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EDUCATIONAL TALENT SEARCH: ASSESSING STUDENT OUTCOMES FOR
FIRST-GENERATION, LOW-INCOME STUDENTS IN RURAL GEORGIA

by

SANDRA J. JENKINS

(Under the Direction of Meta Harris)

ABSTRACT

The Educational Talent Search (ETS) program is a pre-college information dissemination program that works with potential first-generation, low-income sixth through twelfth graders. The goal of the ETS program is to increase the number of first-generation, low-income students graduating from high school and enrolling in programs of postsecondary study. The purpose of this current study is to determine if there are specific ETS program services that facilitate high school graduation and postsecondary enrollment, specifically at the four-year college/university level. The primary data source of this study is the Blumen database system for an ETS program hosted by a small two-year college in Georgia. The target group of this study is the 203 ETS participants who were in the twelfth grade during the 2003-2004 and 2004-2005 academic years. Data analysis results from chi square and logistic regression tests reveal that regardless of the academic year, admissions and financial aid information emerged as the greatest single predictor of this study of both high school graduation and postsecondary enrollment.

INDEX WORDS: Educational Talent Search program, First-generation students, Low-income students, High school graduation, Postsecondary enrollment

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by

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Ed.S., Georgia Southern University, 2003

A Dissertation Submitted to the Graduate Faculty of Georgia Southern University in
Partial Fulfillment of the Requirements for the Degree

DOCTOR OF EDUCATION

STATESBORO, GEORGIA

2006

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EDUCATIONAL TALENT SEARCH: ASSESSING STUDENT OUTCOMES FOR
FIRST-GENERATION, LOW-INCOME STUDENTS IN RURAL GEORGIA

by

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December 2006

DEDICATION

In recognition of all her love, guidance, and belief in me

For instilling the value of education in me

For deferring her own dreams for the sake of her children

For all the sacrifices along the way

I hereby dedicate this dissertation to my mother

Clattie C. Coleman

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God has blessed me abundantly and I thank Him for His favor and for His forgiveness.

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“...but they that wait upon the Lord shall renew their strength; they shall mount up with wings as eagles; they shall run, and not be weary; and they shall walk, and not faint.”

Isaiah 40:31(KJV)

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CHAPTER 1

INTRODUCTION

Learn why the world wags and what wags it. That is the only thing which the mind can never exhaust, never alienate, never be tortured by, never fear or distrust, and never dream of regretting. Learning is the only thing for you. Look what a lot of things there are to learn.

-T.H. White, *The Once and Future King*

Today, Americans expect their children to receive a quality education. They see it as a right and are quick to voice their opinions on the state of education in America and what they think should be done to ‘fix’ what is wrong with America’s educational system. Policies such as No Child Left Behind, enumerate in great detail the changes that are expected of today’s schools. Everyone has an opinion of what is wrong, who caused the problem, and what should be done to solve America’s educational woes. In the midst of all of the controversy and finger-pointing, it is easy to forget that education, now considered an inalienable right, was once a privilege for a select few.

Historical Perspective

In *Lessons of a Century* (Olson, 2000), a collection of articles chronicling the progress of education in the United States since the beginning of the 20th century, a grim picture emerges of the realities of education for today’s middle school and high school student. At the turn of that century, there was an abundance of unskilled jobs available, and a diploma was not required to enter the workforce. As a result, most students left school to begin working by age 13 (Olson, 2000). Only one out of every ten students over age 14 remained in school, and less than 7 percent of those ever graduated from high school (Olson, 2000).

During the 1940s, however, a combination of population shifts all worked together to bring large numbers of students together and lead them back into the K-12 classroom (Spring, 1990). Waves of immigrants were entering the country and rural farmers were leaving their farms for the allure of city life. Simultaneously, the child labor market was shrinking due to technological advances, new child labor laws, and compulsory attendance laws (Olson, 2000). These forces worked together to bring massive numbers of families to the city, and in the absence of a work environment, the K-12 classroom became the default holding ground for the city's youth.

At the same time, the passage of the Servicemen's Readjustment Act of 1944, better known as the GI Bill, made college affordable for millions of Americans. Veterans were eligible for education benefits after being discharged from the military, and millions who would have flooded the labor market instead opted for education, which reduced joblessness during the demobilization period (Olson, 2000). When they did enter the labor market, most were better prepared to contribute to the support of their families and society. Roughly 7.8 million veterans utilized the education and training benefits provided by the G. I. Bill and by 1948 veterans accounted for half of the college students in the United States (Serow, 2004). As more and more people took advantage of the GI Bill, the job market changed and the value of a high school diploma decreased (Altbach, Berdahl, & Gumport, 1999). In 1950, a record number of undergraduate degrees 496,000 were conferred— 496,000— due in large part to the record enrollments of veterans (Serow, 2004). Although the GI Bill did much to increase access to higher education; there still were disparities in the numbers of middle class and low-income persons entering college. These disparities would continue unchallenged until Lyndon B. Johnson

advanced to the presidency after the assassination of John F. Kennedy in the 1963. Johnson would continue the legacy of John Kennedy by bringing with him a utopian vision of the United States where racial injustice and poverty did not exist (Cohen, 1998). His “Great Society” could be achieved only through an absolute “war on poverty” where socio-economic opportunities were available to all Americans, not just the upper and middle classes (Cohen, 1998). It is from these two domestic policies that the beginning of what has come to be known as TRIO programs can be traced.

TRIO Programs

The term “TRIO” was first used to describe the original three programs: Upward Bound, Educational Talent Search, and Student Support Services (McElroy & Armesto, 1998). These programs were put in place to break down social, academic, economic, and cultural barriers to higher education (Balz & Esten, 1998). Participants from all three programs were students from low-income families where neither parent/custodial guardian had obtained a four-year college degree (Balz & Esten, 1998).

