. Students are not fully human until they recognize what they know and take responsibility for it (Palmer, 2007).

Two of Palmer's five proposals for improving higher education were particularly related to emotional intelligence (Palmer, 2007). One concerned the need to take students' emotions as seriously as their intellects. Palmer wrote that the education of the new professional would reverse the academic idea that emotions must be suppressed in order to become technicians. Students would learn to explore their feelings about themselves, their work, those with whom they work, the institutional settings in which they work, and the world in which they live. He also stated that we must begin to take the "intelligence" in emotional intelligence seriously. Students must be helped to develop the skill of "mining" their emotions for knowledge. People who are good at their professions, however technical, realize that not everything they need to know can be found in data points and cognitive constructs. They bring at least as much art as science to their work (Palmer, 2007).

The seventh dimension of greatness according to Stoddard (2010) is *Integrity*. Integrity means moral uprightness, wholeness, honesty, and strength of character. Character is the collection of all the positive characteristics of human greatness. Intuition and Integrity are inextricably linked. We know truth in the heart, and we can help children learn to feel the truth and act on it—even if facing up to a mistake is painful. If children are developing an identity with self-worth and want to contribute at school, home, or in the community, the admission of wrongdoing is much easier. If our desire is to help our children stay out of jail as contributors to society rather than burdens, we are required to include the development of integrity as an especially important dimension of human great-

ness. We are obligated to help our students learn responsibility for their thoughts and behavior and the benefits of being honest and truthful (Stoddard, 2010).

Examples of EfHG in Practice

Educating for Human Greatness is not the prevailing aim of schools. The author located only one private school located north of Austin, Texas that explicitly follows the EfHG approach (The Inside Outside School, 2010). The mission of the Inside Outside School is help students self-actualize using the seven dimensions of human greatness. This school promotes creative and innovative thinking and an individualized curriculum. The school's Website includes testimonials provided by parents (The Inside Outside School, 2010).

Another school of note that is based upon many of the pivotal principles found in EfHG is the Sudbury Valley School in Framingham, Massachusetts, which was founded in 1968. Over twenty schools throughout the world are patterned after Sudbury Valley (Gray, 2008). The EfHG principles of valuing positive human diversity, identity, drawing forth students' potential, respecting autonomy, inviting inquiry, interaction, and initiative are prevalent in the school's philosophy. The simple and self-evident idea fundamental to the Sudbury Valley School is that students educate themselves (Gray, 2008). The private school, which has students from four years through high school age, admits students at any academic level and operates at about half the per pupil cost of surrounding public schools. Students are free to do whatever they desire at school as long as they don't violate school rules. No tests are given, and student progress is not evaluated or graded. (Students who want to graduate with a high school diploma do need to prepare a written

thesis and defend it orally.) The school has no set curriculum, and the institution does not make an effort to motivate its students to learn. Courses are organized when students take the initiative for them to begin, and they end when students no longer want them. Some students never enroll in a course. Learning is in large part incidental. Learning occurs naturally as a consequence of students' self-directed play and exploration. Though the school provides many learning resources, the most important source of learning for most students is the other students who provide a diverse mix of ages, interests, and abilities. A great deal of the students' exploration at the school occurs by means of conversations with each other and with staff members. This conversation stimulates the intellect in a way unlike memorizing material for a test. The Sudbury Valley School has conducted several research studies of its graduates and has learned that the school works well as an academic institution. Graduates represent a wide range of careers valued by our society. Furthermore, graduates who decided to pursue higher education have had no particular problems being admitted into colleges and universities. Once admitted, they have per-formed well. Of greater significance is that Sudbury Valley graduates reported that they are happy with their lives (Gray, 2008).

The following paragraphs contain ways in which the principles of EfHG have been or can be implemented. Most of the information comes from Stoddard (2010).

One strategy invented by teachers to help students discover their gifts and talents was the "Shining Stars Talent Development Program" (Stoddard, 2010). Children were invited to "try on" various talents from a list of 82 talents in a series of talent shows. Talents were performed weekly in class shows. Some children were chosen to appear in

monthly grade-level shows from the weekly performances. Then, quarterly some of the students were chosen to perform in shows before the whole school. Over time students began to determine what they were good at individually and to develop a positive identity. Students developed talents in arts, crafts, hobbies, writing, speaking, dancing, drama, music, physical abilities, and leadership. One of the highlights of the program occurred when parents visited to demonstrate their talents (Stoddard, 2010).

The Great Brain Project, a knowledge recital similar in effect to a musical recital, is a strategy invented by teachers, parents, and principal to assist children to grow in three of the dimensions of human greatness: Identity (self-worth), Inquiry (curiosity), and Interaction (communication) (Stoddard, 2010). This program provides incentive for children to exercise autonomy, their free wills, and responsibility as they pursue deep learning. The Great Brain program also has become an exceptional tool for uniting teachers and parents in a common cause (Stoddard, 2010).

A Great Brain Project is a program consisting of six steps (Stoddard, 2010). The program steps are listed below:

1. Choose a Topic: Students can become smarter than anyone else in their school or neighborhood on whatever topic they choose. They can choose a topic that will provide an exciting adventure in learning.
2. Build Questions: Students write down all the "facts" they think they already know about their subject. Next, they make a list of everything they would like to learn about the subject. Students should try to ask a question that starts with each of the question-starter words. They keep adding to their list of questions as they carry out their investigation.
3. Study: In this step, students gather information about their subject. Students can study with their eyes, draw or paint, measure, weigh, count, collect, and compare their subject. Information can come from libraries, magazines, newspapers, television, interviews they conduct, correspondence, experiments, etc. They should keep a notebook of their findings and make a bibliography of their sources of information.

4. Imagine, Create, Invent: After learning a great deal of information about their subject, students use their own ideas to invent or create an original product. This could be a poem, story, musical composition, work of art, etc.
5. Prepare to Share: Students should next think of an interesting, creative method of sharing their knowledge on their subject with their class, relatives, and friends at a designated time and place. This could be made up of an oral presentation, PowerPoint presentation, visual aids, or other means to hold the attention and interest of the audience.
6. Share: Students schedule a time and place for sharing their Great Brain knowledge with their teacher. They make invitations for those requested to attend the presentation. Students practice their presentation with a friend or family member in a clear, loud voice and adjust their delivery according to suggestions for improvement. At the beginning of the actual presentation students welcome the audience. When the presentation is over, they invite questions from the listeners. They are not afraid to say they don't know an answer. Finally, students thank everyone for attending.

A separate Great Brain Project is done by each individual student; however, a parent, relative, or neighbor is invited to become a research partner to help the student become a Great Brain. Home study, family discussions, and activities are focused on the Great Brain topic. Students are taught library and Internet skills and given sufficient time to plan, read, and study. Students are evaluated according to a standardized rubric to be a *Specialist*, *Expert*, *Mastermind*, or *Genius*. Students are honored in the "Great Brain Hall of Fame." Great Brain Fairs are organized to provide opportunities for students to share their accomplishments (Stoddard, 2010).

The Great Brain inquiry process gives students a different perspective on education (Stoddard, 2010). Participating learners discover that they are responsible for their own behavior and learning. They realize that satisfying accomplishment is the product of personal effort and that they are important, valuable people. Students learn that everyone is talented and gifted, that cooperation with others is necessary, and that learning is a joyous endeavor (Stoddard, 2010).

A significant strategy teachers invented to help students engage in written interaction is the School Post Office (Stoddard, 2010). This approach is a great tool for helping students learn to read and write. After three fourth-graders gained permission and made a school wide announcement at Whitesides Elementary School that a school post office was going to be started, a large official-looking mailbox was placed in the hallway outside the principal's office door. Within minutes the first letter arrived. Within a couple of days of the inauguration of the program, some other activities at the school had to be curtailed or postponed so students would have the time required to write. The flood of mail was so large that the class who started the project had to reorganize their room into a mail-processing center. Some adult staff members became concerned whether they would have time to reply after receiving so many letters. Students began writing letters at home and hurried to school to read their mail. Other problems occurred when some students wrote hateful notes. This provided teachers an opportunity to teach the principles of greatness. Children were encouraged to write people whom they felt needed a friend, as well as their close friends. The school post office became a valuable method for building the attitudes and skills of Interaction. In addition, students began to write as never before without the need for an assignment or persuasion. They learned the spelling of new words rapidly, and a number of kindergarten and first graders began reading and writing without formal instruction. The post office also nurtured Inquiry as students sought out help with grammar, vocabulary, and spelling (Stoddard, 2010).

Self-directed learning may be cultivated in many ways (Stoddard, 2010). The Great Brain Project is one approach that has already been referred to. Another method is

to give students "initiative time" to study whatever they desire once each week for half a day. When Stoddard did this as a teacher, the activity was so successful that he expanded it to a full day and more as his students became engaged in exploring and developing their own projects. The key principle, however, is for teachers to pay special attention to students' interests and encourage them to pursue the construction of their own knowledge (Stoddard, 2010).

Michael Ballam, a well-known Mormon singer, took note of the decline of music and art public education programs in Utah and helped develop the Opera By Children program through the Utah Opera Festival Company (Schmuhl, 2009). The program gives children the opportunity to write and compose their own operas. The students create the story, characters, and costumes. Opera By Children only has three rules: (1) Nobody gets hurt, (2) Everybody participates, and (3) The students do the work—not the teachers. The program utilizes the acronym, TRAG, which stands for Trust, Risk, Affirm, and Growth. According to Ballam, nurturing creativity in children is especially critical at a young age in order to cultivate the imagination and to foster their sense of community (Schmuhl, 2009).

We are just beginning to learn how to cultivate emotional intelligence (Stoddard, 2010). Teachers can help students learn how to sense the truth and give them spiritual experiences through stories and service. Questions about how students feel about things and whether they feel something is true or false can be asked. The examination of various forms of advertising can help to promote intuition. Providing opportunities for students to encounter nature with all of their senses as well as the experiences of listening to great

music, hearing stories and poetry that touch the heart, and seeing and producing great art can nurture this dimension of greatness (Stoddard, 2010).

If teachers want to teach integrity, they must first demonstrate this dimension themselves by doing and saying things consistent with heartfelt truth (Stoddard, 2010). Next, teachers can ask questions that assist students to feel truth in their hearts and act on it. Frequent discussions and practice in predicting the consequences of various choices can help to foster the development of integrity (Stoddard, 2010).

When Stoddard (2010) was a 5th and 6th grade teacher, he taught reading and writing as a means to an end. These subjects were taught as a way to obtain and share delightful information and knowledge. Students read books they were interested in and wrote book reviews on index cards, which were placed in a card file so their classmates could read the reviews to aid in finding a new book to read. One year Stoddard checked his students' achievement test scores and discovered that the students had improved three grade levels in reading ability on average from the previous year (Stoddard, 2010).

Academic Performance

Academic performance or achievement has been measured in various ways. Standardized achievement testing has been a common method of determining academic performance for younger students. Among the tests that have been utilized are the California Standards Tests (California Department of Education, 2005), the Massachusetts Comprehensive Assessment System (Chomitz, Slining, McGowan, Mitchell, Dawson, & Hacker, 2009), Metropolitan Achievement Tests (Sallis, McKenzie, Kolody, Lewis, Marshall, & Rosengard, 1999), *TerraNova* achievement tests (Coe,

Pivarnik, Womack, Reeves, & Malina, 2006; Eveland-Sayers, Farley, Fuller, Morgan, & Caputo, 2009), Degree of Reading Power Test (DRP) (Shore, Sachs, Lidicker, Brett, Wright, & Libonati, 2008), and the ISAT Achievement Tests (Castelli, Hillman, Buck, & Erwin, 2007).

Other methods of evaluating academic performance include the measurement of subject or course grades (Lepper, Corpus, & Iyengar, 2005; Newman-Ford, Lloyd, & Thomas, 2009; Perez-Chada, et al., 2007) and test scores, including pre- and posttests (Davies & Mendenhall, 1998; Smith, Smith, & Boone, 2000; Wiecha, Chetty, Pollard, & Shaw, 2006). The assessment of assigned papers has been used as well (Kelly & Schorger, 2002). A common means of appraising the academic performance of students, particularly in higher education, is some measure of grade point average (Field, Diego, & Sanders, 2001; Jackson, Weiss, Lundquist, & Hooper, 2003; Ock, 2008; Shore, Sachs, Lidicker, Brett, Wright, & Libonati, 2008; Stinebrickner & Stinebrickner, 2007; Wenz & Yu, 2009; Zulauf & Gortner, 1999).

Student Retention

About sixty percent of community college students are required to take at least one developmental course, and less than twenty-five percent of these students complete a degree or certificate within eight years (The White House, 2011). Less than thirty percent of full-time students who seek a two-year degree finish the requirements within three years. Part-time students graduate at even lower rates. Less than fifty percent of degree seeking or transfer students reach their goal in six years (The White House, 2011). The student retention, measured by percentage of full-time students who complete their de-

gree in three years, at one Southeastern community college is less than the median na-

tional community college statistics (NCCBP-2012, 2012). Only 8.24% of full-time, first-

time students at this college completed their associate's degree in three years. Nationally

the median percentage for full-time, first-time community college students was 20.16%

(NCCBP-2012, 2012).

Retention of higher education students from the first year of college to the second

year in the U.S. varies by type of institution. Approximately 77% of students in public

Ph.D. granting institutions returned for their second year (ACT, 2012). BA/BS public and

two-year public institutions reported an average of about 65% and 56% of students who

returned for their second year respectively.

Fortunately the conditions that promote student retention are known (Tinto,

2007). Extensive research has identified environmental characteristics which best foster

student retention, particularly during the first year of college. These are things which in-

stitutions have control over and can change if they are serious about pursuing student re-

tention (Tinto, 2007).

Five important conditions cultivate student retention: institutional expectation,

advising, student support, student involvement, and student learning (Tinto, 2007). First,

students have a higher probability of persisting and graduating in environments where

faculty and staff expect them to succeed. Next, students are more likely to be academical-

ly successful if they receive effective advising and clear and consistent information re-

garding institutional requirements. Third, student retention is enhanced when academic,

social, and personal support is provided. This help may be structured in the forms of

mentor and summer bridge programs and student clubs, or the support may be provided in everyday occurrences such as contact with faculty and an advisor. Fourth, students who are involved as valued members of the institution have a greater chance of being retained. The regularity and quality of contact between students and their peers, students and faculty, and students and staff is a significant independent predictor of student retention, in particular during the first year of college when student attachments are weak and the attraction of the institution is fragile. Last, the most important factor for student retention is a setting that encourages learning. Students who are actively engaged in learning with others are more likely to learn and to consequently persist. The settings that institutions construct to promote student retention must begin in the classrooms and laboratories on campus. Learning communities and the collaborative pedagogical approach that ensures shared learning should be the norm rather than the exception during the student's first year of college (Tinto, 2007).

Student Satisfaction

Ideally one of the primary dependent variables of this study would be student retention. Instead however, student satisfaction, an important predictor of student retention, which is more readily measured in a limited time frame, is being utilized (Herbert, 2006; Roberts & Styron Jr., 2009; Schreiner, 2009).

One meaning of *satisfaction* is the accomplishment of one's needs, desires, or expectations (Oxford University Press, 2011). The author would like to emphasize the concept of fulfilling or meeting expectations when discussing the notion of satisfaction. The academic discipline of marketing commonly uses the concept of meeting customer

expectations when considering customer satisfaction. A customer's satisfaction depends on a product's perceived performance in delivering value relative to the buyer's expectations (Kotler & Armstrong, 2000). If product performance does not meet expectations, the customer is dissatisfied. If the customer's expectations are met, the result is satisfaction. Moreover, if the product exceeds expectations, the buyer is delighted (Kotler & Armstrong, 2000). Satisfaction is based on expectations. If we want to determine true student satisfaction, we need to discover how well the institution, including administration and staff, the faculty, and the curriculum are meeting or fulfilling students' expectations. The author feels that this salient element of student expectations is sometimes not taken into consideration when the evaluation of student satisfaction is attempted. Student satisfaction surveys frequently attempt to directly inquire regarding various aspects of student satisfaction. The consequential results may not be as valid as a survey that instead inquires concerning how well students' expectations have been fulfilled in various areas.

A study of 1,725 students and 214 instructors in adult business degree programs at five institutions of higher education identified four variables that explain about 70% of an observed variance in student satisfaction (Howell & Buck, 2012). The variables identified were *relevancy of subject matter*, *faculty subject matter competency*, *general classroom mangement*, and *student workload*. The greater the relevancy of subject matter, faculty subject matter competency, and general classroom management, the greater the students were satisfied. However, a workload that was perceived by students to be too demanding

can negatively impact satisfaction. This fact necessitates proactive management of students' expectations with regard to their course workload (Howell & Buck, 2012).

Research at Gonzaga University studied 168 undergraduate and 72 graduate students who were pursuing business degrees (Beqiri & Chase, 2009). Research questions examined student satisfaction with online courses based on sociodemographic status, how education-related factors impact student satisfaction with online courses, and whether student satisfaction differs for online and blended courses. Analysis demonstrated that the profile of students who would be more satisfied with the online mode of course delivery was married graduate students who were male and resided off campus. Furthermore, students for whom distance education was attractive, who perceived online instruction to be an appropriate mode of learning in universities, and who had some background with regard to the course taken were students more likely to be satisfied with the online mode. In addition, the researchers recommended that institutions should favor a blended mode of delivery over 100% online (Beqiri & Chase, 2009).

Undergraduate and graduate students taking summer-session online courses at a Western university in the College of Education were the subject of another study (Kuo, Walker, Belland, & Schroder, 2013). Predictor variables of student satisfaction were explored. *Learner-instructor interaction*, *learner-content interaction*, and *Internet self-efficacy* significantly predicted student satisfaction in the 100% online mode of course delivery. The strongest predictor of student satisfaction was learner-content interaction. Learner-learner interaction and self-regulated learning, the degree to which students motivationally, behaviorally, and metacognitively participated in their own learning, were

not significant predictors of student satisfaction. Moreover, female students engaged in more learner-learner interaction; and graduate students had more learner-learner interaction than undergraduates. Students spending less than 5 hours online per week had higher Internet self-efficacy than students spending more than 20 hours online weekly. Finally, students spending less than 5 hours online a week were less self-regulated than those spending 11-15 hours per week. The importance for instructors and course designers to focus on content design and organization in order to enhance learner-content interaction and student satisfaction were practical implications of the study. Prompt instructor feedback and other means of increasing learner-instructor interaction as well as a technology orientation for students were other suggestions of the study (Kuo, Walker, Belland, & Schroder, 2013).

A study at the University of Pittsburg's School of Information Sciences compared the student satisfaction of non-cohort, on-campus students with that of cohort-based online students (Alman, Frey, & Tomer, 2012). Thirty-six students, who were distributed almost equally between the two groups, participated in the research. All students were enrolled in the MLIS (Master's of Library and Information Science) degree program. The analysis of data gathered from a modified version of the *Community of Inquiry* survey demonstrated that the cohort-based learning community in the study had a positive influence on Teaching Presence, Cognitive Presence, and Social Presence. Moreover, cohort members showed higher perceived satisfaction than the non-cohort, on-campus participants (Alman, Frey, & Tomer, 2012).

The Relationship of Student Satisfaction to Student Retention

A study at a medium-sized Midwestern state university aimed to determine the significant variables for retention in online courses by asking questions listed on an online course survey (Herbert, 2006). The Noel-Levitz Priorities Survey for Online Learners[TM] (PSOL) was utilized to establish which of the surveyed institutional predictor variables are most influential in predicting whether a student is retained in an online course. The analyses of the research data indicated that students are more likely to retain their online course if they are more satisfied with the experience. Student expectations was the focus of one of two capstone questions in the survey. Students who did not complete their online course had a significantly lower level of their expectations met by their experience in the course than those students who completed. Students who had expectations consistent with their course experience successfully completed their online course. Neither completers nor non-completers ranked their overall experience exceptionally high. However, the study demonstrated that almost without exception, successful completers were more satisfied with all aspects of the course than non-completers (Herbert, 2006).

The persistence of students within certain academic disciplines was the focus of a study in the College of Education and Psychology at a Southern research-intensive university (Roberts & Styron Jr., 2009). The study results indicated that students not returning for the Fall 2008 semester or changing majors to another area had statistically significant lower perceptions of social connectedness and satisfaction with faculty approachability than students who did return. Social connectness was the best predictor

of persistence, and satisfaction with faculty approachability was the second best predictor (Roberts & Styron Jr., 2009).

A total of 65 institutions representing the spectrum of Carnegie classifications, size, and selectivity participated in a research study that examined the results of the online version of the Student Satisfaction Inventory™ (SSI) as administered to a sample of students during the 2005-2006, 2006-2007, and/or 2007-2008 academic years (Schreiner, 2009). A total of 27,816 students had complete records for the study after the data were collected and screened for missing values. The satisfaction indicators added significantly to the ability to predict retention of students across all models and class levels during the following fall term after the SSI had been administered. Satisfaction indicators almost doubled the ability to predict student retention beyond what institutional and demographic factors could predict, for each of the class levels. Moreover, the best predictive models occurred when all the satisfaction items were utilized or when the gap scores from the most important items were used—rather than global indicators of satisfaction. Nevertheless, even the global satisfaction indicators were significantly predictive of retention (Schreiner, 2009).

In the above study, *Campus Climate* was the most predictive scale across all class levels (Schreiner, 2009). Students' academic experiences are an important contributor to their perceptions of the campus climate. Students are much more satisfied in their student role when they have a positive classroom experience and are supported by advisors to reach their educational goals (Schreiner, 2009).

A study of the responses to the Adult Learner Inventory™ (ALI) by students from four-year public and private colleges as well as students from two-year community and technical colleges examined adult learners' satisfaction and priorities (Noel-Levitz, Inc., 2010). In both the four-year colleges and universities and two-year community colleges the *Teaching-Learning Process* was the fourth most important scale to students. *Outreach*, *Financing*, and *Life and Career Planning* were rated higher for both types of institutions—though in differing order. *Technology*, *Transitions*, *Student Support Systems*, and *Assessment of Learning Outcomes* were all rated as less important than *Teaching-Learning Process* in decending order for both four-year and two-year institutions (Noel-Levitz, Inc., 2010). This study is important because it highlights the importance of the teaching and learning process or academic experiences which have been shown to contribute to student satisfaction and utimately student retention (Herbert, 2006; Roberts & Styron Jr., 2009; Schreiner, 2009).

Mode of Course Delivery and Outcomes

A study at a state-supported Western university looked at the effectiveness of traditional versus online learning environments by examining learning outcomes for an educational technology integration course for pre-service education students (Smith, Smith, & Boone, 2000). All students were undergraduate elementary education, secondary education, or special education majors. The course was offered in education computer labs in two formats. One course was delivered traditionally; the other was delivered online. This study specifically looked at the effectiveness of three traditional instruction methods: lectures, guided instruction, and collaborative discussion in the online environment com-

pared to the traditional classroom. Pretest and posttest data for each instructional method was analyzed using a 2 X 2 repeated-measures ANOVA. No significant differences were found between the traditional and online student outcomes for the lectures and the guided instruction (Smith, Smith, & Boone, 2000).

A study at the University of Montana-Missoula investigated student personality traits and learning preferences in relation to their perceptions of online learning (Kelly & Schorger, 2002). Students in two sections of a teacher education course were test subjects. One section was delivered for eleven weeks by traditional means. The second section received one weekly session by means of computer-mediated communication during weeks eight through eleven. The first seven weeks were delivered traditionally. Students in the second section generally perceived that the online instruction was less effective in terms of learning. A comparison of achievement scores and research papers found that there was no significant difference between the two sections, however (Kelly & Schorger, 2002).

A comparison of online versus face-to-face learning for third-year medical students taking a diabetes management course at Boston University School of Medicine was the objective of another study (Wiecha, Chetty, Pollard, & Shaw, 2006). Online students demonstrated a significantly higher posttest score and a greater increase in overall score from pretest to posttest than students learning face-to-face.

A study which compared students enrolled in both traditional classroom and online versions of a business law course found no significant difference in either student satisfaction or student learning (Shelley, Swartz, & Cole, 2007). All elements of the two

versions of the course were identical with the exception of mode of delivery. Though the study found no statistically significant differences between the two formats with regard to any of the research questions which covered student satisfaction and learning, student satisfaction was slightly higher with the course overall and with the instructor in the traditional format and slightly higher with the course structure in the online format (Shelley, Swartz, & Cole, 2007).

In order to examine learning in online versus traditional courses with students enrolled in a master's degree program in education at a public institution in the Southwest, three face-to-face courses were compared to three traditional ones over a two-year period (Kirtman, 2009). The traditional classes consisted of small and large group work and discussions, direct instruction utilizing PowerPoint slides, and in-class writing activities. The online classes included the following instructional methods: small and large discussion board activities, small group and individual activities, written activities submitted via email, and direct instruction using the same PowerPoint slides from the traditional mode of instruction with audio voiceovers from the lectures presented to the in-class students. The online course elements were offered asynchronously. The instructor was the same for both formats, the same evaluator was utilized, and instruction was matched in every way with the exception that students were required to complete their work online or in class. No significant difference was found between the two groups of students in analyzing paper grades. A significant difference was found when the results from the exams were analyzed. Traditional students scored higher on the mid-term exam. However, the *t*-test did not indicate a significant difference between groups on the final

exam. Student survey data showed that students felt there was no difference in learning with regard to mode of instruction. The difference in mid-term exam scores may have been more of an adjusting to online learning issue than the notion that online classes are inferior to traditional classes in terms of learning outcomes. Survey data indicated that the most important characteristic of teaching and learning online is the small and large group discussions and that instructor and student interaction are important elements of the learning process. Furthermore, student survey answers were so overwhelmingly positive regarding online classes, indicating great satisfaction, that students' increased satisfaction and motivation may have contributed to their learning (Kirtman, 2009).

Two sections of students taking a course in Theories of Counseling at a small, public college on the East Coast experienced the onground and online modes of delivery (Lyke & Frank, 2012). The primary assessments in the study were multiple-choice quizzes developed from textbook content. There were no reliable differences in test scores between the online and onground students. However, student satisfaction was rated lower in the online section than in the onground section (Lyke & Frank, 2012).

Forty-eight students seeking a postbaccalaureate certification or an advanced degree were the focus of a study of two sections of the same graduate course, Contemporary Issues in Special Education (McGinley, Osgood, & Kenney, 2012). Students self-selected either an onground or online section of the course. The research analysis examined student satisfaction, student perceptions of higher order cognitive thinking, and student achievement. Students' satisfaction with course design and implementation was assessed by 13 quantitative questions. Independent sample *t*-tests

were conducted on all 13 questions. Most responses for both sections indicated that there was little room for improvement. Students' final grades were compared to determine if there were differences in student achievement. No differences were found in the analysis (McGinley, Osgood, & Kenney, 2012).

Another study examined the outcomes of a convenience sample of 30 students at a large university in a rural area in the Mid-Atlantic United States (Keramidas, 2012). Participants were enrolled in an onground and an online section of a behavior management course for students in the early childhood/early childhood special education dual certification program. Sixteen students were members of the onground section, and fourteen students were registered in the online class. Both sections of the course utilized essentially the same course materials. As the lecture was captured via Wimba Live Classroom[©], students experienced the same lecture. Assignments, quizzes, and the exam were identical. Out of a possible 450 points, the average points were 412.73 and 404.50 for onground and online students respectively. Thirteen onground students earned As; whereas, only seven online students earned an A. Fifteen onground students earned an A or B, and twelve online students earned an A or B. This was equivalent to 93.75% and 85.7% of onground and online students earning an A or B respectively (Keramidas, 2012). Inferential statistics for the study were not reported in the referenced article.

Methods

Pre-service teachers in a mid-sized, South-Central university in the U.S. were the subjects of research about valuing diversity (Pope & Wilder, 2005). The sample consisted of 236 female and 59 male students. The Valuing Diversity in Education Survey was uti-

lized to assess students' valuing diversity characteristic. The survey separated the pre-service teachers into High Value Diversity and Low Value Diversity groups. When participants were asked about personal interactions with diverse groups in social situations, including community, church, and social events, there was a significant difference between the High Value Diversity and the Low Value Diversity groups. Those high in valuing diversity reported slightly more interaction with diverse groups in church, $F(1,288) = 6.93$, $\eta^2 = .04$ and at social events, $F(1,290) = 11.20$, $\eta^2 = .04$. The greatest difference was found when asked about interaction with diverse others in parent-teacher meetings, $F(1,280) = 19.1$, $\eta^2 = .14$. High value diversity students also expressed a small, significantly greater interaction with diverse others in the student-teaching classroom, $F(1,290) = 4.93$, $\eta^2 = .04$, and in the student-teaching school, $F(1,291) = 6.67$, $\eta^2 = .04$ (Pope & Wilder, 2005).

A pre- and post-test experimental design was utilized to evaluate the effects of WebQuest learning in chemistry on the critical thinking dispositions and skills of students at Xidian Middle School, which is associated with Xidian University in the Shaanxi province of China (Zhou, Ma, Huang, Liang, Yue, & Peng, 2012). Fifty students, aged 16 and 17 years, participated. Students listened to lectures, took notes, sometimes asked questions, participated in discussions with each other, and worked through the WebQuest project. The California Critical Thinking Disposition Inventory (CCTDI) and the California Critical Thinking Skills Test (CCTST) were used to measure critical thinking dispositions and skills respectively. The CCTDI and CCTST were compared before and after the WebQuest project using a paired t-test analysis. CCTDI scores demonstrated a significant

increase, t = 3.950 ($p < 0.001$). Analysis of the CCTDI subscales (truth-seeking, analyticity, systematicity, self-confidence, inquisitiveness, open-minded, and maturity) demonstrated increases in all subscales but *open-minded* and *maturity*. CCTST results from pre- to post-test were also significantly increased, t = 2.859 ($p < 0.01$). Analysis of the subscales (analysis, evaluation, and inference) indicated that *analysis* and *evaluation* increased, but no significant differences were found with *inference* between the pre- and post-tests (Zhou, Ma, Huang, Liang, Yue, & Peng, 2012).

Data regarding students and instructors in adult business degree programs at five institutions of higher education was collected during a 60-day time period (Howell & Buck, 2012). The study of 1,725 students and 214 instructors identified four variables that explained 70% of an observed variance in student satisfaction: *relevancy of subject matter*, *faculty subject matter competency*, *general classroom management,* and *student workload*. Inter-item correlation matrices analyses and Cronbach alpha tests demonstrated satisfactory reliability for the primary data. Independent sample *t*-tests and univariate regression analyses were utilized when appropriate. Rejected hypotheses were subsequently studied using the nonparametric Spearman Rank Correlation Coefficient test. Even though five variables were initially identified as having statistically significant correlations with student satisfaction, a best-fit model eliminated one variable (Howell & Buck, 2012).

An online survey was administered to 168 undergraduate and 72 graduate business students at Gonzaga University regarding student satisfaction with online courses (Beqiri & Chase, 2009). Research questions examined satisfaction based on students' so-

ciodemographic status, education-related factors, and mode of course delivery: fully online compared to blended. The questionnaire collected information on students' demographic profile, perceptions about online and blended courses, and students' online experience. One-tailed t-tests, a paired samples t-test, an ANOVA F statistic, simple linear regression, and multiple regression were utilized to answer research questions. Analysis demonstrated that the profile of students who would be more satisfied with the online mode of course delivery was married graduate students who were male and resided off campus. Furthermore, students for whom distance education was attractive, who perceived online instruction to be an appropriate mode of learning in universities, and who had some background with regard to the course taken were students more likely to be satisfied with the online mode (Beqiri & Chase, 2009).

Research studying a sample of undergraduate and graduate students taking summer-session online courses offered by the College of Education at a Western university examined predictor variables of student satisfaction (Kuo, Walker, Belland, & Schroder, 2013). Data was collected by means of an online survey. With the help of the instructors of 11 online courses, the survey link was distributed to 291 students. A return rate of 38%, a total of 111 surveys, satisfied the requirements of a multiple regression model with 5 independent variables. The survey consisted of questions regarding demographics, five predictor variables, and student satisfaction. Previously developed instruments were utilized to measure Internet self-efficacy and self-regulation. Interaction and student satisfaction scales were modifications from an existing instrument developed by the authors of the study. The relationship between the three types of interactions and

student satisaction was determined by means of correlation analysis. The investigation into whether the five predictor variables significantly predicted student satisfaction was accomplished by multiple regression analyses. One-way ANOVA was utilized to test the effect of student background variables on the five predictors (Kuo, Walker, Belland, & Schroder, 2013).

A study at the University of Pittsburg's School of Information Sciences compared the student satisfaction of non-cohort, on-campus students with that of cohort-based online students (Alman, Frey, & Tomer, 2012). Thirty-six students, who were distributed almost equally between the two groups, participated in the research. All students were enrolled in the MLIS (Master's of Library and Information Science) degree program. A modified version of the *Community of Inquiry* survey was administered anonymously online using Survey Monkey. A reminder followed the initial electronic survey distribution. Survey questions were classified into five categories: Teaching Presence, Social Presence, Cognitive Presence, Online Course Experiences, and Demographics. A high response rate provided sufficient data for analysis and comparison to establish the perceived level of satisfaction of students in the two groups. Baseline data was collected by means of basic statistical measurements. Moreover, the size and equal distribution of the sample between the two groups allowed for the utilization of nonparametric testing. The two groups were compared using the Wilcoxon Mann-Whitney nonparametric test. Statistically significant differences between the non-cohort, on-campus and cohort-based online students were found in the responses for 26 of the 43 questions that pertained to Teaching Presence, Social Presence, and Cognitive Presence. Significance was defined as

p < 0.05. The analysis of data gathered demonstrated strong ties among cohort members. Results showed significant differences in the manner that non-cohort and cohort students perceive social presence, teaching presence, and cognitive presence. The cohort-based learning community in the study had a positive influence on Teaching Presence, Cognitive Presence, and Social Presence. Moreover, cohort members showed higher perceived satisfaction than the non-cohort, on-campus participants (Alman, Frey, & Tomer, 2012).

A study at a medium-sized Midwestern state university was designed to determine the significant variables for retention in online courses by asking questions listed on an online course survey (Herbert, 2006). The Noel-Levitz Priorities Survey for Online Learners™ (PSOL) was utilized to establish which of the surveyed institutional predictor variables are most influential in predicting whether a student is retained in an online course (Herbert, 2006).

The survey was sent to students who took an online course twice during the fall semester of 2005 (Herbert, 2006). The initial survey was sent out in an electronic format using the Internet. It was completed online and returned directly to the Noel-Levitz Corporation. Students not responding to the online survey were later sent a survey using a paper format along with a stamped return envelope. In total, 25.1% of students taking an online course in the fall of 2005 returned surveys. Student expectations was the focus of one of two capstone questions in the survey. Institutional predictor variables were rated on a scale of 0 (not important at all) to 7 (very important) with regard to their importance and satisfaction levels. Mean values of the importance of various institutional variables were rated and ranked by level of importance. Furthermore, mean values of selected

variables were ranked in descending order by level of satisfaction. An independent samples *t*-test was completed on the overall satisfaction level to determine if there was a significant difference between the means of students who did not successfully complete their online course and those who did. The analyses of the research data indicated that students are more likely to retain their online course if they are more satisfied with the experience. Students who did not complete their online course had a significantly lower level of their expectations met by their experience in the course than those students who completed. Students who had expectations consistent with their course experience successfully completed their online course. Neither completers nor non-completers ranked their overall experience exceptionally high. However, the study demonstrated that almost without exception, successful completers were more satisfied with all aspects of the course than non-completers. In addition, a Chi-Square Goodness of Fit test on four possible reasons for non-completion of course based on the responses to the final demographic question on the survey showed that the primary reason students did not retain their online course was due to time commitments (Herbert, 2006).

The persistence of students within certain academic disciplines was the focus of a study in the College of Education and Psychology at a Southern research-intensive university (Roberts & Styron Jr., 2009). Students completed a survey instrument during the latter half of the spring 2008 semester which measured their perceptions of academic advising, social connectedness with other students, involvement/engagement, faculty approachability, learning experiences, and departmental business procedures. About one month into the fall 2008 semester, enrollment status data on the students who completed

the previous survey were collected. Scores from those returning to their majors and those who did not return or changed majors to another major outside of the university's College of Education and Psychology were compared to determine if differences existed between them for the six constructs measured by the questionnaire. Mulivariate analysis of variance (MANOVA) was utilized to see if statistically significant differences existed between any of the dependent variables based on both of the groups. Box's and Barlett's tests were done and demonstrated no homogeneity of variances issues for the two groups. The findings of the MANOVA test were confirmed by a discriminant function analysis. It further served to predict group membership. The MANOVA results indicated a statistically significant difference between the two groups. Statistically significant results resulted from the discriminant function analysis as well. The study results indicated that students not returning for the Fall 2008 semester or changing majors to another area had statistically significant lower perceptions of social connectedness and satisfaction with faculty approachability than students who did return. Social connectness was the best predictor of persistence, and satisfaction with faculty approachability was the second best predictor (Roberts & Styron Jr., 2009).

A study at a state-supported Western university looked at the effectiveness of traditional versus online learning environments by examining learning outcomes for an educational technology integration course for pre-service education students (Smith, Smith, & Boone, 2000). All students were undergraduate elementary education, secondary education, or special education majors. The course was offered in education computer labs in two formats. One course was delivered traditionally; the other was delivered online. This

study specifically looked at the effectiveness of three traditional instruction methods: lectures, guided instruction, and collaborative discussion in the online environment compared to the traditional classroom. Pretest and posttest data for each instructional method was analyzed using a 2 X 2 repeated-measures ANOVA and t-tests (Smith, Smith, & Boone, 2000).

A study at the University of Montana-Missoula investigated student personality traits and learning preferences in relation to their perceptions of online learning (Kelly & Schorger, 2002). Students in two sections of a teacher education course were test subjects. One section was delivered for eleven weeks by traditional means. The second section received one weekly session by means of computer-mediated communication during weeks eight through eleven. The first seven weeks were delivered traditionally. Analysis determined no significant difference between face-to-face and online learning outcomes by comparing group mean achievement scores for exams and research papers (Kelly & Schorger, 2002).

A comparison of online versus face-to-face learning for third-year medical students taking a diabetes management course at Boston University School of Medicine was the objective of another study (Wiecha, Chetty, Pollard, & Shaw, 2006). Three integrated activities were included in the online course: self-study modules, a patient case study, and a moderated discussion board used to post and discuss patient care plans. The online curriculum was compared to small-group case-based face-to-face sessions with a faculty facilitator. A test case was completed by students before and after the course. In addition to comparing overall pre- and posttest case scores, a subset analysis was conducted on

interventions not ordered on the pretest in order to measure what proportion was subsequently ordered correctly on the posttest case. The Mantel-Haenzel procedure was used to test the effectiveness of the intervention (Wiecha, Chetty, Pollard, & Shaw, 2006).

A study which compared students enrolled in both traditional classroom and online versions of a business law course found no significant difference in either student satisfaction or student learning (Shelley, Swartz, & Cole, 2007). All elements of the two versions of the course were identical with the exception of mode of instruction. The same instructor taught each section, and used the same textbook, readings, projects, activities, exams, and assessments. Comparative data was taken from two traditional sections and four online sections of the course over several years. A 24-question satisfaction survey that utilized a five-point Likert scale was adminstered by the instructor after grading was completed. Student participation was voluntary. Student responses from all sections were aggregated and analyzed both qualitatively and quantitatively. An independent-samples *t*-test was run using SPSS for data analysis. "Satisfaction" was defined as having met expectations as evidenced by student responses to the survey, and "Learning" was defined as having acquired knowledge of the subject matter as demonstrated by course grades. Though the study found no statistically significant differences between the two formats with regard to any of the research questions which covered student satisfaction and learning, student satisfaction was slightly higher with the course overall and with the instructor in the traditional format and slightly higher with the course structure in the online format (Shelley, Swartz, & Cole, 2007).