The first TRIO program, Upward Bound (UB), was created by the Economic Opportunity Act of 1964 (Zulli, Frierson, & Clayton, 1998). The following year, the Higher Education Act of 1965 created Educational Talent Search and later (in 1968) Student Support Services (McElroy & Armesto, 1998). Each subsequent amendment of the Higher Education Act has either created additional TRIO programs or solidified the programs already in existence (Blake, 1998). Since their inception in 1964, the TRIO programs have been expanded to offer a wider range of services to a broader base of participants. The original programs were focused only on students who came from low-income families where neither parent had obtained an undergraduate degree, but with the

addition of Student Support Services and Ronald E. McNair Postbaccalaureate Achievement programs, students with disabilities and underrepresented minority students were included in the target population for TRIO programs as well (McElroy & Armesto, 1998). Where once there were only the original three TRIO programs—Upward Bound, Educational Talent Search, and Student Support Services—there are now a total of eight TRIO programs in existence today: Upward Bound, Educational Talent Search, Student Support Services, Educational Opportunity Centers, the Training Program for Federal TRIO programs, the Ronald E. McNair Postbaccalaureate Achievement program, Upward Bound Math/Science, and the TRIO Dissemination Partnership program, chronologically (U.S. Department of Education, 2005a). In fiscal year 2004, these eight programs together served 868,969 participants with a combined budget of \$832.6 million dollars (<http://www.ed.gov/about/offices/list/ope/trio/recentfunding.html>).

Upward Bound (UB)

Upward Bound (UB), which began in 1965, is a pre-college program geared toward first-generation, low-income students who require academic support to graduate high school and pursue a program of postsecondary study (McElroy & Armesto, 1998; McLure & Child, 1998; Casey & Ferguson, 1999). The Department of Education defines a first-generation participant as one whose parents do not have an undergraduate degree (Federal Register, 643.7b). A low-income participant is defined as one whose family's taxable income did not exceed 150 percent of the poverty level established by the Bureau of the Census of the U.S. Department of Commerce (Federal Register, 643.7b). As the first of the TRIO programs, it has the distinction of being the second largest federal

program—with student financial aid programs being the largest—aimed at assisting students in pursuing a postsecondary education (Myers & Schirm, 1999).

Participants enter UB as freshmen or sophomores in high school and receive intensive instructional services, tutoring, and academic advising during the academic year and participate in an equally intense summer component in which the participants attend classes on college campuses (Myers & Schirm, 1999). The U.S. Department of Education requires all Upward Bound projects to provide certain classes to their participants. These classes must include math, laboratory science, composition, literature, and foreign language (McLure & Child, 1998). In fiscal year 2004, the U.S. Department of Education reported that there were 763 UB projects which provided services for 56,679 participants with a combined funding allocation of \$274,097,258.

(<http://www.ed.gov/programs/trioupbound/funding.html>).

Educational Talent Search (ETS)

The Educational Talent Search (ETS) program, created by the Higher Education Act of 1965, is an information dissemination program that works with potential first-generation, low-income sixth through twelfth graders to increase the high school graduation rate and the rate of students enrolling in program of postsecondary study at either colleges/universities or technical schools (Mathematica Policy Research Inc., 2002). Because ETS is a less intensive program than Upward Bound, the number of participants is much larger. Whereas UB projects usually have between 50 and 110 participants, a single ETS project can serve 600 to 1200 participants (Federal Register, 643.32). ETS can serve larger numbers of participants because the program focuses on information dissemination—providing participants with information regarding the

college admissions process, financial aid, and other topics related to academic success (McElroy & Armesto, 1998).

The ETS program focuses on providing workshops and in-school sessions on such topics as career exploration and interest inventories, academic advising (college prep versus tech prep), goal setting, critical thinking and decision making skills, study skills, test-taking tips, and college admissions and financial aid. Supplemental activities and services include the provision of fee waivers for the SAT, ACT, and college admissions application fees, free tutoring, cultural fieldtrips, and college tours (Mathematica Policy Research, Inc., 2002). In fiscal year 2004, the U.S. Department of Education reported that there were 469 Educational Talent Search projects which provided services for 382,541 participants with a combined funding allocation of \$144,230,198 (<http://www.ed.gov/programs/triotalent/funding.html>).

Student Support Services (SSS)

In 1968, the amendments to the Higher Education Act authorized Special Services for Disadvantaged Students, a program designed to assist first-generation, low-income college freshmen and sophomores, as well as students with disabilities, with academic support in an effort to increase the number of students who stayed in college and who graduated (Mahoney, 1998). The program was later renamed Student Support Services (SSS) in an effort to reduce any stigma that might be associated with the program's name (U.S. Department of Education, 2004b). In addition to retention and graduation rates, this program is also concerned with increasing the rates at which students are eligible to transfer from two-year institutions to four-year institutions (Thomas, Farrow, & Martinez, 1998).

Participants receive study skills training, tutoring, academic advising, career counseling, technical assistance with the financial aid application, as well as special accommodations for those students with disabilities (Zhang, Chan, Hale, & Kirshstein, 2005). In addition, the Student Support Services program also provides participants with assistance securing, as well as technical assistance in the completion of, admissions and financial aid paperwork for graduate and professional programs of study (U.S. Department of Education, 1999). In fiscal year 2004, the U.S. Department of Education reported that there were 935 SSS projects which provided services for 196,237 participants with a combined funding allocation of \$263,030,892 (<http://www.ed.gov/programs/triostudsupp/funding.html>).

Educational Opportunity Centers (EOC)

Educational Opportunity Centers (EOC) were added to the list of TRIO programs with the authorization of the 1972 amendments to the Higher Education Act of 1965 (U.S. Department of Education, 2005b). Like ETS, the primary goal of EOC is to provide assistance to first-generation, low-income individuals who wish to pursue postsecondary education (U.S. Department of Education, 2002a). The Educational Opportunity Centers program is also similar to ETS in the respect that both programs operate largely by information dissemination, and therefore, are able to provide services to large numbers of participants (U.S. Department of Education, 2004c). The only real difference between ETS and EOC is in each program's participants. While ETS participants are middle and high school students, EOC participants are generally adults (U.S. Department of Education, 2004c).