In order to examine learning in online versus traditional courses with students enrolled in a master's degree program in education at a public institution in the Southwest, three face-to-face courses were compared to three traditional ones over a two-year period (Kirtman, 2009). The traditional classes consisted of small and large group work and discussions, direct instruction utilizing PowerPoint slides, and in-class writing activities. The online classes included the following instructional methods: small and large discussion board activities, small group and individual activities, written activities submitted via email, and direct instruction using the same PowerPoint slides from the traditional mode of instruction with audio voiceovers from the lectures presented to the in-class students. The online course elements were offered asynchronously. The instructor was the same for both formats, the same evaluator was utilized, and instruction was matched in every way with the exception that students were required to complete their work online or in class (Kirtman, 2009).

Descriptive and inferential statistics were used to analyze data: means, standard deviations, Pearson correlation tests, and independent t-tests for independent samples (p <.05) for determining significance when comparing scores on the written work and the exams (Kirtman, 2009). No significant difference was found between the two groups of students in analyzing paper grades. A significant difference was found when the results from the exams were analyzed. Traditional students scored higher on the mid-term exam. However, the t-test did not indicate a significant difference between groups on the final exam. Student survey data showed that students felt there was no difference in learning with regard to mode of instruction. The difference in mid-term exam scores may have

been more of an adjusting to online learning issue than the notion that online classes are inferior to traditional classes in terms of learning outcomes. Survey data indicated that the most important characteristic of teaching and learning online is the small and large group discussions and that instructor and student interaction are important elements of the learning process. Furthermore, student survey answers were so overwhelmingly positive regarding online classes, indicating great satisfaction, that students' increased satisfaction and motivation may have contributed to their learning (Kirtman, 2009).

Summary

This review has initially examined the six pivotal principles of EfHG from the literature. Subsequently Stoddard's explanation of EfHG including the *seven dimensions of human greatness* was discussed. This was followed by some examples of EfHG in practice. Literature regarding academic performance, student retention, student satisfaction, mode of course delivery and related outcomes, and some of the pertinent methods utilized in the cited studies concluded the review.

CHAPTER III

METHODOLOGY

The purpose of this study was to determine if there were statistically significant differences of academic performance and student satisfaction between students treated with EfHG-inspired strategies and comparison groups in a two-year community college course. The research design held institutional variables and the instructor constant while student satisfaction and academic performance were measured in four different groups. The study attempted to determine the usefulness of the course designs influenced by the Stoddard model (2010). The study also examined the differences in satisfaction and academic performance when using onground and online modes of delivery.

This chapter includes a description of the research design of a study of the principles of marketing course at a Southeastern community college. The population and sample, the instruments used, method of data collection, ethical issues, hypotheses, data analysis, and course designs are also covered. The research design section will explain the type of design and will discuss the various independent, dependent, and intervening variables of the study. The population examined as well as type and size of sample will be the next topic. This will be followed by a discussion regarding the instruments and tests used for data collection. Test and survey reliability and validity will be incorporated in this part of the chapter. Data collection procedures and timelines comprise the subsequent section. This will be followed by a brief treatment of ethical issues related to the study.

The hypotheses that were analyzed in the study make up the next segment. Data analysis of the study will be explained, including the software that was utilized, descriptive statistics, the use of parametric or non-parametric tests, and the specific tests that were run for each hypothesis. Last, the differences between the pedagogy used in the comparison and treatment sections will be explained.

<div align="center">**Research Design**</div>

This is a quantitative study utilizing quasi-experimental research. Gall, Gall, and Borg (2003) explained that experimental research studies offer the most rigorous test of causal hypotheses. Correlational and causal-comparative designs are able to suggest causal relationships between variables; whereas, experimentation is required to determine whether the observed relationship is one of cause and effect. The study employed a pretest-posttest comparison-group design for the dependent variable, academic performance, and a posttest-only comparison-group design for a second dependent variable, student satisfaction (Gall, Gall, & Borg, 2003).

A pretest-posttest comparison-group design was utilized to evaluate the effects of WebQuest learning in chemistry on the critical thinking dispositions and skills of students in China as described in the review of literature (Zhou, Ma, Huang, Liang, Yue, & Peng, 2012). Pretest and posttest learning outcomes data were analyzed as well at a state-supported Western university when examining the effectiveness of traditional versus online learning environments (Smith, Smith, & Boone, 2000). The review of literature also found the comparison of pre- and posttest case scores in a study of the comparison of online versus face-to-face learning for third-year medical students taking a diabetics

management course at Boston University School of Medicine (Wiecha, Chetty, Pollard, & Shaw, 2006).

Independent Variable

The independent variable considered was course design. Two of the four designs were developed by the researcher for the most part from concepts found in the writing of Lynn Stoddard (2010).

Dependent Variables

This study defined student academic performance and student satisfaction as dependent variables. Student academic performance was measured by the score on a final exam that covered standard course learning objectives over the second half of the course, adjusted by the score on a pretest that covered course learning objectives for the complete course. Student satisfaction was measured by a custom satisfaction index made up of 23 aspects of satisfaction.

Intervening Variables

Institutional variables and the instructor influenced student satisfaction and academic performance. These factors were regarded as intervening variables in the study and held constant. Another important intervening variable was mode of course delivery. Students were enrolled in both onground and online sections of the course.

<div align="center">

Population and Sample

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Community colleges serve as a portal for many students into higher education (Bueschel, 2003). Numerous students would have been denied access to higher education if not for community colleges (Kasper, 2002). Forty-three percent of the undergraduate

students in the United States are served by community colleges (The White House, 2011). Community college students represent a disproportionate percentage of low-income, minority, non-traditional, working, parent, and first generation students. The commitment to being open access institutions has characterized community colleges (Bueschel, 2003). As a result community colleges admit students from all backgrounds. Community colleges offer a wide range of academic, service, and training functions and change regularly to respond to the needs of the community. The mission of community colleges is debatable. Advocates argue that community colleges should continue offering a wide, and frequently growing, set of services and programs. Some critics contend that community colleges should limit their focus and provide enhanced service in fewer areas (Bueschel, 2003).

Community colleges have been more responsive to the workforce needs of communities than any other segment of postsecondary education (Kasper, 2002). Students can learn during any phase of their lives while taking advantage of convenient locations, low tuition, comprehensive course offerings, and open admissions. Community colleges provide associate degrees that train students for careers. Increasingly, community colleges offer career training by means of vocationally oriented courses that lead to a certificate (Kasper, 2002). In addition, community colleges work with industry, businesses, labor, and government to create customized training programs to meet specific economic needs (The White House, 2011). Community colleges also grant two-year associate degrees that consist of traditional college-level courses that prepare students for additional study toward a bachelor's degree (Kasper, 2002).

The primary population of the study was business management students working on the A.A.S. degree in Business Management at a Southeastern community college. The Office of Planning and Assessment at the college (2013) reported that this population consisted of 393 part-time and 170 full-time students on April 1, 2013 (Office of Planning and Assessment, 2013). The study covered two consecutive semesters: fall 2012 and spring 2013. One onground and one online section was studied each semester. The EfHG sections were studied during fall 2012. Non-EfHG sections were studied during spring 2013.

Students self-selected the sections they wanted to attend. This self-selection mirrored the normal selection procedure and represented a convenience sample. The sample size was approximately equally divided between modes of delivery and totalled sixty-seven students. This was approximately 12 percent of the population. A small percentage of the students who took the studied course were not part of the primary population. Some few students take the course as a prerequisite to study in a Masters of Business Administration program while others take the course because of personal interest or by mistake.

Instrumentation and Data Collection

Data for the study was collected from institutional student information, course test scores, as well as a custom online student satisfaction questionnaire developed by the researcher. Academic performance was measured by the score on a final exam that covered standard course learning objectives over one-half of the course, adjusted by the score

on a pretest that covered course learning objectives for the whole course. These test scores were collected from course records.

Student participants were required to read an informed consent document and choose whether or not to answer a student satisfaction questionnaire before they were permitted to take their final exam. The questionnaire was introduced by the statement of informed consent. Of the seventy-two students who were given the opportunity of participating in the study, five chose not to participate. In addition to demographic questions the student satisfaction survey consisted of twenty-three questions that were answered based on students' expectations. Questions were answered using a Likert-type scale ranging from 1 to 5. "Much less than expected" is equal to 1; "less than expected" is equal to 2; "met expectations" is equal to 3; "more than expected" is equal to 4; and "much more than expected" is equal to 5 on the scale. The questions were chosen based on responses to a satisfier survey given to students in five Business Management program course sections, both online and onground, totalling sixty-five students during the fall 2010 semester. One of the courses was 100% onground. Another course was a hybrid course that split classtime half and half between online and onground, and three classes were 100% online.

The satisfier survey consisted of 38 questions under consideration and mirrored the satisfaction survey. The questions were asked differently, however. A similar five-point Likert-type scale was used. Students were asked to respond according to how they felt. To illustrate, a question on the satisfier survey was: "I like for my instructors to demonstrate the importance and significance of the subject matter." Answers ranged from

"Strongly Disagree" to "Disagree" to "Neutral" to "Agree" and finally to "Strongly

Agree." On the satisfaction survey students were asked to rate various aspects of the

course with regard to their expectations. The first aspect, which corresponds to the above

question on the satisfier survey, was "Your instructor's ability to demonstrate the

importance and significance of the subject matter." As already explained, students

answered from "much less than expected" to "much more than expected." The satisfier

survey served to identify the 23 most-satisfying aspects of a college course out of the 38

choices that were being considered. The thirty-eight aspects were taken from the student

satisfaction survey currently in use at the community college that is given to graduating

Business Management students, and the IDEA (2008) student evaluation of faculty

survey used at the college for all modes of course delivery in all divisions. The 23 aspects

of a college course that made up the student satisfaction survey follow:

1. Your instructor's ability to demonstrate the importance and significance of the subject matter
2. Your instructor's ability to introduce stimulating ideas about the subject
3. Your instructor displayed a personal interest in students and their learning
4. Your instructor explained the reasons for criticisms of students' academic performance
5. Your instructor found ways to help students answer their own questions
6. Your instructor related course material to real life situations
7. Your instructor made it clear how each topic fit into the course
8. Your instructor explained course material clearly and concisely
9. Your instructor scheduled course work (class activities, tests, projects) in ways which encouraged students to stay up-to-date in their work
10. Your instructor gave tests, projects, etc. that covered the most important points of the course
11. Your instructor provided timely and frequent feedback on tests, reports, projects, etc. to help students improve
12. The quality of instruction in this course
13. Your overall educational experience in this course
14. How well this course prepared you for employment

15. How well this course provided learning experiences which allowed you to learn and grow as a person
16. How well this course provided learning experiences which allowed you to lead or guide others
17. How well this course provided learning experiences which allowed you to gain self-confidence in expressing your ideas
18. How well this course provided learning experiences which allowed you to plan and carry out projects
19. How well this course provided learning experiences which allowed you to think critically
20. How well this course provided learning experiences which allowed you to speak effectively
21. How well this course provided learning experiences which allowed you to write effectively
22. How well this course provided learning experiences which allowed you to understand written information
23. How well this course provided learning experiences which allowed you to define and solve problems

Refer to Appendix A to see the informed consent document and questionnaire. The custom questionnaire was administered as a pilot to thirty-one students taking the marketing course at the community college during the fall 2010 semester. Fifteen of the students were participants in the onground section. Sixteen were in the online section. A Chronbach's Alpha score of reliability was calculated to be .98 for the student satisfaction index using SPSS for Macintosh, Version 19. Three surveys were excluded because of missing information. An alpha value greater than .9 indicates excellent reliability (George & Mallery, 2003).

During the actual study the custom questionnaire was tested for reliability for 62 valid cases. A Chronbach's Alpha score of reliability was calculated to be .979 for the student satisfaction index using IBM SPSS for Macintosh, Version 21. Five surveys were excluded because of missing information.

The validity of the satisfaction scale was confirmed in two ways. First, 38 aspects of a college course were narrowed down to 23 based on the degree that students liked the various aspects as determined by the satisfier survey as explained above. A particular aspect was included in the scale only if 80% or more of the students either *agreed* or *strongly agreed* that they liked that aspect. The content validity of the 23 aspects was also confirmed by a professor in the Business Management program at the Southeastern community college where the study occurred.

Data Collection Procedures and Timelines

The pretest was taken early in the semester before much course content had been covered. Students were permitted to take the timed pretest online at home. However, they were required to submit a pledge that they did not receive assistance from anyone else, their textbook, or another source. The posttest was a proctored final exam. Both exams covered standard course learning objectives. Exam questions were taken at random from the same test bank, which was written by the researcher to correlate to course learning objectives and a study guide. Though some of the same questions may have appeared on both exams, the order was varied.

The satisfaction survey was administered using the Desire2Learn course management system at the end of the semester. Students were required to take or choose not to take the survey in order to gain access to the online, proctored final exam.

Ethical Issues

The research was approved by the Institutional Review Board (IRB) of Tennessee State University in September 2012 as well as the college's IRB (see Appendix B and

Appendix C). Each participant in the study was informed by an informed consent document that introduced the end-of-course online survey regarding what would occur during the study, the information that would be disclosed to the researcher, and the intended use of the data to be collected (Gall, Gall, & Borg, 2003). A student's information has been used only if permission was granted. Furthermore, participants were not asked to do anything in the study that was injurious to them. Students participated in regularly scheduled classes within normal parameters. Nevertheless, privacy and confidentiality of student data was maintained throughout the study and will continue to be maintained in the future.

Hypotheses

The following null hypotheses were tested at the 0.05 level of significance:

- H_{01}: There is no difference between the academic performance of students treated with educating for human greatness (EfHG) strategies and non-EfHG comparison groups.

- H_{02}: There is no difference between the student satisfaction of students treated with EfHG strategies and non-EfHG comparison groups.

- H_{03}: There is no difference between the academic performance of students treated with EfHG strategies and a non-EfHG comparison group using the onground mode of delivery.

- H_{04}: There is no difference between the student satisfaction of students treated with EfHG strategies and a non-EfHG comparison group using the onground mode of delivery.

- H_{05}: There is no difference between the academic performance of students treated with EfHG strategies and a non-EfHG comparison group using the online mode of delivery.

- H_{06}: There is no difference between the student satisfaction of students treated with EfHG strategies and a non-EfHG comparison group using the online mode of delivery.

Data Analysis

The statistical software used for the data analysis was IBM SPSS for Macintosh, Version 21. An overview of the sample using descriptive statistics introduces the analysis. These statistics include gender, age, ethnicity, student status (part-time, full-time, or dual-enrollment), student-reported grade point average (GPA) for college-level courses taken at the community college, highest level of academic achievement, employment status, and annual income.

The dependent variables in the sample were next tested for skewness. Skewness between -1 and +1 will indicate a normal distribution and allow for parametric tests (George & Mallery, 2003). Skewness outside of this range would indicate a need to utilize non-parametric testing. The discussion below correctly assumes that all dependent variables passed the skewness test and were normally distributed.

A series of chi square tests were conducted on the various categories that described the student characteristics in the various comparison groups to ensure that the hypothesis testing results were not significantly being affected by these intervening variables. If a descriptive variable was found to be significantly different among the

comparison groups, further testing was conducted to determine if students described by this variable had significantly different pretest, posttest, or satisfaction scores. If so, the descriptive variable was taken into account during the hypothesis testing.

The chi square test was used in a study at a medium-sized Midwestern university discussed in the review of literature (Herbert, 2006). This test was utilized to determine whether any of the four possible reasons for non-completion of course based on responses on a survey were significant.

First Null Hypothesis

The first null hypothesis was initially tested using a posttest-only control-group design. This test was followed by a pretest-posttest control-group design. A posttest-only control-group design was preferable if there were no pretest data available and if a large sample of students were assigned to experimental and control groups randomly (Gall, Gall, & Borg, 2003). Inasmuch as this study collected pretest data, the sample of students was not particularly large, and a convenience sample was utilized, a pretest-posttest control-group design was preferable. Last, the pretest-postest control-group design testing was extended to control for possible intervening variables and mode of course delivery.

The statistical method chosen to analyze the posttest-only control-group design was one-way analysis of variance (ANOVA). The method utilized for the pretest-posttest control-group design was analysis of covariance (ANCOVA). This was the preferred statistical method for this type of design, where the posttest means of the control and experimental groups were compared and the pretest scores were used as a covariate (Gall, Gall, & Borg, 2003). ANCOVA adjusted the posttest scores of the non-EfHG and EfHG

groups for differences on the pretest without regard for mode of course delivery. Next, ANCOVA was utilized again controlling for any significant intervening variables and the onground and online modes.

An ANOVA *F* statistic was one of several methods chosen in a Gonzaga University study in the review of literature (Beqiri & Chase, 2009). An online survey collected information regarding student satisfaction with online courses based on sociodemographic status, education-related factors, and mode of course delivery. The literature review also discussed a research study which utilized one-way ANOVA to test the effect of student background variables on five predictors of student satisfaction (Kuo, Walker, Belland, & Schroder, 2013).

Second Null Hypothesis

For the second null hypothesis, the first test was one-way analysis of variance (ANOVA). Differences in student satisfaction among students treated with EfHG strategies and comparison groups was determined without regard for mode of course delivery. Next, ANCOVA was conducted to test differences while controlling for any significant intervening variables as well as for mode of course delivery.

Third Null Hypothesis

The third null hypothesis was tested using both posttest-only control-group and pretest-posttest control-group designs. The statistical method chosen to analyze the posttest-only control-group design was one-way ANOVA; whereas, ANCOVA was used for the pretest-posttest control-group design. The academic performance of students treated with EfHG strategies was tested against the performance of the non-EfHG group.

The statistical test was run only for students in the onground mode of delivery. An additional ANCOVA test was conducted to control for any significant intervening variables if found.

Fourth Null Hypothesis

One-way ANOVA was conducted for the fourth null hypothesis to test student satisfaction in the EfHG and the non-EfHG groups for onground students. Afterwards ANCOVA was used to test student satisfaction in the two groups while controlling for significant intervening variables if found.

Fifth Null Hypothesis

The fifth null hypothesis was tested using both posttest-only control-group and pretest-posttest control-group designs. The statistical method chosen to analyze the posttest-only control-group design was one-way ANOVA; whereas, ANCOVA was used for the pretest-posttest control-group design. The academic performance of students treated with EfHG strategies was tested against the performance of the non-EfHG group. The statistical test was run only for students in the online mode of delivery. An additional ANCOVA test was conducted to control for any significant intervening variables if found.

Sixth Null Hypothesis

The last hypothesis was tested using one-way ANOVA to test for differences of student satisfaction in the EfHG and the non-EfHG groups for online students. Afterwards ANCOVA was used to test student satisfaction in the two groups while controlling for significant intervening variables if found.

Course Designs

There were four separate course designs found in the study: onground EfHG, online EfHG, onground non-EfHG, and online non-EfHG. An attempt was made to make the onground and online EfHG designs equivalent. Similarly the non-EfHG onground and online designs were constructed to be alike. The nature of onground and online modes of delivery, however, were so different that there were actually four distinct course designs. Refer to the Course Designs table that follows (Appendix D) for a quick reference to the four course designs.

EfHG Designs

Two course designs were influenced by Stoddard's Educating for Human Greatness concepts. However, no single part of these designs was particularly remarkable. Most, if not all, of the elements of the EfHG designs have been utilized before by others. Nevertheless, the purposefulness with regard to EfHG and phd and the combination of course components may be somewhat unique.

The concepts of EfHG have primarily been developed for K-12 education. They emphasize the individual student's freedom of choice. The curriculum is student-centered; and a variety of learning activities are applied in order to promote the seven dimensions of human greatness, enabling the student to become a contributor to society. Curriculum is a means to the end of human greatness, societal contribution and positive diversity, rather than the aim of education itself. Figure 1 illustrates this.

For maximum effectiveness, Educating for Human Greatness should be implemented throughout an educational institution. The administration, faculty, and staff

should all support this student-centered approach. In addition, students' families would play an integral participatory role in the implementation of this method. A comprehensive EfHG strategy would perhaps more easily be accomplished at the primary and secondary levels. However, it is not inconceivable that a college program could successfully design its curriculum to highlight and emphasize EfHG.

This study applied EfHG principles to one course in higher education without the benefits associated with a more general employment in the organization. Fortunately, students in college typically select courses of study they have chosen to take themselves. There may be required courses that students abhor, but choice is inherently built into the college academic experience. The EfHG course designs utilized in this study attempted to provide student choice within a particular course and promote the seven dimensions and positive diversity while achieving the course's standardized learning objectives. Though Stoddard might consider this a timid approach, it is a practical one which served to satisfy organizational requirements, as well as give students the opportunity to be themselves and develop their own unique talents and abilities during part of the course. The researcher took care to do this in a way that did not surpass the student's workload capacity.

Onground EfHG Course Design.

The academic content aims or learning objectives for this design were for exposure and fluency over the standard curriculum as in the non-EfHG designs explained below as well as enhanced fluency over parts of the standard curriculum as chosen by students. In addition, mastery of the student's chosen curriculum was the culminating aim

of the design. The curriculum that students chose to master fell within the curriculum universe of the academic discipline, but could fall outside of the learning objectives of the standard curriculum. See Figure 2 and Figure 3.

In this design students were exposed to content exactly as in the onground and online non-EfHG designs. This was accomplished by reading the textbook, completing online lessons, taking optional extra credit online chapter quizzes, and taking required online review tests. Questions were taken from the textbook publisher's test bank. Quizzes and review tests were not proctored and could be taken mulitiple times until their deadlines. Students were given their highest score. Students also could read and study the textbook publisher's PowerPoint slides that were made available online.

Students could progress to fluency as they worked in groups during class to inquire together regarding key standard concepts that required fluency. Students optionally reported their findings to the class and were given extra credit for presenting. Each student in every group had the opportunity to present at least part of the group's report. Each group member worked together to assign presentation duties. This was called the Mini Great Brain Presentation. The instructor did not relinquish his responsibility to ensure that key concepts were presented properly. He at times expanded upon, clarified, or otherwise modified the information transferred during the student presentations as they were given. Furthermore, he later reviewed the key concepts covered during student presentations by means of a mini-lecture. This served to activate and reinforce memories of the previous presentations in preparation for covering new ground. This method of presenting key concepts and principles agrees with the idea of

helping students develop the dimensions of human greatness so that they can become contributors to society. The curriculum is the tool. The instructor already knows the curriculum. Classtime was utilized to assist students to become engaged in class activities and to cultivate their abilities and talents. A minority of the key concepts were only presented by the instructor as in the non-EfHG onground course design when necessary to stay current with the class schedule.

In addition, students interacted online using a discussion board regarding their inquiries concerning key standard concepts in order to become fluent. These were called Mini Great Brain Discussions and were for credit.

Students could continue their quest for fluency as they prepared for proctored mid-term and final exams that were taken from the instructor's test bank. The test bank was written using the instructor's study guide as a reference. The study guide was developed with the aim of covering principles and concepts that require fluency within the course learning objectives.

Enhanced fluency was achieved in areas of the student's choosing within the standard curriculum. The first means of enhancing fluency was achieved by allowing students to select one of four possible areas of concentration in the course: Product, Price, Promotion, or Place. Three chapters from the textbook were assigned to each concentration. Students took a proctored concentration exam by the end of the semester. Questions were taken from the instructor's test bank for the three chapters respectively. The study guide provided for the mid-term and final exams was utilized for the chosen concentration. For grading purposes, the concenration exam was weighted a little more

than the mid-term and final exams. The concentration exam covered only the key concepts for three chapters; whereas the mid-term and final exams covered the salient principles of nine chapters for each exam. In this way the student's area of concentration was given added value, albeit the area resided within the standard course-level learning objectives. Students were able to "profit" from enhancing their fluency in an area of preferred interest.

The second method that students could utilize to enhance fluency in the standard curriculum was the TV advertisement assignment. A modicum of choice was involved, inasmuch as students chose which advertisement they wanted to analyze. This assignment covered a key area of the standard marketing curriculum, promotion and advertising, and supported the EfHG concept by addressing the dimension of Intuition: the attempt to develop and nurture insight, emotional intelligence, and recognition of truth with the heart. The assignment is found in Appendix E.

The goal of the Great Brain Project was a level of mastery in an area of the curriculum universe of the student's choosing. The topic could fall within or outside of the standard curriculum. The Great Brain Project was described earlier. Students chose a topic of study and proceeded until they reached one of four levels of knowing: Specialist, Expert, Mastermind, or Genius—in hierarchichal order. A research partner was chosen from parents, relatives, peers, or subject matter experts in the community. Inquiry methods were utilized. Creativity and originality were required. Students ultimately prepared and posted a Great Brain Presentation online. Some students volunteered to present in class. Students also were required to submit a project paper to the instructor.

The project grade was weighted greater than the sum of the mid-term and final exams. Instructions for the project and the project's grading rubric are found in Appendix F and Appendix G respectively.

Online EfHG Course Design.

The academic content aims or learning objectives for the online EfHG design were identical to those of the onground EfHG course design. Nevertheless, the means of reaching these goals were not entirely identical. Students were exposed to content as in the previous course design. Furthermore, the method of attaining enhanced fluency was the same as in the onground EfHG design. Though an attempt was made to accomplish fluency and mastery in a similar fashion as the onground EfHG design, the methods varied slightly.

The online EfHG design provided no lecture to help students become fluent in the curriculum. In addition, students did not meet face-to-face in the online design. Therefore, the optional in-class Mini Great Brain Presentations found in the onground EfHG design were replaced by optional online Mini Great Brain Presentations on a discussion board. The online Mini Great Brain Presentation lacked the give and take of the in-class group discussions and the instant feedback from the instructor. Presentations or explanations were posted individually by students for extra credit. Students were given additional extra credit when they posted audio or video presentations in addition to written explanations of key concepts found in the exam study guide. Additional fluency could be reached when students interacted online using a discussion board regarding their inquiries concerning key standard concepts. These required activities were called Mini

Great Brain Discussions and were for credit. They were identical to the online Mini Great Brain Discussions that were included in the onground EfHG course design and both of the non-EfHG designs.

Students could also achieve fluency by preparing for proctored mid-term and final exams that were taken from the instructor's test bank. The test bank for all four course designs was written using the instructor's study guide as a reference. The study guide was developed with the aim of covering principles and concepts that require fluency within the course learning objectives.

The aim of mastering a chosen marketing topic of particular interest to the student which could be outside of the standard curriculum was one purpose of the Great Brain Project. The project requirements and logistics for the online EfHG course design were almost identical to those of the onground design. However, there was one primary difference. No students were given the opportunity of presenting their project in person.

EfHG Aims and Methods.

The EfHG aims for both onground and online course designs in addition to meeting standard course learning objectives were to educate for societal contribution and positive diversity by helping students grow in seven dimensions: Identity, Inquiry, Interaction, Initiative, Imagination, Intuition, and Integrity. The curriculum was the tool. Identity could be cultivated during class introductions, the online Ice Breaker exercise, choice of an area of concentration, the Great Brain Project, and the TV advertisement assignment. Identity also came into play when students decided whether or not they would choose to participate in an optional course activity.

The Mini Great Brain Presentations and Discussions over standard learning objectives gave students the opportunity to develop their Inquiry abilities. The Great Brain Project served to provide a culminating exercise where Inquiry played a principal role.

Interaction was promoted during the Mini Great Brain Presentations and Discussions and the Great Brain Project. Class introductions, the online Ice Breaker exercise, and class attendance advanced Interaction as well. When possible, the instructor supported Interaction by emphasizing cooperation, kindness, and respect over competition during the semester.

The utilization of active learning, choice, inquiry, and self-directed learning were designed to help to improve Initiative. The Mini Great Brain Presentations and Discussions, choice of concentration, the Great Brain Project, and Self-Evaluation all played a part in increasing the dimension of Initiative. In addition, all optional course activities included an Initiative component.

Imagination was required for creating an original product in the Great Brain Project. Moreover, some imagination could be utilized for Mini Great Brain Presentations and Discussions as well as class introductions and the online Ice Breaker exercise.

The attempt to develop and nurture insight, emotional intelligence, and recognition of truth with the heart—or Intuition (Stoddard, 2010) was explicitly addressed by means of the TV advertisement analysis assignment. Intuition could also be developed as students read and studied various ethical issues and dilemmas found in the course content.

Integrity, the seventh dimension of human greatness, was hopefully fostered when students evaluated themselves at the end of the semester with their Self-Evaluation, where they evaluated their own performance with regard to the seven dimensions of human greatness, and when they evaluated themselves and their classmates' performance on the Great Brain Project. Ideally, students took the opportunity to compare their evaluation of themselves, their classmates' evaluations of them, and their instructor's evaluation of their project. The various growth methods found in the EfHG designs as well as an outline of the four course designs are detailed in Appendix D.

Onground Non-EfHG Course Design

The academic content aims or learning objectives for this design were for exposure and fluency. Students were exposed to more content than they were expected to be able to work with fluently; however, all exposed content fell under the course-level learning objectives umbrella. Students who achieved fluency met the standard course-level objectives. Exposure content was broader than fluency content.

In this design students were exposed to content by reading the textbook, completing online lessons, taking optional extra credit online chapter quizzes, and taking required online review tests. Questions were taken from the textbook publisher's test bank. Quizzes and review tests were not proctored and could be taken mulitiple times until their deadlines. Students were given their highest score. Students also could read and study the textbook publisher's PowerPoint slides that were made available online.

Fluency is an additive process. In addition to the exposure methods, students could progress to fluency as knowledge was transferred to them using traditional lecture

of key standard concepts by the instructor. The instructor utilized PowerPoint slides and a white board to accomplish this along with some class discussion. Students also could become more fluent by participating in required online discussions (Mini Great Brain Discussions). Last, students achieved fluency by preparing for proctored mid-term and final exams that were taken from the instructor's test bank. The test bank was written using the instructor's study guide as a reference. The study guide was developed with the aim of covering principles and concepts that require fluency within the course learning objectives.

Online Non-EfHG Course Design

The academic content aims or learning objectives for this design were for exposure and fluency as well. Students were exposed to more content than they were expected to be able to work with fluently; however, all exposed content fell under the course-level learning objectives umbrella. Students who achieved fluency met the standard course-level objectives. Exposure content was broader than fluency content.

In this design students were exposed to content by reading the textbook, completing online lessons, taking optional extra credit online chapter quizzes and taking required online review tests. Questions were taken from the textbook publisher's test bank. Quizzes and review tests were not proctored and could be taken mulitiple times until their deadlines. Students were given their highest score. Students also could read and study the textbook publisher's PowerPoint slides that were made available online.

Students could progress to fluency as they continued with the exposure methods. There was no lecture. Students also could become more fluent by participating in

required online discussions (Mini Great Brain Discussions). Students could achieve fluency by preparing for comprehensive proctored mid-term and final exams that were taken from the instructor's test bank. The test bank was written using the instructor's study guide as a reference. The study guide was developed with the aim of covering principles and concepts that require fluency within the course learning objectives.

Key Distinguishing Course Design Differences between EfHG and Non-EfHG Designs

There were several key differences between the EfHG and non-EfHG course designs. First, traditional lecture or lack of lecture, in the case of the online non-EfHG course design, was replaced by inquiry-based discussion and interaction in the EfHG designs. Second, students in the EfHG designs chose areas of concentration. Students were given the opportunity to develop positive diversity within the standard curriculum. Last, the Great Brain Project was utilized in the EfHG designs. This assignment helped students develop their unique skills and abilities that would allow them to contribute to society. They were given the opportunity of developing positive diversity outside the standard curriculum, yet within the discipline.

Comparison of Grading and Aims for Required Course Activities

The grading emphasis and aims for the comparison and treatment course designs differed. Appendix H illustrates these differences.

Comparison of Key Optional Course Activities

The aims for key optional course activities for the comparison and treatment course designs differed. Appendix I illustrates these differences.

CHAPTER IV

DATA ANALYSIS

Description of Sample

The sample was made up of 67 students. The four comparison groups were made up of between 19.4% and 34.3% of the sample each (see Table 1). The EfHG comparison groups were studied during the fall 2012 semester, and the non-EfHG comparison groups participated during the spring of 2013. Thirty-seven students made up the non-EfHG groups, and thirty students were enrolled in the EfHG comparison groups (see Table 2). Thirty-one students were in onground comparison groups, and thirty-six students were members of online comparison groups (see Table 3).

Table 1

Frequency and Percentage of the Four Comparison Groups

Comparison Group	n	Percent
Onground EfHG	17	25.4
Online EfHG	13	19.4
Onground Non-EfHG	14	20.9
Online Non-EfHG	23	34.3
Total	67	100.0

Table 2

Frequency and Percentage of Students in the EfHG and Non-EfHG Groups

Group	n	Percent
EfHG	30	44.8
Non-EfHG	37	55.2
Total	67	100.0

Table 3

Frequency and Percentage of Students in the Onground and Online Delivery Modes

Mode of Delivery	n	Percent
Onground	31	46.3
Online	36	53.7
Total	67	100.0

Thirty-seven of the students were male, and thirty students were female. There were 55.2 percent males and 44.8 percent females. Students ranged from age groupings of 16-20 years of age to over 35 years (see Table 4). No students studied were under 18 years old.

Table 4

Frequency and Percentage of Student Age Groups

Age Group	n	Percent
16-20 years[*]	10	14.9
21-25 years	20	29.9
26-30 years	16	23.9
31-35 years	11	16.4
More than 35 years	10	14.9
Total	67	100.0

[*]All students in the study were 18 years of age or older.

Ethnic or racial groups represented included American Indian and Alaska Native; Asian; Black, African American, or Negro; Hispanic, Latino, or Spanish; and White or Caucasian (see Table 5). Most students were White or Caucasian (n = 39, 58.2%) or Black, African American, or Negro (n = 22, 32.8%).

Table 5

Frequency and Percentage of Student Ethnic or Racial Groups

Ethnic or Racial Group	n	Percent
American Indian and Alaska Native	1	1.5
Asian	4	6.0
Black, African American, or Negro	22	32.8
Hispanic, Latino, or Spanish	1	1.5
White or Caucasian	39	58.2
Total	67	100.0

Most of the students in the sample (n = 44, 65.7%) identified themselves as full-time college students. This is defined as students taking 12 or more credit hours during the term being studied. Almost all of the remainder of the students were part-time college students (n = 22, 32.8%). One student identified herself as a dual-enrollment student. Dual-enrollment students are enrolled in high school and college at the same time.

Students who were not in their first semester at the college were asked to report their grade point average (GPA). Forty-eight students reported (see Table 6). Over fifty-eight percent of students reported a GPA between 3.00 and 3.99. Over twenty-nine percent of students reported a GPA between 2.00 and 2.99. The mean and median grade point averages reported were 3.27 and 3.35 respectively. The standard deviation of the GPA in the sample was 0.54. Grade point averages are calcuated on a 4-point scale at the community college where the study took place.

Table 6

Frequency and Percentage of Student GPA Classifications

GPA Classification	n	Percent
0.00 – 0.99	0	0.0
1.00 – 1.99	0	0.0
2.00 – 2.99	14	29.2
3.00 – 3.99	28	58.3
4.00	6	12.5
Total	48	100.0

Students were also asked to report their highest level of academic achievement. Sixty students (89.6%) indicated that they had completed high school or a general equivalency diploma (GED). Two students (3.0%) reported having an associate's degree, and five students (7.5%) said they had earned a bachelor's degree.

In addition, students were surveyed regarding their employment status. Seventeen students (25.4%) reported being not gainfully employed. Twenty-seven students (40.3%) indicated that they worked part-time. The remaining students (n = 23, 34.3%) said that they worked full-time.

Students were questioned with regard to their annual income as well. The income groupings ranged from $0 - $14,999 to $60,000 or more per year (see Table 7). The majority of the students (56.7%) reported an annual income of less than $15,000.

Table 7

Frequency and Percentage of Student Annual Income Groupings

Annual Income Grouping	n	Percent
$0 – 14,999 per year	38	56.7
$15,000 – 29,999 per year	13	19.4
$30,000 – 44,999 per year	8	11.9
$45,000 – 59,999 per year	6	9.0
$60,000 or more per year	2	3.0
Total	67	100.0

Hypothesis Testing

Test for Skewness of Dependent Variables

Skewness was tested for the two dependent variables in the study, academic performance and student satisfaction. The skewness statistic for academic performance (final exam score) was -.568. A skewness statistic of -.819 was calculated for student satisfaction (23-question scale). The statistics fell between -1 and +1, indicating that both dependent variables represented a normal distribution and could be tested with parametric statistical tests.

Test for Differences in Student Characteristics in Comparison Groups

Differences in student characteristics in the comparison groups were tested using Pearson's chi-square. The variables tested were gender, age, ethnic or racial group, student status, GPA classification, level of academic achievement, employment status,

and annual income. The plan was to consider these intervening variables to be more or less the same in the various comparison groups and of no further concern if there was no statistically significant difference for the variables in the groups. If a difference was found, further testing would determine whether academic performance, student satisfaction, or the pretest score, a covariate with the measure of academic performance, varied with the particular variable. If so, the variable would be taken into account during the hypothesis-testing analysis. The student variables were tested based on the four comparison groups: onground EfHG, online EfHG, onground non-EfHG, and online non-EfHG; the type of curriculum (EfHG or non-EfHG); and mode of course delivery (onground and online). The results can be found in Table 8, Table 9, and Table 10.

The chi-square results for the eight student characteristic variables in the four comparison groups (see Table 8) yielded no statistically significant differences in the four groups for any of the variables. Of note, however, were the variables of age, student status, and income. The test values were X^2 (12, N = 67) = 17.42, p = .134; X^2 (6, N = 67) = 9.55, p = .145; and X^2 (12, N = 67) = 16.61, p = .165 respectively. Though not significant for this sample, the p values were low enough for comment. Furthermore, as the differences in curriculum were not advertised to students, the key possible differences if any in the population for these variables would logically be based on student preference for a particular mode of course delivery, which will be examined below.

Table 8

Differences in Student Characteristics Variables in the Four Comparison Groups

Variable	dF	N	Pearson Chi-Square	*p*
Gender	3	67	2.59	.460
Age	12	67	17.42	.134
Ethnic or Racial Group	12	67	12.88	.378
Student Status	6	67	9.55	.145
GPA Classification	6	48	7.88	.247
Level of Academic Achievement	6	67	4.77	.573
Employment Status	6	67	4.51	.608
Annual Income	12	67	16.61	.165

The chi-square test results for the eight variables based on type of curriculum: EfHG or non-EfHG, are found in Table 9. There were no significant differences in the eight student variables in the two curriculum groups. Furthermore, *p* values for all of the variables were high enough to confidently state as would be expected that no likely differences are found in the population based on curriculum.

Table 9

Differences in Student Characteristics Variables in the Curriculum Groups

Variable	dF	N	Pearson Chi-Square	p
Gender	1	67	0.50	.479
Age	4	67	2.31	.679
Ethnic or Racial Group	4	67	2.53	.640
Student Status	2	67	1.93	.382
GPA Classification	2	48	1.73	.421
Level of Academic Achievement	2	67	1.75	.416
Employment Status	2	67	0.18	.915
Annual Income	4	67	3.38	.496

The last series of chi-square testing was done to determine if there were differences in the eight student characteric variables in the two modes of course delivery groups: onground or online (see Table 10). Variables of interest which were not statistically significant but had sufficiently low p values to examine further were gender, X^2 (1, N = 67) = 2.02, p = .156; ethnic or racial group, X^2 (4, N = 67) = 6.92, p = .140; student status, X^2 (2, N = 67) = 5.57, p = .062; GPA classification, X^2 (2, N = 48) = 4.03, p = .134; and annual income, X^2 (4, N = 67) = 7.95, p = .093. A discussion of these variables follows.