Typical program services available to EOC participants are identical to services that participants in Educational Talent Search, Upward Bound, and Student Support Services programs receive, and include technical assistance with college admissions applications and financial aid applications, career counseling, and academic advising (U.S. Department of Education, 2002a). As with the TRIO programs already mentioned, the goal of EOC services is to facilitate the number of first-generation, low-income students who pursue postsecondary education. In fiscal year 2004, the U.S. Department of Education reported that there were 139 Educational Opportunity Center projects which provided services for 217,265 participants with a combined funding allocation of \$48,971,567 (<http://www.ed.gov/programs/trioec/funding.html>).

Training Program for Federal TRIO Programs

The Training Program for Federal TRIO Programs, authorized by the 1976 Education Amendments, was the first TRIO program created that was not a direct service program. Unlike Upward Bound, Educational Talent Search, Student Support Services and Educational Opportunity Centers, the Training Program was created to provide services to people who worked in TRIO programs, not students or adults needing assistance in pursuing a program of postsecondary study (U.S. Department of Education, 2004a). Anyone who is employed by or is about to begin employment with a TRIO program that provides direct services is eligible to receive assistance through the Training Program (Federal Register, 642.3a, Federal Register 642.5b).

The Training Program provides funds to designated training centers that use the funds to provide training or professional development to TRIO staff in the forms of workshops, seminars, and conferences (Federal Register 642.10b). Indeed, the Training

Program can include almost any professional assistance that will lead to the more effective provision of services within a TRIO program (Federal Register, 642.10a). This includes providing internships and even the publication of training, operation, and regulation manuals (Federal Register, 642.10b). The Secretary of Education sets the priorities upon which the training topics are based, and typically, the topics that emerge as priorities are legislative and regulatory requirements, training for new directors, evaluation of projects, incorporating technology, best practices and model programs, improving student retention within a project, and working with the first-generation, low-income population (<http://www.ed.gov/programs/triotrain/index.html>). In fiscal year 2004, the U.S. Department of Education reported that there were 13 Training Program for Federal TRIO projects which provided services for 3,688 TRIO staff members with a combined funding allocation of \$5,299,275 (<http://www.ed.gov/programs/triotrain/funding.html>).

Ronald E. McNair Postbaccalaureate Achievement Program (McNair)

The Ronald E. McNair Postbaccalaureate Achievement Program was created by the 1986 amendments to the Higher Education Act of 1965 and is the only TRIO program, along with Student Support Services, that currently provide services to college students (U.S. Department of Education, 2005b). The McNair program was named in honor of Dr. Ronald E. McNair, a NASA astronaut who, like the rest of the crew, lost his life in the Challenger space shuttle crash (Grimmett, Bliss, & Davis, 1998). Of all of the TRIO programs, the McNair program has perhaps the most long-term goal. While Upward Bound, Educational Talent Search, and Educational Opportunity Center programs focus on postsecondary entrance (McElroy and Armesto, 1998), and the

Student Support Services program is focused on postsecondary graduation and graduate school admission (Mahoney, 1998), the McNair program is set up to provide first-generation, low-income students, as well as underrepresented minority students, with assistance in entering and completing doctoral programs (Grimmett, Bliss, & Davis, 1998).

Participants in the McNair program are typically juniors and seniors at four-year colleges and universities who have been identified and referred to the program because of their interest and potential for completing a doctorate degree (U.S. Department of Education, 2005b). These participants receive summer internships, tutoring, research opportunities, and mentoring opportunities through a pairing of participants to faculty members at the host institution, assistance in locating, applying, and securing financial aid for graduate programs, as well as other services that aid in preparing the participant for doctoral study (Grimmett, Bliss, & Davis, 1998). In fiscal year 2004, the U.S. Department of Education reported that there were 179 Ronald E. McNair Postbaccalaureate Achievement Program projects which provided services for 4,133 participants with a combined funding allocation of \$42,092,721 (<http://www.ed.gov/programs/triomcnair/funding.html>).

Upward Bound Math-Science (UBMS)

The Upward Bound Math-Science program (UBMS), which was created in 1990, is a specialized Upward Bound program that focuses on attracting students to the fields of math and science (U. S. Department of Education, 2004c). While it is an Upward Bound program, and thus subject to the same regulations as the regular UB program, there are some differences between the two (Federal Register, 645.10b). The Upward Bound Math-

Science program serves fewer participants than regular UB, with a UBMS project serving between 50 to 75 participants as compared to a regular UB project that serves between 50 and 150 participants (Federal Register, 645.43a).

Because this program was specifically created to address concerns about a predicted shortage of professionals in the math and science fields, UBMS focuses on preparing students to enter into one of these fields of study by exposing them computer training, faculty mentors from math and science departments, residential summer enrichment programs that focus on math and science, as well as the required courses in classes must include math, laboratory science, composition, literature, and foreign language (U.S. Department of Education, 2004c, Federal Register 645.13b). In fiscal year 2004, the U.S. Department of Education reported that there were 127 Upward Bound Math-Science projects which provided services for 6,845 participants with a combined funding allocation of \$ 32,812,036 (<http://www.ed.gov/programs/triomathsci/funding.html>).

TRIO Dissemination Partnership

As the last of the TRIO programs, the TRIO Dissemination Partnership was created by the 1998 amendments to the Higher Education Act of 1965 (U.S. Department of Education, 2005b). The Dissemination Partnership program is different from every other TRIO program in the respect that it is the only program that focuses on community collaboration (U.S. Department of Education, 2003). This program works by partnering an existing TRIO project with an agency or organization that also serves first-generation, low-income students. Through the TRIO Dissemination Partnership program, the TRIO community has been given a vehicle to increase the impact of TRIO program services on

the first-generation, low-income college-bound population in the United States (U.S. Department of Education, 2003).