Table 10

Differences in Student Characteristics Variables in the Mode of Course Delivery Groups

Variable	dF	N	Pearson Chi-Square	p
Gender	1	67	2.02	.156
Age	4	67	13.32	.010*
Ethnic or Racial Group	4	67	6.92	.140
Student Status	2	67	5.57	.062
GPA Classification	2	48	4.03	.134
Level of Academic Achievement	2	67	2.51	.285
Employment Status	2	67	2.16	.339
Annual Income	4	67	7.95	.093

*$p < .05$

The cross tabulation of delivery mode by gender can be found in Table 11. There was no significant difference in gender for students taking the onground or online courses. However, the *p* value in Table 10 as well as the cross tabulation figures suggest that further study might be useful to inquire if males in the population tend to take more onground classes than expected and less online classes. Furthermore, additional inquiry regarding whether or not females in the population tend to take less onground classes and more online than expected could be enlightening.

Table 11

Cross Tabulation of Mode of Course Delivery by Gender

	Male	Female	Total
Onground Count	20	11	31
Onground Expected Count	17.1	13.9	31.0
Onground Residual	2.9	-2.9	
Online Count	17	19	36
Online Expected Count	19.9	16.1	36.0
Online Residual	-2.9	2.9	
Total Count	37	30	67
Total Expected Count	37.0	30.0	67.0

Table 12 presents the cross tablulation of mode of course delivery by ethnic or racial group. Students taking onground or online courses were not significantly different in terms of ethnic or racial group. A relatively low *p* value and the cross tablulation table suggest that the population could possibly include Asians who take onground classes more than expected and online classes less. In addition, the White or Caucasian students in the population may tend to take online classes more and onground classes less than expected.

Table 12

Cross Tabulation of Mode of Course Delivery by Ethnic or Racial Group

	American Indian & Alaska Native	Asian	Black, African American, or Negro	Hispanic, Latino, or Spanish	White or Caucasian	Total
Onground Count	0	4	11	0	16	31
Onground Expected Count	.5	1.9	10.2	.5	18.0	31.0
Onground Residual	-.5	2.1	.8	-.5	-2.0	
Online Count	1	0	11	1	23	36
Online Expected Count	.5	2.1	11.8	.5	21.0	36.0
Online Residual	.5	-2.1	-.8	.5	2.0	
Total Count	1	4	22	1	39	67
Total Expected Count	1.0	4.0	22.0	1.0	39.0	67.0

Student status (part-time, full-time, or dual-enrollment) is presented for the two modes of course delivery in Table 13. The p value of .062 found in Table 10 for student status was very close to being statistically significant. The low p value along with the cross tabulation table suggest that the student status for the population could possibly be different in onground and online classes. Additional study could conceivably show that part-time students prefer online classes more than expected and full-time students prefer more than expected to attend in the on-campus environment.

Table 13

Cross Tabulation of Mode of Course Delivery by Student Status

	Part-time	Full-time	Dual-Enrollment	Total
Onground Count	6	24	1	31
Onground Expected Count	10.2	20.4	.5	31.0
Onground Residual	-4.2	3.6	.5	
Online Count	16	20	0	36
Online Expected Count	11.8	23.6	.5	36.0
Online Residual	4.2	-3.6	-.5	
Total Count	22	44	1	67
Total Expected Count	22.0	44.0	1.0	67.0

Though not significant, GPA classification could possibly indicate a more than expected preference for mode of course delivery. Table 14 indicates a possibility that students in the 2.00 – 2.99 group favor the onground mode and students in the 3.00 – 3.99 group prefer online classes more than would be expected.

Table 14

Cross Tabulation of Mode of Course Delivery by GPA Classification

	2.00 – 2.99	3.00 – 3.99	4.00	Total
Onground Count	9	9	3	21
Onground Expected Count	6.1	12.3	2.6	21.0
Onground Residual	2.9	-3.3	.4	
Online Count	5	19	3	27
Online Expected Count	7.9	15.8	3.4	27.0
Online Residual	-2.9	3.3	-.4	
Total Count	14	28	6	48
Total Expected Count	14.0	28.0	6.0	48.0

The last student characteristic variable which was not statistically significant that will be discussed with regard to delivery mode is annual income. The *p* value of .093 that resulted from the chi-square test (see Table 10) and the cross tabluation table (see Table 15) hint of a possible difference in annual income among students in the two modes of delivery in the population. Students in the population whose annual income is in the $0 - $14,999 group may prefer onground classes more than expected, and students with income in the $30,000 - $44,999 group may favor taking their courses online. However, there was no statistically significant difference in preference for mode of course delivery for the different income groups.

Table 15

Cross Tabulation of Mode of Course Delivery by Annual Income

	$0 - $14,999	$15,000 - $29,999	$30,000 - $44,999	$45,000 - $59,999	$60,000 or more	Total
Onground Count	21	5	1	4	0	31
Onground Expected Count	17.6	6.0	3.7	2.8	.9	31.0
Onground Residual	3.4	-1.0	-2.7	1.2	-.9	
Online Count	17	8	7	2	2	36
Online Expected Count	20.4	7.0	4.3	3.2	1.1	36.0
Online Residual	-3.4	1.0	2.7	-1.2	.9	
Total Count	38	13	8	6	2	67
Total Expected Count	38.0	13.0	8.0	6.0	2.0	67.0

Students did tend to choose whether to study onground or online based on their age. The student characteristic variable, age, was statistically significant, X^2 (4, N = 67) = 13.32, p = .010 (see Table 10). Students selected mode of delivery differently in different age groups. The cross tabulation of mode of course delivery by age (Table 16) showed that students in the 16-20 and 21-25 years groups preferred the onground mode more than expected and the online mode less. In addition, students in the 31-35 group took the online class more than expected and the onground class less. The 26-30 and 35 years and above groups indicated a preference to take online classes more than expected; however, the residual figures are not large.

Table 16

Cross Tabulation of Mode of Course Delivery by Age

	16 - 20	21- 25	26 - 30	31 - 35	35+	Total
Onground Count	8	12	7	1	3	31
Onground Expected Count	4.6	9.3	7.4	5.1	4.6	31.0
Onground Residual	3.4	2.7	-.4	-4.1	-1.6	
Online Count	2	8	9	10	7	36
Online Expected Count	5.4	10.7	8.6	5.9	5.4	36.0
Online Residual	-3.4	-2.7	.4	4.1	1.6	
Total Count	10	20	16	11	10	67
Total Expected Count	10.0	20.0	16.0	11.0	10.0	67.0

One-way analysis of variance (ANOVA) was used to see if pretest, final exam, or satisfaction index scores varied by age group in the sample. The 10 participants in the 16-20 group had an average pretest score of 47.70 ($SD = 20.6$); the 20 participants in the 21-25 group had an average pretest score of 58.85 ($SD = 12.2$); the 16 participants in the 26-30 group had an average pretest score of 56.81 ($SD = 10.0$); the 11 participants in the 31-35 group had an average pretest score of 58.00 ($SD = 15.00$); and the 10 participants in the more than 35 years group had an average pretest score of 68.00 ($SD = 10.0$). The effect of age group on pretest score was significant, $F(4,62) = 2.88$, $p = .030$ (see Table 17 and Table 18). Older students had higher pretest scores. R Squared for the test was .157. Thus, 15.7% of the variance in pretest scores was explained by age group. Since age

group significantly affected the pretest score, age group was controlled for when the

covariate, pretest score, was used during hypothesis testing.

Table 17

Comparison of Pretest Scores by Age Group

Age Group	n	Mean	SD	95% Confidence Interval	
				Lower Bound	Upper Bound
16-20 years	10	47.70	20.6	32.96	62.44
21-25 years	20	58.85	12.2	53.15	64.55
26-30 years	16	56.81	10.0	51.50	62.12
31-35 years	11	58.00	15.0	47.93	68.07
more than 35	10	68.00	10.0	60.84	75.16
Total	67	57.93	14.2	54.45	61.40

Table 18

Comparison of Pretest Scores by Age Group

	Sum of Squares	df	Mean Square	F
Between Groups	2097.54	4	524.39	2.88*
Within Groups	11275.09	62	181.86	
Total	13372.63	66		

*$p < .05$

The effect of age group on the final exam score (posttest) and satisfaction index

score was not found to be statistically significant. There was no statistically significant

difference in final exam and satisfaction index scores for the different age groups. The one-way ANOVA results for these two dependent variables were $F(4,61) = 0.67$, $p = .614$ and $F(4,57) = 0.56$, $p = .694$ respectively.

First Null Hypothesis

First Null Hypothesis: There is no difference between the academic performance of students treated with educating for human greatness (EfHG) strategies and non-EfHG comparison groups.

This hypothesis was tested in four different ways. First, one-way ANOVA was utilized to compare final exam scores for students in the EfHG and non-EfHG groups. The next three tests used analysis of covariance (ANCOVA) in a progressive manner. The first ANCOVA used the pretest score as a covariate. The second ANCOVA added age to the pretest score as a covariate. Finally, the third ANCOVA included mode of course delivery as a third covariate to account for the differing onground and online modes. To summarize, the three ANCOVA tests had one (pretest), two (pretest and age), and three (pretest, age, and mode of delivery) covariates respectively.

The 29 participants in the EfHG group had an average final exam score of 75.59 ($SD = 9.0$), and the 37 participants in the non-EfHG group had an average final exam (posttest) score of 73.89 ($SD = 13.2$). The one-way ANOVA yielded no significant difference in academic performance as measured by the final exam score for the two types of curriculum, $F(1,64) = 0.35$, $p = .557$. The first ANCOVA test (covariate: pretest) was not significant, $F(1,63) = 0.15$, $p = .701$, $\eta_p^2 = .002$. The second ANCOVA test (covariates: pretest and age) was also not statistically significant, $F(1,62) = 0.16$, $p =$

.688, η_p^2 = .003. The final ANCOVA (covariates: pretest, age, and mode of delivery) did not show any significant difference in academic performance between the two curriculum groups, $F(1,61)$ = 0.09, p = .767, η_p^2 = .001. In all three ANCOVA tests, however, the pretest score was significantly related to the final exam score. The p scores were .000, .001, and .001 respectively.

The four tests confirmed the null hypothesis. Though the mean academic performance was higher for students treated with EfHG strategies, there was no difference between the academic performance of students treated with educating for human greatness (EfHG) strategies and non-EfHG comparison groups.

Second Null Hypothesis

Second Null Hypothesis: There is no difference between the student satisfaction of students treated with EfHG strategies and non-EfHG comparison groups.

The second null hypothesis was tested in two ways. First, one-way ANOVA was used to compare student satisfaction scores in the two curriculum groups. The second test was ANCOVA. Mode of course delivery was a covariate.

The 29 participants in the EfHG group had an average student satisfaction score of 4.00 (SD = 0.59), and the 33 participants in the non-EfHG group had an average student satisfaction score of 3.71 (SD = 0.93). The one-way ANOVA yielded no significant difference in student satisfaction for the two types of curriculum, $F(1,60)$ = 2.02, p = .161. The ANCOVA test (covariate: mode of delivery) showed no signficant difference as well, $F(1,59)$ = 1.75, p = .191, η_p^2 = .029.

The two tests confirmed the null hypothesis. Though the mean student satisfaction was higher for students treated with EfHG strategies, there was no difference between the student satisfaction of students treated with educating for human greatness (EfHG) strategies and non-EfHG comparison groups.

Third Null Hypothesis

Third Null Hypothesis: There is no difference between the academic performance of students treated with EfHG strategies and a non-EfHG comparison group using the onground mode of delivery.

This hypothesis was tested in three different ways. First, one-way ANOVA was employed to compare final exam scores for onground students in the non-EfHG and EfHG groups. The next two tests used ANCOVA in a progressive manner. The first ANCOVA used the pretest score as a covariate. The second ANCOVA added age to the pretest score as a covariate. The two ANCOVA tests had one (pretest) and two (pretest and age) covariates respectively.

The 17 participants in the EfHG group had an average final exam score of 74.71 ($SD = 10.0$), and the 14 participants in the non-EfHG group had an average final exam score of 74.57 ($SD = 11.9$). The one-way ANOVA yielded no significant difference in academic performance as measured by the final exam score for the two types of curriculum, $F(1,29) = 0.00$, $p = .973$. The first ANCOVA test (covariate: pretest) was not significant, $F(1,28) = 0.02$, $p = .896$, $\eta_p^2 = .001$. The second ANCOVA test (covariates: pretest and age) also showed no significant difference, $F(1,27) = 0.03$, $p = .870$, $\eta_p^2 =$

.001. In both ANCOVA tests, however, the pretest score was significantly related to the final exam score. The p scores were .006 and .018 respectively.

The three tests confirmed the null hypothesis. Though the mean academic performance was slightly higher for students treated with EfHG strategies, there was no difference between the academic performance of students treated with EfHG strategies and a non-EfHG comparison group using the onground mode of delivery.

Fourth Null Hypothesis

Fourth Null Hypothesis: There is no difference between the student satisfaction of students treated with EfHG strategies and a non-EfHG comparison group using the onground mode of delivery.

The fourth null hypothesis was tested using one-way ANOVA to compare student satisfaction scores in the two curriculum groups for onground students (see Table 19 and Table 20). The 17 participants in the EfHG group had an average student satisfaction score of 4.19 ($SD = 0.52$), and the 14 participants in the non-EfHG group had an average student satisfaction score of 3.58 ($SD = 1.05$). The one-way ANOVA yielded a significant difference in student satisfaction for the two types of curriculum, $F(1,29) = 4.48$, $p = .043$. R Squared for the test was .134. Thus, 13.4% of the variance in student satisfaction scores was explained by type of curriculum.

Table 19

Comparison of Student Satisfaction Scores by Curriculum Group using the Onground Mode of Delivery

				95% Confidence Interval	
Group	n	Mean	SD	Lower Bound	Upper Bound
EfHG	17	4.19	0.52	3.92	4.46
Non-EfHG	14	3.58	1.05	2.97	4.18
Total	31	3.91	0.85	3.60	4.22

Table 20

Comparison of Student Satisfaction Scores by Curriculum Group using the Onground Mode of Delivery

	Sum of Squares	df	Mean Square	F
Between Groups	2.87	1	2.87	4.48*
Within Groups	18.61	29	.64	
Total	21.48	30		

*$p < .05$

The test rejected the null hypothesis. The mean student satisfaction was higher for students treated with EfHG strategies, and there was a difference between the student satisfaction of students treated with educating for human greatness (EfHG) strategies and a non-EfHG comparison group in the onground mode.

Fifth Null Hypothesis

Fifth Null Hypothesis: There is no difference between the academic performance of

students treated with EfHG strategies and a non-EfHG comparison group using the online

mode of delivery.

The fifth null hypothesis was tested in three different ways. First, one-way

ANOVA was used to compare final exam scores for online students in the non-EfHG and

EfHG groups. The next two tests utilized ANCOVA in a progressive manner. The first

ANCOVA used the pretest score as a covariate. The second ANCOVA added age to the

pretest score as a covariate. To review, the two ANCOVA tests had one (pretest) and two

(pretest and age) covariates respectively.

The 12 participants in the EfHG group had an average final exam score of 76.83

(SD = 7.7), and the 23 participants in the non-EfHG group had an average final exam

score of 73.48 (SD = 14.2). The one-way ANOVA yielded no significant difference in

academic performance as measured by the final exam score for the two types of

curriculum, $F(1,33) = 0.58$, $p = .453$. The first ANCOVA test (covariate: pretest) was not

significant, $F(1,32) = 0.21$, $p = .654$, $\eta_p^2 = .006$. The second ANCOVA test (covariates:

pretest and age) was also not statistically significant, $F(1,31) = 0.21$, $p = .649$, $\eta_p^2 = .007$.

There was no statistically significant difference in final exam scores for the two types of

curriculum. In both ANCOVA tests, however, the pretest score was significantly related

to the final exam score. The p scores were .030 and .040 respectively.

All tests confirmed the null hypothesis. Though the mean academic performance

was higher for students treated with EfHG strategies, there was no difference between the

academic performance of students treated with EfHG strategies and a non-EfHG

comparison group using the online mode of delivery.

Sixth Null Hypothesis

Sixth Null Hypothesis: There is no difference between the student satisfaction of students

treated with EfHG strategies and a non-EfHG comparison group using the online mode of

delivery.

The last null hypothesis was tested using one-way ANOVA to compare student

satisfaction scores in the two curriculum groups for online students. The 12 participants

in the EfHG group had an average student satisfaction score of 3.73 ($SD = 0.59$), and the

19 participants in the non-EfHG group had an average student satisfaction score of 3.81

($SD = 0.84$). The one-way ANOVA did not find a significant difference in student

satisfaction for the two types of curriculum, $F(1,29) = 0.10$, $p = .759$.

The test confirmed the null hypothesis. Though the mean student satisfaction

score was higher for online students in the non-EfHG comparison group, there was no

difference between the student satisfaction of students treated with educating for human

greatness (EfHG) strategies and a non-EfHG comparison group in the online mode.

Summary of Hypothesis Testing

The *First Null Hypothesis* was accepted. Though the mean academic performance

was higher for students treated with EfHG strategies, there was no significant difference

between the academic performance of students treated with EfHG strategies and non-

EfHG comparison groups. Likewise, the *Second Null Hypothesis* was accepted. Even

though the mean student satisfaction was higher for students treated with EfHG

strategies, there was no difference between the student satisfaction of students treated with EfHG strategies and non-EfHG comparison groups. The *Third Null Hypothesis* was accepted as well. The mean academic performance was slightly higher for students treated with EfHG strategies, but there was no significant difference between the academic performance of students treated with EfHG strategies and a non-EfHG comparison group using the onground mode of course delivery. The *Fourth Null Hypothesis* was rejected. The mean student satisfaction was higher for students treated with EfHG strategies, and there was a difference between the student satisfaction of students treated with EfHG strategies and a non-EfHG comparison group in the onground mode. Furthermore, 13.4% of the variance in student satisfaction scores was explained by type of curriculum. The *Fifth Null Hypothesis* was accepted. Though the mean academic performance was higher for students treated with EfHG strategies, there was no significant difference between the academic performance of students treated with EfHG strategies and a non-EfHG comparison group using the online mode of course delivery. Finally, the *Sixth Null Hypothesis* was also accepted. The mean student satisfaction score was lower for online students treated with EfHG strategies, but there was no difference between the student satisfaction of students treated with EfHG strategies and a non-EfHG comparison group in the online mode.

CHAPTER V

DISCUSSION

Interpretation of the Results

Hypothesis Testing

The motivation for the implementation of EfHG curriculum strategies was to attempt to improve student satisfaction and ultimately student retention and degree completion. EfHG strategies take students' eyes off the ball of the standard core curriculum in part as students learn a positively diverse curriculum in accordance with their own unique needs and wants in addition to the standard learning objectives. The hope was to improve satisfaction and retention without negatively affecting academic performance in the standard curriculum.

The confirmation of the first null hypothesis agreed with the above aims. There was no difference in academic performance between students in the EfHG and non-EfHG curriculum groups. Furthermore, the mean score was higher for the EfHG students.

The verification of the second null hypothesis, however, did not indicate the efficacy of EfHG strategies to enhance student satisfaction. Though not significant, a possible positive influence of the EfHG curriculum on student satisfaction was suggested by both tests of the second null hypothesis by the relatively low p values, .161 and .191 respectively, and the higher mean student satisfaction for students in the EfHG groups.

Testing for the last four null hypotheses allowed for more precise analysis of the effects of the four different types of curriculum design. In actuality, the EfHG curriculum was not exactly the same in the onground classroom as it was online. In like manner, the non-EfHG curriculum was different online than it was onground.

The tests for the third null hypothesis demonstrated that there was no difference in academic performance in the on-campus classroom between students who experienced either the EfHG or the non-EfHG approaches. This argues in favor of using EfHG strategies as long as they are accompanied by increased student satisfaction.

The test for the fourth null hypothesis demonstrated that the hypothesis was invalid. The mean student satisfaction for the the onground EfHG students was higher, and it was significantly higher than the satisfaction for students who experienced the non-EfHG course design. Therefore, the results of the tests for the third and fourth hypotheses indicated that when utilizing the onground mode of course delivery, the EfHG strategies improved student satisfaction without sacrificing academic performance. This finding is important. In the attempt to make both onground and online EfHG groups as similar as possible, as a result of systemic limitations, and, in retrospect, as a result of less than optimal design, the onground EfHG course curriculum was not as robust as it might have been. Nevertheless, a significantly higher satisfaction was found without hurting academic performance.

The tests for the fifth null hypothesis demonstrated that there was no difference in academic performance online between students who experienced either the EfHG or the

non-EfHG approaches. Logically this suggests that EfHG strategies could profitably be used online if they are accompanied by increased student satisfaction.

Unlike the test of the fourth null hypothesis, the test of the sixth null hypothesis confirmed that there was no difference between the student satisfaction of students treated with EfHG strategies and students who were in non-EfHG curriculum group when using the online mode of delivery. Furthermore, the mean student satisfaction of the sample was higher for the students in the non-EfHG comparison group.

In summary, the study demonstrated that the particular EfHG strategies utilized in the onground mode produced significantly higher student satisfaction than the non-EfHG strategies in the same mode without hurting academic performance. On the contrary, the EfHG strategies used in the online mode of delivery did not generate a greater level of student satisfaction than the non-EfHG approach in the same mode. There was no significant difference, and the mean satisfaction was actually higher in the group that experienced the non-EfHG curriculum strategies. The effects of EfHG strategies which were beneficial onground were not relatively advantageous online. Therefore, if the aim is to improve student satisfaction and ultimately increase student retention and degree completion, there is no apparent practical cause to employ the EfHG strategies utilized in the study in the online mode of delivery.

Differing Results

Why did EfHG strategies produce the desired student satisfaction effect in the onground classroom, but not online? Without further study the complete answer is a matter of conjecture. Three salient possibilities for the differing results in the study are

the differing strategies used in the two modes of delivery, the supposition that the profile of an average onground student is different than that of an average online student resulting in differing circumstances, needs, wants, and expectations, which directly affect satisfaction; and the notion that the younger students in the onground mode prefer an engaging learning experience.

Four Different Strategies.

The the EfHG and the non-EfHG strategies used were similar and different in the different modes of delivery. Students in the EfHG onground section not only were provided live commentary and mini-lectures and reviews by the instructor, but they also had numerous opportunities to interact with one another as they optionally participated in Mini Great Brain Presentations, which were an integral part of the typical class period. This was a powerful way for students to participate in social, cooperative, and constructive learning and to grow to become better contributors to society. Students in the online EfHG section did not have the benefit of a live instructor's review, commentary, or mini-lecture. Furthermore, the corresponding online version of the Mini Great Brain Presentations turned out to be a weaker exercise. Students optionally prepared their presentations by themselves and presented by posting written and elective audio and video concepts on an online discussion board. Most of the social and cooperative learning was lost; and students, by and large, did not participate; whereas, in the onground classroom participation among attenders was almost always one hundred percent of those in attendance.

Students in the non-EfHG onground section experienced traditional lecture and discussion—to the degree that they attended. They also had the opportunity to interact with the instructor and classmates in customary ways. Online, however, students in the non-EfHG group were provided no live or recorded lecture. Also, student-to-instructor and student-to-student interaction was more limited.

The Two Different Student Profiles Hypothesis.

Data analysis of the various student characteristics variables for students in the two modes of course delivery (see Table 10 and Table 16) indicated that a key statistically significant difference in student characteristics in the population in the two modes was age. Online students were older than onground students. In addition, analysis demonstrated that older students made higher pretest scores (see Table 17 and Table 18). In other words, older students began the course with greater knowledge than younger students. Though none of the other student characteristics were found to be different for students choosing to study onground or online, an interesting hypothesis of two different student profiles for students who choose to study in the different modes of delivery can be developed in light of the relatively low p values for the variables and the small sample size used in the study. Table 21 through Table 29 help to demonstrate the two proposed student profiles found in the population. (Table 26 and Table 27 report the results of a one-way ANOVA test on reported GPA, instead of GPA classification, by mode of course delivery. The 21 participants in the onground mode had an average GPA of 3.15 ($SD = 0.52$), and the 27 participants in the online mode had an average reported GPA of 3.37 ($SD = 0.54$). The one-way ANOVA yielded no significant difference in GPA for the

two modes, $F(1,46) = 2.07$, $p = .157$. This agreed with the earlier results of the chi-square

test of GPA classifications found in Table 10.)

Table 21

Frequency and Percentage of Students in the Onground and Online Delivery Modes by Gender

Gender	Onground n	Onground %	Online n	Online %	Total	%
Male	20	54.1	17	45.9	37	100.0
Female	11	36.7	19	63.3	30	100.0
Total	31	46.3	36	53.7	67	100.0

Table 22

Frequency and Percentage of Students in the Onground and Online Delivery Modes by Age

Age	Onground n	Onground %	Online n	Online %	Total	%
16-20 years	8	80.0	2	20.0	10	100.0
21-25 years	12	60.0	8	40.0	20	100.0
26-30 years	7	43.8	9	56.3	16	100.0
31-35 years	1	9.1	10	90.9	11	100.0
more than 35	3	30.0	7	70.0	10	100.0
Total	31	46.3	36	53.7	67	100.0

Table 23

Frequency and Percentage of Students by Delivery Mode and by Ethnic or Racial Group

Ethnic or Racial Group	Onground n	Onground %	Online n	Online %	Total	%
American Indian and Alaska Native	0	0.0	1	100.0	1	100.0
Asian	4	100.0	0	0.0	4	100.0
Black, African American, or Negro	11	50.0	11	50.0	22	100.0
Hispanic, Latino, or Spanish	0	0.0	1	100.0	1	100.0
White or Caucasian	16	41.0	23	59.0	39	100.0
Total	31	46.3	36	53.7	67	100.0

Table 24

Frequency and Percentage of Students in the Onground and Online Delivery Modes by Student Status

Student Status	Onground n	Onground %	Online n	Online %	Total	%
Part-time College	6	27.3	16	72.7	22	100.0
Full-time College	24	54.5	20	45.5	44	100.0
Dual Enrollment	1	100.0	0	0.0	1	100.0
Total	31	46.3	36	53.7	67	100.0

Table 25

Frequency and Percentage of Students by Delivery Mode and by GPA Classification

GPA Classification	Onground n	Onground %	Online n	Online %	Total	%
0.00 – 0.99	0	0.0	0	0.0	0	0.0
1.00 – 1.99	0	0.0	0	0.0	0	0.0
2.00 – 2.99	9	64.3	5	35.7	14	100.0
3.00 – 3.99	9	32.1	19	67.9	28	100.0
4.00	3	50.0	3	50.0	6	100.0
Total	21	43.8	27	56.3	48	100.0

Table 26

Comparison of Reported GPA and Mode of Delivery

Group	n	Mean	SD	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Onground	21	3.15	0.52	2.91	3.38
Online	27	3.37	0.54	3.15	3.58
Total	48	3.27	0.54	3.11	3.43

Table 27

Comparison of Reported GPA and Mode of Delivery

	Sum of Squares	df	Mean Square	F
Between Groups	0.59	1	.59	2.07*
Within Groups	13.05	46	.28	
Total	13.64	47		

*p > .05

Table 28

Frequency and Percentage of Students by Delivery Mode and by Employment Status

Student Status	Onground n	Onground %	Online n	Online %	Total	%
Not Gainfully Employed	8	47.1	9	52.9	17	100.0
Employed Part-time	15	55.6	12	44.4	27	100.0
Employed Full-time	8	34.8	15	65.2	23	100.0
Total	31	46.3	36	53.7	67	100.0

Table 29

Frequency and Percentage of Students by Delivery Mode and by Annual Income Grouping

Annual Income Grouping	Onground n	Onground %	Online n	Online %	Total	%
$0 – 14,999 per year	21	55.3	17	44.7	38	100.0
$15,000 – 29,999 per year	5	38.5	8	61.5	13	100.0
$30,000 – 44,999 per year	1	12.5	7	87.5	8	100.0
$45,000 – 59,999 per year	4	66.7	2	33.3	6	100.0
$60,000 or more per year	0	0.0	2	100.0	2	100.0
Total	31	46.3	36	53.7	67	100.0

The typical hypothetical onground student was a younger Black or Caucasian and more likely male than female. He was a full-time student, had a GPA of 3.15, and had completed high school or the requirements for the GED. This student was either employed part-time or not at all and had an income of less than $30,000 per year.

The average theoretical online student in the population was an older male or female who was Black or Caucasian. This student went to school part-time or full-time, had a GPA of 3.37, and had completed high school or the requirements for the GED. This student was employed full-time, part-time, or not at all and had an income of less than $45,000 per year.

The differences between the two proposed profiles indicated a tendency to find more male students onground, while online the split between male and female students was even. We can confidently assert that the onground student was younger than the online student and that the online student began the course with greater knowledge than the onground student. Black and Caucasian students were predominant in both modes of course delivery, though Caucasian students may have tended to choose online over onground courses (see Table 23). The theoretical onground student favored going to school full-time, and the online student characteristically chose to study either part-time or full-time with perhaps a preference for going to school full-time. The hypothetical online student had a higher GPA and was more likely to be employed full-time than the onground student. The proposed online student also had a higher income than the onground student.

To reiterate, the above profiles of onground and online students are hypothetical and would require further research to determine their validity in whole or in part. However, if the profile of an average onground student is different than that of an average online student, the circumstances, needs, wants, and expectations of students in each group would likely be different. The degree to which student expectations are met or exceeded determines the level of student satisfaction and in time retention and degree completion. If students who choose to take online courses are significantly different than those who take onground courses, teaching and learning strategies in the two different modes of delivery may need to be significantly different. The concepts that inspired the EfHG strategies may be sound for students in both onground and online courses, but the

particular strategies implemented themselves may need to be considerably different for the different modes of delivery to produce the desired results.

Younger Students and Engagement.

This last explanation could be included in the second possibility. The study demonstrated that the onground students were younger than online students. Furthermore, the mode of delivery that produced enhanced satisfaction when EfHG strategies characterized by student engagement were implemented was the onground mode. The older online students who were treated with the EfHG curriculum were not more satisfied with the more engaging learning experience. This logically suggests that the younger population of community college students prefer greater engagement.

In conclusion, the above discussion explored three likely explanations for the differing results in the study based mode of course delivery: (1) the differing strategies used in the two modes of delivery produce different levels of satisfaction, (2) the theory that the profile of an average onground student is different than that of an average online student, and (3) that younger students prefer a more engaging curriculum. If the second explanation is valid, the two groups have disparate circumstances, needs, wants, and expectations, which need to be adequately addressed if students' satisfaction levels will consequently be sufficient to lead to retention and degree completion. The real causes for not obtaining the desired result with the online students might likely be a combination of these reasons along with others not known.

Relationship Between the Findings and the Literature

Tinto (2007) stated that learning communities and the collaborative pedagogical approach that ensures shared learning should be the norm rather than the exception during the student's first year of college in order to enhance student retention. The EfHG strategies employed in the classroom in the study included extensive use of Mini Great Brain Presentations, which were collaborative in nature. These strategies yielded significantly higher student satisfaction, a predictor of student retention.

A study in adult business degree programs at five institutions of higher education identified four variables that explain about 70% of an observed variance in student satisfaction (Howell & Buck, 2012). Results indicated that a workload that was perceived by students to be too demanding can negatively impact satisfaction. The fact that the EfHG strategies utilized in the online mode in this study did not increase satisfaction may have been the result of the perception of a too demanding workload by the participating online students.

This study's results also corresponded with those at a state-supported Western university where the effectiveness of traditional versus online learning environments as measured by learning outcomes for lectures and guided instruction was assessed (Smith, Smith, & Boone, 2000). No significant differences were found between onground and online student academic outcomes.

Students in a section of a teacher education course at the University of Montana-Missoula who experienced a combination of traditional and online modes of delivery during the same term perceived that the online instruction was less effective in terms of

learning (Kelly & Schorger, 2002). However, a comparison of achievement scores and research papers found that there was no difference between this section and another section which had completed the term totally onground. Those findings agreed with this study. There was no difference in academic performance in any of the comparison groups. On the other hand, when EfHG strategies were utilized, there was greater student satisfaction onground than online. Perception of learning effectiveness and student satisfaction are logically closely related.

One study which did not agree with the findings of this research took place at Boston University School of Medicine (Wiecha, Chetty, Pollard, & Shaw, 2006). In that study third-year medical students taking a diabetes management course online demonstrated a higher posttest score and a greater increase in overall score from pretest to posttest than students attending onground. Academic achievement was significantly higher for the online mode.

A study which compared students in a business law course found no difference in student satisfaction or student learning for traditional or online versions of the course (Shelley, Swartz, & Cole, 2007). Furthermore, student satisfaction was marginally higher with the course overall and with the instructor in the onground mode; and slightly higher with the course structure in the online format. This is similar to the findings of this study. There was no significant difference in academic achievement in the two modes of delivery. However, student satisfaction was higher when the EfHG strategies were implemented onground. The fact that the EfHG strategies in the online mode did not show enhanced satisfaction over the satisfaction of online students treated with the non-

EfHG strategies may be related to course structure as was demonstrated in the business law course.

Research at a public institution in the Southwest that studied three onground and three online courses in a master's degree program in education found no significant difference in outcomes between students in the two modes of delivery on paper grades and on the final exam (Kirtman, 2009). However, student survey data indicated that the most important characteristic of teaching and learning online is the small and large group discussions and that instructor and student interaction are important elements of the learning process. This research also demonstrated that there was no difference in learning outcomes between the two modes of instruction or teaching strategies. The key question, however, is the cause for increased student satisfaction with EfHG strategies onground and no difference in satisfaction when EfHG strategies were employed online. The above study may give a clue. Small and large group discussions as well as student-instructor interaction were found to be key elements of the online learning process. These important components were what largely characterized the differences between onground and online EfHG strategies used in this study.

The learning outcomes in a Theories of Counseling course at a small, public college on the East Coast showed no difference between onground and online students (Lyke & Frank, 2012). However with regard to satisfaction, the students rated the onground mode of course delivery higher than the online mode. This study produced similar results. Though these findings were not part of the study's hypothesis testing, the data was collected nonetheless; and the statistical tests were easily performed. The 31

participants in the onground group had an average final exam score of 74.65 (SD = 10.7),

and the 35 participants in the online group had an average final exam score of 74.63 (SD

= 12.3). The ANCOVA (covariate: pretest score) yielded no significant difference in

academic performance as measured by the final exam score for the two modes of course

delivery, $F(1,63) = 0.29$, $p = .594$, $\eta_p^2 = .005$. The 31 participants in the onground group

had an average satisfaction score of 3.91 (SD = 0.85), and the 31 participants in the

online group with complete data had an average satisfaction score of 3.78 (SD = 0.74).

The ANOVA yielded no significant difference in student satisfaction for the two modes

of course delivery, $F(1,60) = 0.42$, $p = .517$. Students who experienced the non-EfHG

curriculum in both modes had similar results for academic performance and student

satisfaction as the overall group of students reported above. Of interest, on the other

hand, were students treated with EfHG strategies. The 17 participants in the onground

group had an average final exam score of 74.71 (SD = 10.0), and the 12 participants in

the online group had an average final exam score of 76.83 (SD = 7.7). The ANCOVA

(covariate: pretest score) yielded no significant difference in academic performance as

measured by the final exam score for the two modes of course delivery, $F(1,26) = 0.04$, p

= .849, $\eta_p^2 = .001$. The 17 participants in the onground group had an average satisfaction

score of 4.19 (SD = 0.52), and the 12 participants in the online group had an average

satisfaction score of 3.73 (SD = 0.59). The one-way ANOVA yielded a significant

difference in student satisfaction for the two modes of course delivery, $F(1,27) = 4.94$, p

= .035. R Squared for the test was .155. Thus, 15.5% of the variance in student

satisfaction scores for students treated by the EfHG curriculum was explained by mode of

course delivery. The test demonstrated that there is a difference in the satisfaction of students who took the EfHG curriculum in the onground and online modes of course delivery. The mean student satisfaction was higher for students treated with EfHG strategies onground. This should come as no surprise and is essentially a corollary to the results of the test for the fourth null hypothesis. Therefore, this study's findings agreed with those of the small, public college on the East Coast study only when EfHG strategies were utilized.

Implications for Practice

Reliance on only a high school diploma to experience a middle-class lifestyle has ended (The White House, 2011). Most new jobs in the next decade will require workforce training or higher education after high school. Community colleges play an important role in helping under-prepared students who historically have experienced poor rates of retention to achieve this advanced training (The White House, 2011).

Improved retention produces the fruits of increased enrollment, higher graduation rates, additional tuition and fee revenue, reduced costs per student and greater student "profitability" (Ackerman & Schibrowsky, 2007). Enhanced student satisfaction predicts student retention (Schreiner, 2009).

Undoubtedly the most important inference resulting from this study is that an onground community college course can be designed and implemented to increase student satisfaction by aiming at least in part to educate for societal contribution and positive diversity using the curriculum as a tool without hindering student learning of the standard course objectives. Increased satisfaction could then hopefully increase the

likelihood of student retention and degree completion. In other words, instructors can enrich onground courses by embracing strategies that allow students to grow in their abilites to contribute to society by developing their own unique talents and by allowing students to satisfy their curiosities in areas of interest within or outside the standard curriculum without sacrificing becoming fluent in the standard curriculum and meeting standard learning objectives. Moreover, the resulting increased student satisfaction may very well lead to increased student retention and degree completion. This approach satisfies the needs and wants of students, educational leaders, the community, and society in general. An enriched course of this type is characterized by student engagement.

Furthermore, in the endeavor to make both onground and online EfHG groups as similar as possible in this study, as a result of less than optimal design after reflection, and as a result of environmental limitations, the onground EfHG course curriculum was not as well-implemented as it might have been. Yet a significantly higher level of satisfaction was found in the sample when the less-than-optimal EfHG strategies were used in the onground mode. This is encouraging and suggests that more effective course designs may be developed and implemented resulting in even greater student satisfaction and potential retention.

In addition, this study demonstrated that the onground students were younger than online students. The mode of delivery that produced enhanced satisfaction when EfHG strategies characterized by student engagement were implemented was the onground mode. This logically suggests that the younger population of community college students

prefer greater engagement. An engaging curriculum would, then, be recommended for onground community college students in order to promote satisfaction and retention.

Educators may elect to utilize a variety of methodologies that cultivate student engagement, especially for the younger students. Educational practitioners who would choose to incorporate EfHG strategies into their courses may want to consider the researcher's suggested changes to this approach below.

With regard to specific changes to the EfHG strategies used in the study, one suggested modification to the onground EfHG strategies would be to move all of the student presentations for the Great Brain Project from the online discussion board to the classroom. Project presentations were done on the discussion board in the study in order to mimic the online section's Great Brain Project and so more class time would be available to cover the standard curriculum. In the spirit of educating for human greatness and positive diversity, the Great Brain Project should be given a greater role in the classroom. Moreover, instructions for and assessment of the project should give greater weight to the *Inquiry* and *Imagination* (creativity) elements. Experience has shown that some students tend to superficially go through the motions of this assignment and can disregard these most important aspects.

Students in the study were given extra credit for participating in the optional Mini Great Brain Presentations in class after working in groups and inquiring about key concepts. This was a way to introduce the curriculum in lieu of the traditional lecture by the instructor. Giving more substantial credit for this should be considered. This rich activity enjoyed a high level of class participation by those students in attendance.

Unfortunately, student attendance dropped noticeably after the mid-term exam. Additional credit for participation might diminish this typical trend. Moving the credit for participation from optional extra credit to the base portion of the class grading rubric or the introduction of a penalty for lack of attendance could also be done, but this would detract from the desire to promote student *Identity* and *Initiative*. The goal should be for the class to be so enjoyable and worthwhile that students don't want to miss. The "carrot" is preferable to the "stick."

Moving at least part of the TV advertisement analysis assignment into the classroom should also be considered. This assignment is relatively short and could advantageously be presented to classmates. In the study, students submitted the assignment online and didn't share with each other. This assignment served to support standard learning objectives and addressed ethical issues which can function to help develop students' *Intuition* and *Integrity*. Students' work should probably be shared so they can learn from each other.