Through the collaborative process that takes place between the partner agencies and the TRIO project, the partner agencies are able to adopt the practices and strategies that have been so successful for the TRIO community over the past four decades. By taking certain components and strategies from the TRIO project, the partnering agencies are able to use this information with their clients. The purpose of the TRIO Dissemination Partnership program is to increase the impact of TRIO programs in target areas where there are not any TRIO programs currently in existence (<http://www.ed.gov/programs/triodissem/index.html>). In fiscal year 2004, the U.S. Department of Education reported that there were 23 TRIO Dissemination Partnership projects with 68 partners with a combined funding allocation of \$ 4,386,457 (<http://www.ed.gov/programs/triodissem/funding.html>).

TRIO programs represent the largest organized group of federally funded student programs aimed at increasing access to higher education. As a group, these programs share two similarities: the population served and a focus on educational advancement. Some programs focus on high school graduation, some on college graduation, but all focus on advancing toward an educational goal. These similarities make each program, in its individual niche, able to operate as part of a community of programs. In most cases, this community outlook serves to advance the cause of TRIO programs. In certain situations, however, this outlook has hindered progress. Each program, though a part of the TRIO community, must be valued and judged according to its own merit. As the flagship program, Upward Bound has been the standard against which all TRIO programs

are judged. This accounts not only for the wealth of research found on Upward Bound, but also for the lack of research found on other TRIO programs, including Educational Talent Search.

Statement of the Problem

The Educational Talent Search program, as one of the five TRIO programs offering direct services, is a pre-college initiative geared toward sixth through twelfth grade students who come from low-income families where neither parent has a baccalaureate degree. The ultimate goal of the ETS program is to increase the number of first-generation, low-income students who graduate from high school and pursue postsecondary education.

To be eligible to participate in ETS, an applicant must meet all of the following requirements: 1) be a citizen or naturalized citizen, 2) be between the ages of 11 and 27 and 3) be in the sixth through twelfth grades or have dropped out of school in one of these grades (Federal Register, 643.3). Additional requirements stipulate that two-thirds of the participants must be both potential first-generation college students and 'low-income' (Federal Register, 643.10). The remaining third may be comprised of first-generation or low-income students or students who are neither first-generation, nor low-income.

While the above mentioned eligibility requirements might seem to limit the number and kinds of students an Educational Talent Search program may serve, the reality is that almost any student in middle and high school, who desires to pursue postsecondary education and needs the program's services, can qualify for services through the Educational Talent Search program. In the 1999-2000 academic year,

328,070 participants were served by the 359 Educational Talent Search programs located throughout the United States (U. S. Department of Education, 2002b), which is an increase from the 1998-1999 academic year when 349 programs provided services for 307,451 participants (U. S. Department of Education, 2002c). Participants varied greatly across racial lines, but not much variability was seen across gender lines. White participants comprised 32% of the total participants in Educational Talent Search across the nation; minority students comprised the other 68% with Blacks accounting for 35%, Hispanics 23% and Asians/Native Americans 4% (U. S. Department of Education, 2002b). In regard to gender distribution, females comprised 60% of the total number ETS participants served in the United States (U. S. Department of Education, 2002b).

The Educational Talent Search program administrator determines the extent to which services are offered, how services are delivered, and how in-school sessions are conducted. At the time that the ETS grant is initially written, and every four-years when it is renewed, the program administrator details for the Department of Education a plan of action for how services will be delivered to program participants (Mathematica Policy Research Inc., 2002). In addition, the ETS program administrator determines the target area for which they wish to provide services. A target area may be a town/city or an entire county. Once the target area is selected, the middle and high schools within the target area are asked to allow their students to participate and receive services through the ETS program. Those schools that accept are added into the grant and then become part of that ETS project's service population. The number of schools served by any particular ETS project will be vary depending on the number of participants and the size of the target area included in the grant application.

The Department of Education gives regulations for the provision of services through Educational Talent Search, but it is at the discretion of the program administrator to determine the exact plan of action for each individual project. This plan of action is outlined in the original grant request and is one of the criteria that the U.S. Department of Education uses to select which grant requests will be funded. A new grant request must prove that there is a need for Educational Talent Search services within the target area and must also address how these services will be delivered and must include self-determined goals by which the success of the program may be judged.

Even though the Department of Education gives latitude in determining how an individual ETS project will provide services, each project is evaluated using the same basic criteria. These evaluation measures can all be found in the Educational Talent Search Annual Performance report. Currently, ETS projects are evaluated yearly by the submission of required Annual Performance reports (US Department of Education, 1995). These reports consist of the following criteria:

- A demographic profile which categorizes participants by eligibility (first-generation, low-income, first-generation and low-income, or neither first-generation nor low-income)
- Race/ethnicity, gender, age, and grade-level data
- Project performance outcomes (which quantify the number of participants who are promoted from grade to grade, graduate high school, and enter postsecondary education)

While valuable, this data does not present a full picture of the effect that ETS services have on participants' high school graduation or their postsecondary enrollment.

The Annual Performance Report simply documents a particular project's progress toward self-determined goals. It compares a project's yearly performance to its expected yearly performance. It does not compare one project's performance to another, nor does it have a set standard that all projects must meet. More importantly, the Annual Performance Report does not have a mechanism in place to determine which ETS services, or combination of services, are most beneficial in facilitating high school graduation and postsecondary enrollment.

The purpose of this current study is to determine if there are specific ETS services/activities that facilitate high school graduation, postsecondary enrollment, and specifically, enrollment into four-year colleges.

Research Questions

1. To what extent do gender differences exist in reference to the provision of ETS services?
2. To what extent do gender differences exist in reference to the outcome variables (high school graduation, postsecondary enrollment, and four-year college enrollment)?
3. To what extent do ETS services contribute to high school graduation?
4. To what extent do ETS services contribute to postsecondary enrollment?
5. To what extent do ETS services contribute to four-year college enrollment?