In order to reduce the pressure of having to cover the standard concepts in the course with reduced classtime because of project presentations in class and other learning activities that help students to grow in their ability to contribute to society, some of the nonessential concepts could be removed from the standard curriculum. This again favors an approach of putting greater emphasis on students' *Identity* by giving them greater choice and opportunities to diversify their education in a positive manner according to their unique interests and abilities and reducing the emphasis on the standard curriculum, while attaining standard course learning objectives.

Another modification to the onground EfHG course would be the elimination of the concentration exam. Students were given the opportunity of choosing an area of concentration in the course from the standard curriculum. Later, they were given a concentration exam which was weighted a little more than either the mid-term exam or the final exam. This exam covered only a third as many chapters as the mid-term or final exams and tilted a student's grade in favor of the chosen area of interest. The goal was to enhance students' fluency in learning the standard curriculum in an area and to respect student *Identity*. In retrospect enhanced fluency and the support of student *Identity* could perhaps be done in a better way. Giving students another mandatory exam to take could have been interpreted as letting students choose their own "poison." A more palatable and satisfying approach might be to introduce greater student choice into how the mid-term and and/or final exams are constructed and weighted instead of adding another exam to the class. Of course, this would need to be done in a way that still adequately assesses student learning of essential course objectives. The support of student *Identity* and the enhancement of fluency in the standard curriculum might also be done in some other clever ways.

Another general comment with regard to positive modifications to the EfHG strategies for onground sections is that learning activities and assessments should be simplified as much as possible. One possible reason that the EfHG strategies produced greater student satisfaction in the face-to-face classroom, but the online EfHG strategies failed to create a difference was the complexity of the course design. First, this complex course design was easier to implement in the classroom. Second, it was easier to explain

to students in person as well. The course should be simple and should be designed to cultivate individual student growth using the standard curriculum as a tool.

In theory EfHG strategies would be most effective if introduced throughout a program of study or even an entire institution. The cultivation of the seven dimensions of human greatness in one lone course is too much to ask. Students would more effectively grow to contribute to society if many of their courses were designed to foster human greatness and positive diversity and if their institution's culture was in agreement, both implicitly and explicitly. In addition, no one course would necessarily have to explicitly promote each of the seven dimensions if a coordinated team approach were used. Ideally the institution's lead administrators and instructors would be champions in the organization for EfHG.

Another thing that should be remembered when considering modifications is that sound teaching and learning methodologies and principles should always be utilized. Though *educating for human greatness* is a powerful notion that could help to reform education in a significant way, other concepts, such as active learning and engagement, formative, summative and authentic assessments, constructivism, cooperative learning, and the cultivation of critical thinking, should be employed as appropriate. Many of these concepts and EfHG work together well. Also, other positive virtues could effectively be included in the curriculum. In a business class these could appropriately include standards for prompt attendance, a dress code, suitable language, etc. EfHG is a wonderful idea. We should remember that there are many other good ideas as well that can be incorporated into an excellent course.

With regard to using EfHG strategies in the online mode of course delivery, further study is required. The design used in this study did not improve student satisfaction and is not recommended. The research cited above that was done at a public institution in the Southwest determined that small and large group discussions as well as student-instructor interaction were found to be key elements of the online learning process. This would possibly suggest the advisability of interjecting additional interaction into the online course design. However, if the online students in this study's population are taking online instead of onground classes because of a full schedule of family, work, and school activities, that approach might only exacerbate student satisfaction and possibly reduce retention and degree completion. Students are performing the same academically with either EfHG or non-EfHG strategies. A streamlined approach might be in order. Additional inquiry into online students' circumstances, needs, wants, and expectations would help to shed light on this dilemma. Research and trial and error are necessary to determine if a form of the EfHG curriculum could be effective in the online mode.

Recommendations for Future Research

Three areas immediately come to mind with regard to future research. First, an examination into which elements of the onground EfHG strategies were critical to causing greater student satisfaction would be enlightening. Two salient aspects of the onground EfHG approach in the study which contrasted with the non-EfHG approach were the Mini Great Brain Presentations and the Great Brain Project. Which of the two, for example, was more effectual?

Second, a study of the effects of an improved set of EfHG strategies in the classroom as suggested above would serve to confirm or disprove the effectiveness of the changes. Confirmation would be indicated by a significantly greater satisfaction than a comparison group and a greater effect size than that shown in this study.

Third, research into the circumstances, needs, wants, and expectations of online students would provide added insight into why the EfHG strategies utilized in this study did not improve student satisfaction. Moreover, the results of such a study could suggest ways to apply more effective EfHG strategies in online course designs.

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FIGURES
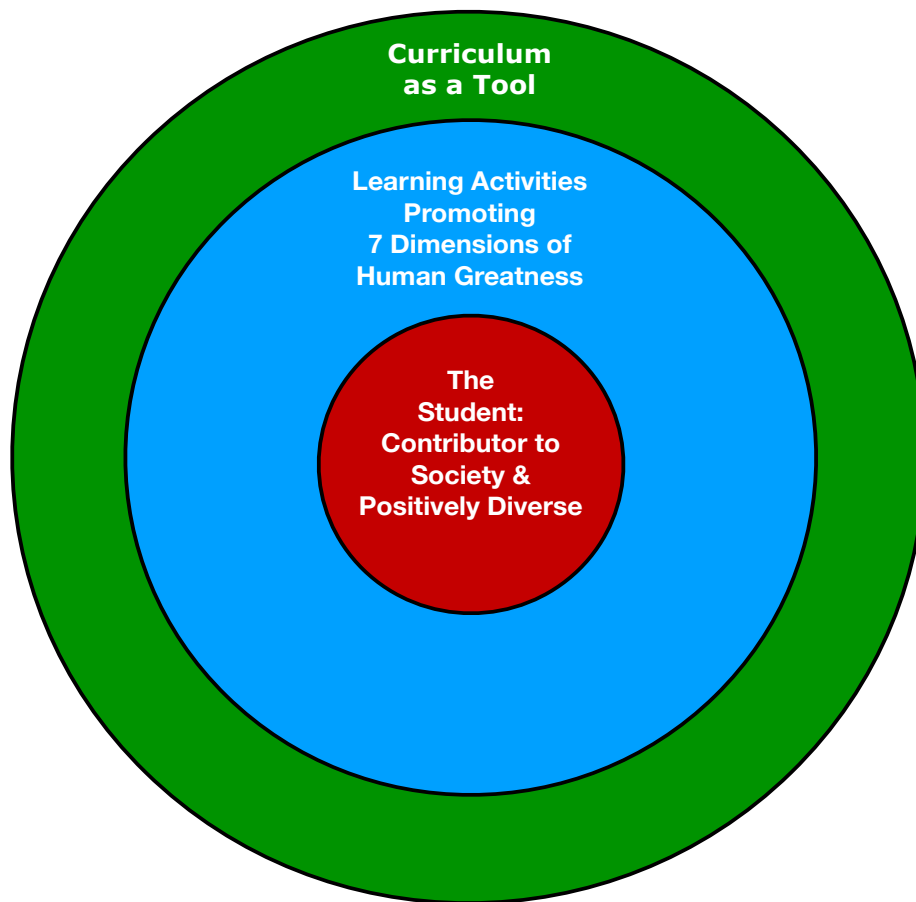
The Student-Centered Curriculum

Figure 1. The Student-Centered Curriculum Model
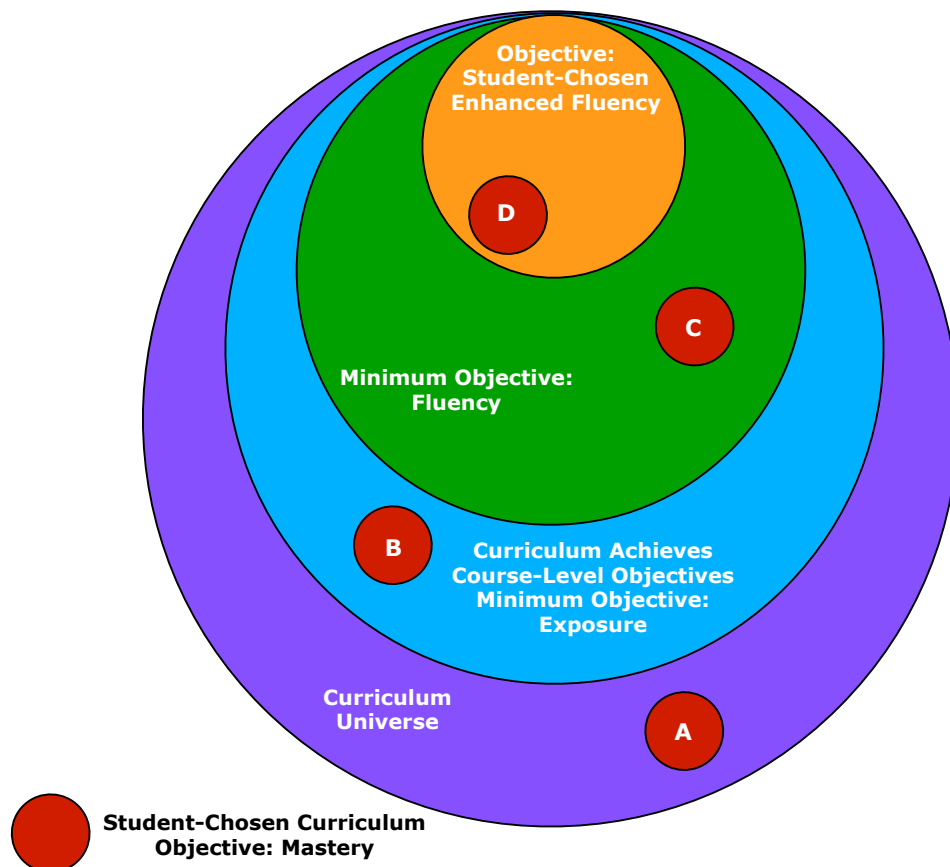
**Societal Contribution & Positive Diversity
Hierarchical Curriculum Model**

Figure 2. The Societal Contribution and Positive Diversity Hierarchical Curriculum
Model

Student Choice

Curriculum

Highest

Student's

Higher

Instructor's
& Institution's

Lower

Mastery

**Enhanced
Fluency**

Fluency

Exposure

**Societal Contribution & Positive Diversity
Hierarchical Curriculum Objectives**

Figure 3. Societal Contribution and Positive Diversity Hierarchical Curriculum Objectives

APPENDIX A

Informed Consent Document & Survey

Informed Consent Document & Survey

David Gerth is conducting a study to determine if there are statistically significant differences of academic performance and student satisfaction between students taking this course at Nashville State Community College using different course designs and modes of course delivery.
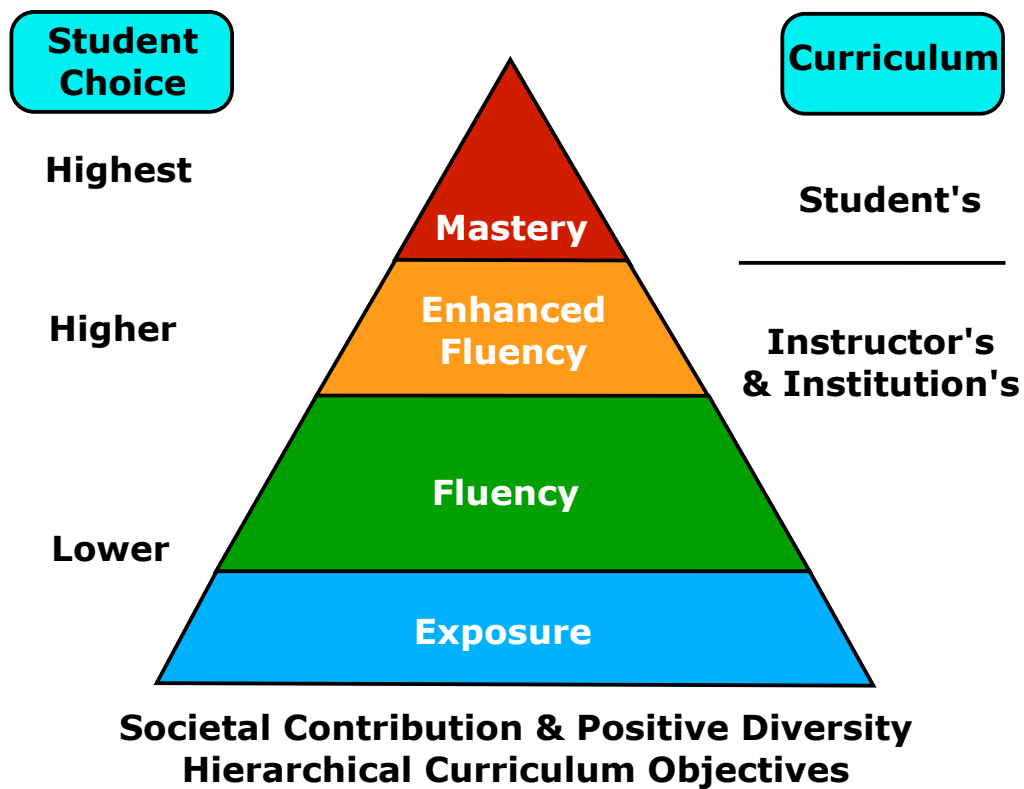
You are invited to participate in this study by completing this survey and allowing the researcher to use all of the information you provide in the survey as well as your pretest and final exam scores in this course.

Although you will not benefit directly from the knowledge gained from your participation in the study, you will make a contribution to the information known about course designs and modes of course delivery. In the future, other students may benefit from this research.

David Gerth will hold all of your personal information and test scores confidentially. After your survey information and test scores are matched, your name will be removed from the secure database used in the study.

You will be granted 10 points of extra credit on your final grade for your effort to complete the survey. Other than the extra credit described above, survey responses have no bearing on your final grade. If you have questions regarding the study including participants' rights, please contact David Gerth at 615-353-3423 or david.gerth@nscc.edu.

Your answer to Question 1 below as well as your submission of the online survey is recognition that you understand the information presented, and that you either do or do not want to participate in the study. You understand that participation is voluntary, and you may withdraw from the study at any time by changing your answer to Question 1 from "yes" to "no" and submitting the survey without answering all questions.

Online Survey Questions

1. Do you voluntarily choose to participate in the study?
   a. yes
   b. no

2. What is your gender?
    a. male
    b. female

3. What is your age to the nearest year?
    a. less than 16 years
    b. 16-20 years
    c. 21-25 years
    d. 26-30 years
    e. 31-35 years
    f. more than 35 years

4. What group below do you primarily consider yourself a member of?
    a. American Indian and Alaska Native
    b. Asian
    c. Black, African American, or Negro
    d. Hispanic, Latino, or Spanish
    e. Native Hawaiian and other Pacific Islander
    f. White or Caucasian
    g. Other

5. If you answered "Other" in the question above, please specify your racial or ethnic group:

    _____

6. What is your student status? Choose the option that best describes your situation.
    a. I am a part-time college student (less than 12 credit hours this term).
    b. I am a full-time college student (12 or more credit hours this term).
    c. I am a dual-enrollment student (enrolled in both high school and college classes at the same time).

7. What is your overall GPA (Grade Point Average) for the college-level courses you have taken at Nashville State Community College? If this is your first semester taking college-level courses at , enter "first semester."

    Note: Developmental, remedial, or learning support courses are not considered "college-level" and should not be included in your GPA.

    _____

8. What is your highest level of academic achievement?
   a. I do not have a high school diploma or GED.
   b. I have completed high school or have a GED.
   c. I have an associate's degree.
   d. I have a bachelor's degree.
   e. I have a master's degree.
   f. I have a doctorate.

9. What is your employment status?
   a. I am not gainfully employed.
   b. I am employed and work part-time (less than 40 hours per week).
   c. I am employed and work full-time (40 or more hours per week).

10. What is your annual income level in U.S. Dollars?
    a. $0 - $14,999 per year
    b. $15,000 - $29,999 per year
    c. $30,000 - $44,999 per year
    d. $45,000 - $59,999 per year
    e. $60,000 or more per year

11. Where do you live? Enter your zip code. (If you are living outside the United States, enter your country of residence.)

    _____

12. The balance of the survey will ask you to rate various aspects of this course with regard to your expectations:
    1 = "much less than expected"
    2 = "less than expected"
    3 = "met expectations"
    4 = "more than expected"
    5 = "much more than expected"

    1. Your instructor's ability to demonstrate the importance and significance of the subject matter
    1 much less than expected
    2 less than expected
    3 met expectations
    4 more than expected
    5 much more than expected

2. Your instructor's ability to introduce stimulating ideas about the subject
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

3. Your instructor displayed a personal interest in students and their learning
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

4. Your instructor explained the reasons for criticisms of students' academic performance
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

5. Your instructor found ways to help students answer their own questions
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

6. Your instructor related course material to real life situations
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

7. Your instructor made it clear how each topic fit into the course
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

8. Your instructor explained course material clearly and concisely
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

9. Your instructor scheduled course work (class activities, tests, projects) in ways that encouraged students to stay up-to-date in their work
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

10. Your instructor gave tests, projects, etc. that covered the most important points of the course
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

11. Your instructor provided timely and frequent feedback on tests, reports, projects, etc. to help students improve
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

12. The quality of instruction in this course
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

13. Your overall educational experience in this course
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

14. How well this course prepared you for employment
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

15. How well this course provided learning experiences which allowed you to learn and grow as a person
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

16. How well this course provided learning experiences which allowed you to lead or guide others
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

17. How well this course provided learning experiences which allowed you to gain self-confidence in expressing your ideas
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

18. How well this course provided learning experiences which allowed you to plan and carry out projects
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

19. How well this course provided learning experiences which allowed you to think critically
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

20. How well this course provided learning experiences which allowed you to speak effectively
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

21. How well this course provided learning experiences which allowed you to write effectively
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

22. How well this course provided learning experiences which allowed you to understand written information
1 much less than expected
2 less than expected
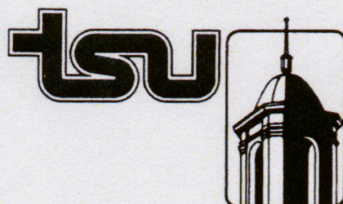3 met expectations
4 more than expected
5 much more than expected

23. How well this course provide learning experiences which allowed you to define and solve problems
1 much less than expected
2 less than expected
3 met expectations
4 more than expected
5 much more than expected

APPENDIX B

IRB Approval Letter

IRB Approval Letter

Research and Sponsored Programs
Division of Academic Affairs
Tennessee State University
3500 John A. Merritt Blvd.
Nashville, Tennessee 37209-1561

OFFICE OF THE PROVOST

To: David Gerth
david.gerth@nscc.edu
cdickens@tnstate.edu
Dept.: Teaching and Learning

From: *[signature]*

Digitally signed by G. Pamela Burch-Sims, Ph.D.
DN: cn=G. Pamela Burch-Sims, Ph.D., o=Institutional
Review Board for the, ou=Protection of Human
Subjects, email=irb@tmstate.edu, c=US

Dr. G. Pamela Burch-Sims, Chair, Institutional Review Board

Re: Protocol #HS2012-3102

Date: Monday, September 17, 2012

The document listed below has been carefully reviewed and found to be in compliance with OPRR document title 45, Code of Federal Regulations part 46, the protection of human subjects, as amended by Federal policy, effective August 19, 1991. This project is **approved** as it presents minimal or no research risks to the pool of impending human subjects. Please make note, that any deviations in the administration of the protocol, accidental or otherwise should be reported to the IRB as soon as possible. The FWA for Tennessee State University is #FWA00007692, which is effective from July 8, 2011 to July 8, 2016.

"Educating for Societal Contribution and Positive Diversity at a Two-Year Community College"

This approval is valid for one year from the date indicated above. Continuation of research beyond that date requires re-approval by the Institutional Review Board.

Please contact me at 963-5661 or e-mail irb@tnstate.edu for additional information.