Significance of the Study

Despite the fact that the Educational Talent Search program has been in existence since 1965 and has served hundreds of thousands of middle school and high school participants during the ensuing forty years, there has never been a formal comprehensive

evaluation of the program to determine if there are specific ETS services that are more effective in facilitating high school graduation and postsecondary enrollment.

The Educational Talent Search program has a foundation that is entrenched in the public school systems across this country and is strengthened by the colleges and universities that serve as host institutions. Because the main goal of this program is to increase the number of first-generation, low-income students graduating from high school and entering postsecondary education, this study has far-reaching implications for both K-12 and higher education. This study is important for K-12 schools that have students participating in the program because it will provide teachers, school counselors and administrators with information regarding how this program impacts their students and will lay the foundation for ETS program staff and K-12 staff to finally become partners in improving the academic achievement and future professional endeavors of these students.

This study can also have far-reaching implications for school counselors, not only for the work they do with students in the K-12 setting, but also in terms of the education and training they receive from higher educational institutions in school counseling preparation programs. Both the American School Counselor Association (ASCA) and the Education Trust initiatives like the Transforming School Counseling Initiative (TSCI) and the National School Counselor Training Initiative (NSCTI) address the role that school counselors should play in the academic and career development of the students in their schools. A major part of their interaction with students should be focused on advocacy and career counseling. The implications of this study for school counselors lies in curriculum development at the higher education level and how these preparation programs train school counselors to effectively interact with students, especially first-

generation, low-income students, in a way that encourages the successful completion of high school and enrollment into programs of postsecondary study.

This study will be of great importance for legislators because it will provide a platform from which to advocate for the continuation and increased funding levels of the Educational Talent Search program. Although the ETS program has been in existence for over forty years, the TRIO community understands that funding is still somewhat tenuous and can be increased or drastically reduced by the whims of those who are in power. As such, it is important that legislators realize the value of these programs and the benefits that are reaped in the communities served because of their existence.

The group for whom this study holds perhaps the most importance is ETS administrators, and indeed the entire TRIO community, for three reasons. First, this study has the potential to finally add legitimacy to work that has been done for over four decades. In light of the recent threat of legislative budget cuts posed by President Bush, the TRIO community needs to document its successes for Congress, in order to continue to remain financially viable. Secondly, this study can help transform the way in which the TRIO community collects, uses, and reports student outcome results to the Department of Education, thus presenting a more accurate and comprehensive portrait of the true impact of Educational Talent Search services. Lastly, this study can help ETS administrators consider new ways to provide services to project participants. As with all things education related, accountability is stressed and administrators are expected to meet a standard of performance in exchange for the funds that are received. This study will afford ETS administrators valuable insight into ways to improve student outcomes and,

thus, by the US Department of Education's standards, become more accountable to the taxpayers who fund these programs.

This program and this study are important to this researcher because of personal struggles, both mental and financial, that were encountered while applying to and pursuing a baccalaureate degree in college. As a first-generation, low-income student and an advocate for the Educational Talent Search program, this researcher understands the importance of the ETS program in ending the cycle of generational poverty, and improving the quality of life for a group of students that might otherwise fall through the cracks of America's public school systems.

The admissions process was very mysterious and intimidating for this researcher because no one in her family had ever been to college. Very little help was forthcoming from the school counselor because she had very few expectations of students from low socioeconomic backgrounds. If not for the tenacity and forceful personality of this researcher's mother, the assistance needed to apply to college would not have been forthcoming. In the days that this researcher struggled through the college admissions process, there was no Educational Talent Search projects in the area. If there had been an ETS project available, the college admissions process would have been demystified, and this researcher would have been more prepared for the demands of college life and would have had an easier transition from high school to college. That is the mission of the ETS program—to be the advocate, supporter, and cheerleader for those who were written off before they ever got a chance at their shot to have a better life.

Procedure

Sample

The primary data source of this study is the Blumen database system at a small two-year college in Georgia. The Blumen database contains demographic and post high school graduation data, as well as all of the ETS project's activity/service contacts with its participants. The target group of this study is the 203 Educational Talent Search participants who were in the twelfth grade during the 2003-2004 and 2004-2005 academic years.

Variables and Measures

Dependent Variables

Two variables will comprise the dependent or outcome variables for this study. These dependent variables are taken from the Educational Talent Search program's mission, and they, along with their measures, are listed below:

High School Graduation. A dichotomous variable measuring whether or not a participant graduated from high school (graduated/did not graduate).

Postsecondary Enrollment. A dichotomous variable measuring whether or not a participant attended a postsecondary institution (enrolled/did not enroll).

Independent Variables

The independent variables selected for this study are based on their prevalence and importance in the existing literature pertaining to the first-generation and the low-income student and are also based on federal regulations for the ETS program's services and activities. These independent variables can be divided into two major categories: One category is an index of participant demographic characteristics such as race, gender, and

eligibility status (i.e. first-generation and low-income, first-generation only, low-income only, neither first-generation nor low-income). The second category is a measure of the services and activities provided to the participants by the Educational Talent Search program such as Academic Advising, Technical Assistance with Financial Aid Applications, Admissions and Financial Aid Information, SAT/ACT Preparation, Georgia High School Graduation Test/End of Course Preparation, Career Counseling, Tutoring/Academic Support, College Tours, College Fairs, Cultural Activities, Parental Involvement Activities, Study Skills/Test Taking Tips, Goal Setting/Life Skills, Critical Thinking/Decision Making, and Self Esteem/Self Concept Assessment.

Data Analysis

A mixed qualitative and quantitative approach was used in this study. Descriptive statistics such as frequency and percentages will be calculated for the data in this study as a preliminary data analysis. In addition to the descriptive statistics, the data from this study will also be analyzed using a binomial logistic regression to measure the effects of participant demographics and program services on receipt of financial aid information, high school graduation, and postsecondary enrollment. Logistic regression is used to describe the relationship between a dichotomous, categorical dependent variable and a set of independent or explanatory variables (Woldbeck, 1998). The independent variables may be continuous or in the case of this study, discrete with dummy variables used to code the data. The dependent variable will be nominal with the value assigned to it holding no real numerical value. Logistic regression, like linear regression, is used to calculate the probability of the dependent variable as a function of the values of the independent variables (King, 2002).