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER M/F

APPENDIX C

Nashville State Community College IRB Memo

Nashville State Community College IRB Memo

Nashville State
Community College

Memorandum
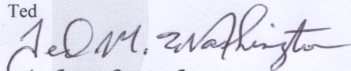
To: Mr. David Gerth

From: Ted M. Washington, NaSCC IRB Chair

Date: 3/31/2014

Re: Research Request

_____

After reviewing the IRB documents that were approved by the Institutional Review Board of Tennessee State University, reciprocity was granted, authorizing you to proceed with your study.

This memo certifies that Nashville State Community College approved of your study and granted you permission to proceed. Please let me know if additional information is needed in order to establish your compliance with Nashville State's IRB policies.

Regards,

Ted

Ted M. Washington
Associate Vice President for Planning and Assessment
Nashville State Community College
Phone: (615) 353-3228
Fax: (615) 353-3221
Email: ted.washington@nscc.edu

APPENDIX D

Course Designs

Course Designs

Course Designs	
Comparison Group:	**Academic Content Aims:** Content is broadest with Exposure and narrowest and deepest with Mastery. Student Choice is least with Exposure and Fluency and greatest with Mastery. Students accomplishing Fluency have met standard course learning objectives.
Onground EfHG	Exposure, Fluency, Enhanced Fluency, and Mastery
Online EfHG	Exposure, Fluency, Enhanced Fluency, and Mastery
Onground Non-EfHG	Exposure and Fluency
Online Non-EfHG	Exposure and Fluency

Comparison Group:	**Exposure Methods:**
Onground EfHG	Read textbook, complete online lessons, and take optional extra credit online chapter quizzes and required online review tests. Questions are taken from textbook publisher's test bank. Quizzes and review tests are not proctored and can be taken multiple times until their deadlines. Students are given their highest score. Textbook publisher's PowerPoint slides made available to students online within online lessons—along with other resources.
Online EfHG	Read textbook, complete online lessons, and take optional extra credit online chapter quizzes and required online review tests. Questions are taken from textbook publisher's test bank. Quizzes and review tests are not proctored and can be taken multiple times until their deadlines. Students are given their highest score. Textbook publisher's PowerPoint slides made available to students online within online lessons—along with other resources.
Onground Non-EfHG	Read textbook, complete online lessons, and take optional extra credit online chapter quizzes and required online review tests. Questions are taken from textbook publisher's test bank. Quizzes and review tests are not proctored and can be taken multiple times until their deadlines. Students are given their highest score. Textbook publisher's PowerPoint slides made available to students online within online lessons—along with other resources.

Course Designs - Continued	
Online Non-EfHG	Read textbook, complete online lessons, and take optional extra credit online chapter quizzes and required online review tests. Questions are taken from textbook publisher's test bank. Quizzes and review tests are not proctored and can be taken multiple times until their deadlines. Students are given their highest score. Textbook publisher's PowerPoint slides made available to students online within online lessons—along with other resources.

Comparison Group:	Fluency Methods:
Onground EfHG	Students work in groups during classtime to inquire regarding key standard concepts and report their findings to the class. Students are given extra credit for presenting. (Mini Great Brain Presentations) Instructor later reviews the same concepts with a mini-lecture. If class falls behind schedule, instructor solely presents key concepts without student presentations. This occurs only during a small portion of the course. Students interact online to inquire regarding key standard concepts and report their findings to the class using an online discussion board for credit. (Mini Great Brain Discussions) Proctored mid-term and final exams from the instructor's test bank. Students given exam study guide.
Online EfHG	Students are individually given an optional opportunity to inquire regarding key standard concepts and report their findings to the class on an online discussion board. Students are given extra credit for presenting in writing. Audio or video presentations are given additional credit. (Mini Great Brain Presentations) Students interact online to inquire regarding key standard concepts and report their findings to the class using an online discussion board for credit. (Mini Great Brain Discussions) Proctored mid-term and final exams from the instructor's test bank. Students given exam study guide.

Course Designs - Continued	
Onground Non-EfHG	Transfer of knowledge to students using traditional lecture of key standard concepts by instructor; utilization of PowerPoint slides and white board. Some classroom discussion occurs. Students interact online to inquire regarding key standard concepts and report their findings to the class using an online discussion board for credit. (Mini Great Brain Discussions) Proctored mid-term and final exams from the instructor's test bank. Students given exam study guide.
Online Non-EfHG	No lecture Students interact online to inquire regarding key standard concepts and report their findings to the class using an online discussion board for credit. (Mini Great Brain Discussions) Proctored mid-term and final exams from the instructor's test bank. Students given exam study guide.

Comparison Group:	Enhanced Fluency Methods:
Onground EfHG	Students take one proctored exam over a course area of concentration chosen by them from four options. Questions are taken from instructor's test bank. Students are given a study guide. Concentration exam is weighted a little more than the mid-term and final exams. Students complete the TV advertisement analysis assignment. Some choice is involved.
Online EfHG	Students take one proctored exam over a course area of concentration chosen by them from four options. Questions are taken from instructor's test bank. Students are given a study guide. Concentration exam is weighted a little more than the mid-term and final exams. Students complete the TV advertisement analysis assignment. Some choice is involved.
Onground Non-EfHG	None
Online Non-EfHG	None

Course Designs - Continued	
Comparison Group:	**Mastery Method:**
Onground EfHG	Great Brain Project: Students choose a topic to study until they reach one of four levels of knowing: Specialist, Expert, Mastermind, or Genius. A research partner is chosen from parents, relatives, peers, or subject matter experts in the community. Inquiry methods are utilized. Creativity and originality are required. Students ultimately prepare and submit a (audio or video preferred) Great Brain presentation online. Some students are given the opportunity to optionally present their project in class. The project grade is weighted more than the sum of the mid-term and final exams.
Online EfHG	Great Brain Project: Students choose a topic to study until they reach one of four levels of knowing: Specialist, Expert, Mastermind, or Genius. A research partner is chosen from parents, relatives, peers, or subject matter experts in the community. Inquiry methods are utilized. Creativity and originality are required. Students ultimately prepare and submit a (audio or video preferred) Great Brain presentation online. The project grade is weighted more than the sum of the mid-term and final exams.
Onground Non-EfHG	None
Online Non-EfHG	None

Comparison Group:	**EfHG Aims:**
Onground EfHG	Educate for societal contribution and positive diversity. Help students grow in seven dimensions: Identity, Inquiry, Interaction, Initiative, Imagination, Intuition, and Integrity.
Online EfHG	Educate for societal contribution and positive diversity. Help students grow in seven dimensions: Identity, Inquiry, Interaction, Initiative, Imagination, Intuition, and Integrity.
Onground Non-EfHG	Not Applicable
Online Non-EfHG	Not Applicable

Course Designs - Continued	
Comparison Group:	**Identity Growth Methods:**
Onground EfHG	Emphasis on the development of students' unique assets (talents) rather than on the need to overcome their deficits. This is done during class introductions, online Ice Breaker exercise, choice of area of concentraton, as part of the Great Brain Project, and the TV advertisement assignment. Identity also comes into play when students decide whether or not to participate in any optional course activity. Whenever students are given choice, Identity is activated.
Online EfHG	Emphasis on the development of students' unique assets (talents) rather than on the need to overcome their deficits. This is done during online Ice Breaker exercise, choice of area of concentration, as part of the Great Brain Project, and the TV advertisement assignment. Identity also comes into play when students decide whether or not to participate in any optional course activity. Whenever students are given choice, Identity is activated.
Onground Non-EfHG	Not Applicable
Online Non-EfHG	Not Applicable

Comparison Group:	**Inquiry Growth Methods:**
Onground EfHG	Mini Great Brain Presentations and Discussions over standard course learning objectives throughout the term and the Great Brain Project assignment.
Online EfHG	Mini Great Brain Presentations and Discussions over standard course learning objectives throughout the term and the Great Brain Project assignment.
Onground Non-EfHG	Not Applicable
Online Non-EfHG	Not Applicable

Course Designs - Continued	
Comparison Group:	**Interaction Growth Methods:**
Onground EfHG	Interactive Mini Great Brain Presentations & Discussions over standard learning objectives, the Great Brain Project, and an emphasis on cooperation, kindness, and respect over competition. Interaction is also found in class introductions, the online Ice Breaker exercise & class attendance.
Online EfHG	Interactive Mini Great Brain Presentations & Discussions over standard learning objectives, the Great Brain Project, and an emphasis on cooperation, kindness, and respect over competition. Interaction is also found in the online Ice Breaker exercise & class attendance.
Onground Non-EfHG	Not Applicable
Online Non-EfHG	Not Applicable

Comparison Group:	**Initiative Growth Methods:**
Onground EfHG	Utilization of active learning, choice, inquiry, and self-directed learning. This is found in the Mini Great Brain Presentations and Discussions, choice of concentration, the Great Brain Project, and Self-Evaluation. Initiative is important in all optional course activities.
Online EfHG	Utilization of active learning, choice, inquiry, and self-directed learning. This is found in the Mini Great Brain Presentations and Discussions, choice of concentration, the Great Brain Project, and Self-Evaluation. Initiative is important in all optional course activities.
Onground Non-EfHG	Not Applicable
Online Non-EfHG	Not Applicable

Course Designs - Continued	
Comparison Group:	**Imagination Growth Methods:**
Onground EfHG	Imagination is required for originality in product creation in the Great Brain Project. Some imagination can also be utilized for the Mini Great Brain Presentations and Discussions. Imagination helps add interest to class introductions and the online Ice Breaker exercise.
Online EfHG	Imagination is required for originality in product creation in the Great Brain Project. Some imagination can also be utilized for the Mini Great Brain Presentations and Discussions. Imagination helps add interest to the online Ice Breaker exercise.
Onground Non-EfHG	Not Applicable
Online Non-EfHG	Not Applicable

Comparison Group:	**Intuition Growth Methods:**
Onground EfHG	The general attempt to develop and nurture insight, emotional intelligence, and recognition of truth with the heart. This is specifically addressed with the TV advertisement analysis assignment. Intuition can also be developed as students study various ethical issues found in the course content.
Online EfHG	The general attempt to develop and nurture insight, emotional intelligence, and recognition of truth with the heart. This is specifically addressed with the TV advertisement analysis assignment. Intuition can also be developed as students study various ethical issues found in the course content.
Onground Non-EfHG	Not Applicable
Online Non-EfHG	Not Applicable

Course Designs - Continued	
Comparison Group:	**Integrity Growth Methods:**
Onground EfHG	Students will have the opportunity of evaluating themselves and their peers and seeing the differences between these evaluations—and those of their instructor. This will take place when the Great Brain Project is evaluated. Also, students evaluate themselves with regard to their performance for the whole semester.
Online EfHG	Students will have the opportunity of evaluating themselves and their peers and seeing the differences between these evaluations—and those of their instructor. This will take place when the Great Brain Project is evaluated. Also, students evaluate themselves with regard to their performance for the whole semester.
Onground Non-EfHG	Not Applicable
Online Non-EfHG	Not Applicable

Key Distinguishing Course Design Differences between Comparison Groups	(1) Traditional lecture or lack of lecture (online) in non-EfHG sections is replaced by inquiry-based discussion and interaction in EfHG sections. (2) Students in EfHG sections choose areas of concentration. The grade value of assessment of the area of concentration is significant. Students are given the opportunity to develop positive diversity within the standard curriculum. (3) Students in EfHG sections complete the Great Brain Project. This assignment helps students develop their unique skills and abilities that will allow them to contribute to society. They are given the opportunity of developing positive diversity outside the standard curriculum, yet within the discipline. (4) Though an attempt has been made to make onground and online sections of non-EfHG and EfHG course designs similar, they are not identical in every respect.

APPENDIX E

TV Advertisement Assignment

TV Advertisement Assignment

TV Advertisement Assignment

1. **Choose a TV advertisement:** From current television advertisements or dated ads that you can find on the Internet choose a TV ad to analyze.
 	
 2. **Answer Questions:** Answer the following questions about the ad:
    a. Describe the profile(s) of the target audience(s) you think the ad is designed to reach. Use geography, demographics, psychographics, benefits, geodemographics, and loyalty to describe the target audience(s) as appropriate.
    b. Do you think this advertisement is part of the advertiser's pull or push promotion strategy? Explain.
    c. What segmentation strategy do you think the advertiser is using: undifferentiated, differentiated, concentrated, or micromarketing? Defend your choice.
    d. Is the advertisement primarily informative, persuasive, or reminder advertising? Explain.
    e. Is the advertisement product-focused or institutional? Explain.
    f. Do you think this ad is trying to generate primary or selective demand? Explain.
    g. What message do you think the advertisement is trying to communicate to the target audience(s)? What is the unique selling proposition?
    h. What kind of appeal is utilized in the ad: informational, emotional, or other? Explain.
    i. Do you think the advertisement successfully communicates the intent of the ad to the target audience(s)? Explain.
    j. Test your intuition, insight and emotional intelligence. Use your heart to determine the truth. Discuss whether or not you feel this advertisement is totally honest or deceptive. Is it true or false? Is it good for society? Is it ethical? Could you in good conscience responsibly use this ad if you were the advertiser? Explain and defend your answer. This section of the analysis is the most important one. Put effort into your answer. ("The heart is wiser than the intellect." --J.G. Holland)
 	
 3. **Submit:** Submit your analysis (answers and comments) electronically with the Assignments tool using a .doc or .docx file format. Use a 12-point, single-spaced font. There is no length requirement. Make the analysis as long as it needs to be to complete the assignment in a satisfactory manner. **Make sure you describe the ad comprehensively in the beginning of your analysis.** Include a hyperlink to the ad if it can be found on the Internet.

APPENDIX F

Great Brain Project Instructions

Great Brain Project Instructions

Great Brain Project Instructions
1.   **Choose a topic:** You can be smarter than anyone in class or on campus on almost any marketing-related topic you choose. All around you there are marketing-related things waiting for someone to discover something new about them. Choose one for an exciting adventure in learning. Though your topic must be related to marketing, it **doesn't** need to be covered in your textbook.
2.   **Get topic approved:** Submit your chosen topic to your instructor and receive approval before going further. Your instructor will most likely approve your preferred topic.
3.   **Choose a research partner:** Your partner can be a peer, relative, or subject matter expert in the community. Your choice of partner should be influenced by your chosen topic. Your research partner should be someone who is willing and able to give you advice regarding all of the remaining steps of the Great Brain project. **Your partner should not do the work.** Your partner is your consultant and adviser. Give your partner's name and relationship to you to your instructor.
4.   **Build Questions:** First, write down all the "facts" you think you already know about your subject. Then, make a list of all the things you would like to learn about your subject. See if you can ask a question that starts with each of these words. Can you use them all? (what, why, when, who, was, which, would, were, how, is, do, does, did, may, are, could, shall, will, can, have, if) Keep adding to your list of questions while you carry out your investigation. **You should include your research questions in your final paper.**
5.   **Study:** Gather information about your subject. Study intensely with your eyes--draw or paint pictures of your subject. Count, weigh, measure, collect, and compare. Search in all possible places--libraries, newspapers, magazines, television, interviews with authorities, the Internet, etc. Read everything you can get your hands on. Write letters asking for information. Perform experiments. Keep a notebook of your findings. Make a bibliography of your sources of information. Use the APA style.
6.   **Imagine, Create, Invent:** After filling your mind with information about your subject, *use your own ideas to create or invent an original product--a story, a poem, a work of art, a piece of music, a construction, a consumer or B2B product, an advertisement, etc.*

Great Brain Project Instructions - Continued
7. **Prepare to share:** Think of a creative, interesting way to share your Great Brain knowledge with your class, relatives, friends, and acquaintances. Take time to prepare visual aids, a speech, a PowerPoint presentation, a demonstration, or other ways to share your knowledge that will hold the attention and interest of your audience. ***During your preparation, develop a brief summary of the gathering-knowledge portion of your project so you can share this during the presentation. The quantity and quality of your questions, the quantity and quality of the information you recorded, your reading and other sources of information, and your creative product(s) of original thinking should all be included in this summary. Share your original product during the presentation if possible.***
8. **Share:** When you are ready, record your audio and/or video presentation using a voice recorder, camcorder, smart cell phone, etc.
9. **Post Presentation:** Post your presentation in the appropriate location in the Discussions area according to the instructions given there. **Make sure to work well ahead of your deadline in case you run into technical difficulties!**
10. **Submit:** Submit an electronic, written Great Brain project report with bibliography to your instructor using the Assignments tool. The file format should be .doc or .docx . Include the following sections: topic, research partner, questions asked, information recorded, reading, other sources of information, creative product of original thinking, and presentation. **This is not a term paper.** Your presentation is where you share your Great Brain knowledge. The report documents the steps in the project. There is no set length for the report. Make the report as long or short as it needs to be to adequately report on your project. Use 12-point font, double-spaced with one-inch margins on all sides. ***Use the provided Great Brain Project Paper Template. Simply fill out the form, save, and submit.***
11. **Evaluate:** Your project will be evaluated according to the Great Brain Evaluation form (attached). Yourself, your instructor, and your classmates will evaluate your project. You will ultimately be evaluated to be a ***Specialist***, ***Expert***, ***Mastermind***, or ***Genius***. Take all three sources of evaluation and compare them. Contemplate any discrepancies among them. Determine if your self-assessment was accurate and honest. Your project grade will come from your instructor's evaluation.

APPENDIX G

Great Brain Evaluation

Great Brain Evaluation

Great Brain Evaluation

Student: _____   Semester/Section: _____

	Specialist	Expert	Mastermind	Genius
Points	1	2	4	8
Gathering Knowledge				
Questions:				
Quantity				
Quality				
Recording Information:				
Quantity				
Quality				
Reading:				
(Bibliography)				
Other Resources:				
(Interviews, Museums, etc.)				
Creative Product(s):				
Presentation				
Loud & Clear				
Own Words				
Expression				
Enthusiasm				
Holds Audience				
Visuals				
Effort				
Fielding Questions				
Column Total				
Grand Total				

Specialist	**10 – 20 points**
Expert	**21 – 50 points**
Mastermind	**51 – 100 points**
Genius	**101 – 120 points**

(Stoddard, 2010)

APPENDIX H

Grading Criteria & Aims for Required Course Activities

Grading Criteria & Aims for Required Course Activities

Grading Criteria & Aims for Required Course Activities		
	EfHG Course Designs	**Non-EfHG Course Designs**
Review Tests (Exposure & Fluency)	**12%**	**12%**
Mid-Term Exam (Fluency)	**12%**	**39%**
Final Exam (Fluency)	**12%**	**39%**
Online Mini Great Brain Discussions (Fluency, Inquiry[*], Interaction[*], Initiative[*] & Imagination[*])	**10%**	**10%**
Concentration Exam (Enhanced Fluency, Identity & Initiative)	**14%**	**-**
TV Ad Analysis (Enhanced Fluency, Identity & Intuition)	**7.5%**	**-**
Great Brain Project (Mastery, Identity, Inquiry, Interaction, Initiative, Imagination & Integrity)	**30%**	**-**
Self-Evaluation Survey (Initiative & Integrity)	**2.5%**	**-**

[*]**Non-EfHG course designs do not have aims that include the seven dimensions of human greatness, even though one or more of these dimensions may be enhanced during the course.**

APPENDIX I

Aims for Key Optional Course Activities

Aims for Key Optional Course Activities

Aims for Key Optional Course Activities		
	EfHG Course Designs	**Non-EfHG Course Designs**
Class Introduction/ Ice Breaker	**Identity, Interaction, Initiative & Imagination**	**-**
Complete Online Lessons	**Exposure, Fluency, Enhanced Fluency, Identity, Initiative & Intuition**	**Exposure & Fluency**
Class Attendance	**Fluency, Identity, Interaction & Initiative**	**Fluency**
Mini Great Brain Presentations	**Fluency, Identity, Inquiry, Interaction, Initiative & Imagination**	**Not Applicable**
Online Chapter Quizzes	**Exposure, Fluency, Identity & Initiative**	**Exposure & Fluency**
Case Assignments	**Exposure, Fluency, Identity & Initiative**	**Not Applicable**