Definitions

- Educational Talent Search. The Educational Talent Search program is an information dissemination program that works with first-generation, low-income sixth through twelfth graders to increase the high school graduation rate and the rate of students enrolling in a program of postsecondary study at either a college/university or technical school (Mathematica Policy Research Inc., 2002).
- First-generation student. “An individual neither of whose natural or adoptive parents received a baccalaureate degree; an individual who prior to the age of 18, regularly resided with and received support from only one parent and whose supporting parent did not receive a baccalaureate degree; or an individual who, prior to the age of 18, did not regularly reside with or receive support from a natural or an adoptive parent” (Federal Register, Section 643.7b).
- First-generation, low-income student. A student who is considered both first-generation and low-income according to guidelines outlined in the Federal Register.
- Low-income student. “An individual whose family’s taxable income did not exceed 150 percent of the poverty level amount in the calendar year preceding the year in which the individual initially participated in the project. The poverty level amount is determined by using criteria of poverty established by the Bureau of the Census of the U.S. Department of Commerce “(Federal Register, Section 643.7b).
- Post-secondary enrollment. Enrollment at an institution of higher education. This includes technical colleges, two-year/community colleges, and/or four-year colleges and universities.

- Project. A project is a single operation of any TRIO program. For example, in the state of Georgia, participants in the state of Georgia receive Educational Talent Search program services through one of the fourteen ETS projects located in Georgia.
- TRIO programs. The term TRIO was first used to describe the original three programs: Upward Bound which originated from the Economic Opportunity Act of 1964 (Zulli, Frierson, & Clayton, 1998) and Educational Talent Search and Student Support Services which arose from the Higher Education Act of 1965 (McElroy & Armesto, 1998).

Summary

All of the TRIO programs are focused on providing services to first-generation, low-income students as part of what started as Lyndon B. Johnson's commitment to waging war on the poverty in the United States. Over the years, programs have been added and services expanded. More students are being touched by a TRIO program today than ever before. TRIO programs represent the largest organized group of federally-funded student programs aimed at increasing access to higher education with the exception of the federal student financial aid program.

The Educational Talent Search program, as one of the TRIO programs, is a pre-college initiative geared toward sixth through twelfth grade students who come from low-income families where neither parent has a baccalaureate degree. The ultimate goal of the ETS program is to increase the number of first-generation, low-income students who graduate from high school and pursue postsecondary education. Although the ETS program has been in existence since 1965, a significant gap in knowledge exists in regard

to the exact impact of specific ETS services in facilitating high school graduation and postsecondary enrollment by first-generation, low-income students.

Annual performance reports, which are used to evaluate TRIO programs like Educational Talent Search, only record generic demographic information and outcome data such as the number of students who are promoted from one grade to the next and the number of seniors who pursue postsecondary education after graduation. While valuable, this data does not have the capacity to determine which ETS services, or combination of services, are most beneficial to participants.

The purpose of this current study is to determine if there are specific ETS services/activities that facilitate high school graduation and postsecondary enrollment. A secondary purpose of this study is to identify possible ETS services that facilitate enrollment into four-year colleges or universities.

CHAPTER 2

REVIEW OF LITERATURE

The following review of literature will address the first-generation college student, the low-income college student, and the challenges these students face in being admitted and in graduating from institutions of postsecondary education. This review of literature will also address the Educational Talent Search (ETS) program and the documented impact it has had on assisting these students in their pursuit for postsecondary education.

To increase access to higher education for underrepresented groups, it is crucial to have an understanding of how these groups differ from middle class students and students with at least one parent who possesses a baccalaureate degree and the obstacles associated with low-income, first-generation students contemplating postsecondary education. If one operates on the premise that all students, regardless of socioeconomic status, race, or family background deserve an opportunity to improve their quality of life through the pursuit of postsecondary education at the university or technical college level, it becomes vital to communicate to all shareholders—public school administration and staff, ETS staff, parents, and students—information that will assist these students in making the transition from high school to postsecondary education.

The First-Generation Student

Researchers agree that there are significant differences between first-generation students and students whose parents have post-secondary education (Choy, 2001; Matthey, 1989; Pascarella, Pierson, Wolniak, & Terenzini, 2004; Riehl 2004; Terinzini & Springer, 1996). Researchers, disagree, however, as to what constitutes first-generation

status (Billson & Terry, 1982; Hicks, 2003; McGregor, Mayleben, Davis, & Becker, 1991; York-Anderson & Bowman, 1991). Some researchers define a first-generation student as a student whose parents do not have a baccalaureate degree (Hicks, 2003; Hicks, 2005; Hsiao, 1992; Naumann, Bandalos, & Gutkin, 2003; Pascarella et al, 2004; Ting, 1998; Van T. Bui, 2002; Willett, 1989). This definition allows for first-generation students' parents to have technical school certificates and even associate degrees. This is the definition of first-generation student used by the U.S. Department of Education in conjunction with Educational Talent Search and other TRIO programs.

Most researchers, however, define a first-generation student as one whose parents have no exposure to post-secondary education (Billson & Terry, 1982; Fallon, 1997; Hellman & Harbeck, 1997; Inman & Mayes, 1999; London, 1989; Pratt & Skaggs, 1989; Riehl, 1994; Rodriguez, 2003; Strage, 1999). By this definition, first-generation students' parents possess no knowledge or experience in the four-year college or technical school setting. McGregor, Mayleben, Davis, and Becker (1991) further expanded the definition of first-generation students to include those students who had only one parent who attended college. That same year, York-Anderson & Bowman (1991) classified any student who did not have a parent or siblings attend college for more one year as a first-generation student. These researchers surmised that college attendance of less than one year would not afford the opportunity to gain valuable information that could be passed on; thus, students from these families would be no different than students in which college attendance had never occurred.

Regardless of how first-generation status is defined, there is one major premise that holds true for all first-generation students. This premise is that because of their lack

of exposure to the college culture from their parents, there will be significant deficits in first-generation student's knowledge about the college admissions and financial aid processes, the university's expectations, and the student's role in the active acquisition of knowledge during the college experience (London, 1989; Hicks, 2005; Hossler & Gallagher, 1987; Thayer, 2000; Vargas, 2003). When there has not been anyone in the immediate family to graduate from college, there is no one to guide the potential first-generation college student in preparing for and applying to college. There is no one to explain the college admissions and financial aid processes and the importance of adhering to university deadlines, no one to assist in selecting colleges, or to give a perspective on what to expect regarding college life (Hellman & Harbeck, 1997; Hsiao, 1992; Van T. Bui, 1999; Willett, 1989).

This lack of knowledge not only can leave the student vulnerable to undue hardship, but can create a highly stressful atmosphere which can lead to the student leaving the postsecondary educational setting. In their 1991 study, York-Anderson & Bowman concluded that although they found no significant differences in the amount of college knowledge held by first-generation students and their peers, high attrition rates by these first-generation students might be attributable to these factors. In a similar vein, Thayer (2000) and Terenzini and Springer (1996) determined that first-generation college students often found their environment alien and experienced anxiety over leaving the world they know and often perceived the college campus as less than welcoming.

Another area in which the first-generation student's lack of knowledge hinders the college admissions process is technology. The gap in access to and use of technology by

middle class and lower-income families continues to widen (Eamon, 2004). This so-called “digital divide” places the first-generation student at a decided disadvantage in the college admissions and financial aid application process, which have both become more pervasive on the Internet (Vargas, 2003).

Parental Support

It has already been established that most first-generation students do not get valuable information about the college admission process and college culture from their parents, because their parents never attended college. The parents of first-generation students have a tremendous impact on these students’ educational aspirations, and the extent to which these parents offer encouragement and support to their children can determine their likelihood of success in the postsecondary educational environment (Billson & Terry, 1982; Bouse & Hossler, 1991; Hossler & Gallagher, 1987; London, 1989).

In their landmark study on student college choice, Hossler and Gallagher (1987) identified three stages that students experience as they embark on the journey toward entry into postsecondary education: the predisposition stage, the search stage, and the choice stage. In the predisposition stage, the student makes a decision as to whether he or she will pursue a postsecondary education. This phase is to a great extent determined by the student’s parents. It is during this predisposition phase that many first-generation students make the decision, based on family factors, perceived financial constraints, and other personal or familial situations. In a similar study, Pascarella and Terinzini (1991) found a positive relationship between parental education and student’s educational aspirations. Students whose parents were at the high school level and below were more

likely to express lower educational and occupational aspirations for themselves than students whose parents had education above the high school level.

For those who do decide to pursue postsecondary education, they enter into the second stage of Hossler and Gallagher's model, the search phase. In this phase, the student begins to gather information about different colleges according to a set of predetermined priorities. These priorities may include such things as proximity to home, coeducational residence halls, and school sports. Once the student has selected a set of colleges to which they wish to apply, he or she enters into the choice stage. In this final stage, students make a decision about which college they will attend. It is here that the student makes application to a college or colleges based upon the priorities that were established in the search phase. In this stage, parents once again play a crucial role.

The role that parents of first-generation students play in a student's decision has been discussed previously, however, it is important to look at the parent's role in terms of Hossler and Gallagher's choice stage. Parents without postsecondary experience of their own often make their children's decision to pursue a college education more difficult. These parents may not be to offer their children any support and may even discourage their children from attending college (Hsaio, 1992; Striplin, 1999). Researchers, over the years, identified differences in the level of parental support experienced by first-generation and other students as they pursue postsecondary education (Billson & Terry, 1982; London, 1989; Pratt & Skaggs, 1989; McGregor, Mayleben, Buzzanga, Davis, & Becker, 1991; York-Anderson & Bowman, 1991).

In their landmark study, Billson & Terry (1982) identified social and academic integration factors which negatively impact the college experience of first-generation

students and account for much of this group's higher attrition rate. One of the factors discussed was support received from others. Billson and Terry posited that since first-generation students were more likely to live at home, and less likely to become involved in campus organizations and activities, the degree to which the student's home life was conducive to, and supportive of, the college process would be indicative of the likelihood of the student leaving college before degree completion.

Hsaio (1992) later confirmed the importance of support in the home, particularly regarding assigned quiet places to study. Strage, however, in her 1999 study investigating factors of social and academic integration and the effect they have on first-generation students' success in college, contradicted Billson & Terry's findings. The results of Strage's 1999 study indicate no significant differences between first-generation students and non first-generation students in academic or social integration. It is important to note that the results of Strage's study are not supported by previous research or research conducted in later years.

In an earlier study, Howard London (1989) found that first-generation students face conflicting emotions related to their families and their pursuit of higher education. On the one hand, these students are presented with an opportunity to pursue an education that will allow them to lead a financially stable life, and on the other hand, they are presented with the fears, resentments, and sometimes jealousies of their family as they become acclimated to the college culture. The degree to which these students are able to resolve this conflict ultimately determines whether they will complete their baccalaureate degrees.

In a more recent qualitative study, Rodriguez (2003) investigated first-generation college students and the factors that enabled these students to obtain baccalaureate degrees in spite of the lack of family support they received. Rodriguez's study cited three major success factors that present in the lives of the first-generation students she interviewed: The first factor is "special status." Rodriguez found that early in her interviewees' lives, someone had singled them out as special or smart and that this special status had increased their self-confidence and made them more willing to pursue postsecondary education. The second factor is positive naming, and occurs when someone positive in the interviewees' lives helped them to guide them and to develop their potential. The final factor is ascending cross-class identification, and this occurs when the first-generation student becomes aware of class distinctions and begins to imagine what their life would be like if they were a member of the middle or upper-middle class. All of these supportive phenomena generally occurred outside the family and educational settings.

Personal and Academic Characteristics

In addition to the already mentioned characteristics, first-generation students have other personal and academic characteristics that differentiate them from students whose parents have undergraduate degrees. In terms of personal characteristics, first-generation students tend to be low-income, older, female, and belonging to a racial minority group (Choy, 2001; Terinzini & Springer, 1996). These students are also more likely to live off campus or with family, and to work full-time (Billson & Terry, 1982; U. S. Department of Education, 1998; McGregor et al., 1991; Pascarella et al., 2004). Lower self-esteem

and lower self-efficacy are also characteristics of these first-generation students (Hellman & Harbeck, 1997; Hicks, 2005; McGregor et al., 1991).

Academically, these students tend to be less prepared than their counterparts. Riehl (1994) found that first-generation students scored lower on the SAT and had lower overall grade point averages. Thayer (2000) found similar deficiencies in academic preparation. This under preparation is linked to both the class choices and the academic advisement of the first-generation student.

In terms of class choices, research has shown that there is a direct link between the math courses that a high school student takes and his or her likelihood of graduating from college (Adelman, 1999; Choy, 2001; Trusty & Niles, 2003). In 1999, Adelman used data from a national longitudinal study that spanned from 1980 to 1993 to determine which factors were most important to the completion of the baccalaureate degree. He found that students who completed Algebra II had a higher likelihood of obtaining a Bachelor's degree than students who did not. In addition, he found that students who completed a higher level math class beyond Algebra II doubled the likelihood that they would graduate from college. In a similar study, Trusty and Niles (2003) analyzed high school math class data from a national longitudinal sample of college students. The results were the same as Adelman's, but had an added twist. Adelman's results indicate that the level of eighth grade math is the turning point and ultimately determines degree completion. Trusty and Niles' (2003) findings corroborated Adelman's findings and expanded upon them. They found that the level of math undertaken by a student in the eighth grade determined the highest level math course this student would attempt in high school. This information, coupled with Adelman's assertion that math classes beyond

Algebra II double the likelihood of graduating from college suggests that the eighth grade math course ultimately would be the determining factor in degree completion.

Perhaps the most influential person in the school setting in regard to the student population and the determination of their postsecondary outcomes is the school counselor. The school counselor is in a position to impact— for better or worse— the class choices, postsecondary educational options, and general college preparation of the students at any particular school (Fallon, 1997). Fallon found that first-generation students were the students most in need of guidance information regarding the college admissions process, but were the least likely to receive this information because they were not seen as college material. Because these students are not supported in their postsecondary educational pursuit by the school counselors, they are ill-prepared academically and score lower on college admissions tests, which, in turn, tend to limit them to community colleges or other postsecondary institutions that offer remediation (Riehl, 1994; Pascarella, et al., 2004; Willet, 1989). Rodriguez (2003) found that most first-generation students received guidance and advice on the college admissions process from peers or other acquaintances outside of the school and family settings. Rowe (1989) confirmed these findings, stating that although the school counselor's role as liaison between secondary and postsecondary education is a vital one, counselors are the last people that first-generation students seek out for advice or guidance.

This under-utilization can possibly be explained by two studies completed later that same year. Matthay (1989) found that first-generation students are more dissatisfied with the types and amount of assistance they are provided by the school counselor. Much of this dissatisfaction stems from the lack of inclusion of the family in the college

preparation and college admissions process. Hutchinson and Reagan (1989) also found students to be dissatisfied with the assistance provided by school counselors. When high school students were surveyed, their responses indicated that although they believed school counselors were knowledgeable and could provide important information, {the students} were not getting the help they needed.

Educational Expectations

With the lack of knowledge about the college culture and the admissions and financial aid processes, lack of parental encouragement and support, and the lack of academic preparation, it is little wonder that first-generation students show differences in their educational expectations and aspirations than their counterparts (Pascarella, et al., 2004). Both Riehl (2004) and Hicks (2003, 2005) found first-generation students have lower degree aspirations. In both his 2003 and 2005 studies, Hicks utilized the Perceptions, Expectations, Emotions, and Knowledge about College (PEEK) questionnaire which was developed by Weinstein, Palmer and Hanson in 1995. The PEEK questionnaire was designed to assess the academic, personal, and social experiences that students expect to help them gain realistic expectations in an effort to ease the transition into college life. Hicks used the PEEK questionnaire in a pre-test, post-test method to assess the changes in perceptions experienced by students in a summer bridge program. In the 2003 study, Hicks found that both first-generation and non first-generation students held misconceptions about college. At the end of the six-week bridge program, post-test results indicated that both first-generation and non first-generation students felt more apprehensive about their ability to graduate from college.

In the 2005 study, Hicks compared the PEEK scores of two groups of first-generation students. The first group was chosen because of their high level of academic preparation. They possessed high SAT scores and grade point averages and excelled in math and science. The second group was comprised of first-generation students with low levels of academic preparation as evidenced by their low SAT scores and low grade point averages. When comparing post-test results, the “under-prepared” group of first-generation students indicated significant increases in their apprehension about their ability to graduate from college.

Riehl (1994) took the SAT scores, high school class rank, and high school grade point averages of first-year college students and compared these student outcome variables to the respondents’ predictions about their freshman college performance. The results indicated that first-generation students, when compared to other students, had lower scores on all student outcomes (SAT, GPA, and class rank) and had lower expectations regarding their freshman performance. Riehl’s findings were later contradicted in a study by Naumann, Bandalos, & Gutkin (2003) in which they surveyed college freshmen using the *Motivated Strategies for Learning Questionnaire* to determine how accurate college admissions tests were in predicting the freshman year performance of first-generation students when the students’ expectation for success was also factored. Their findings suggest that although ACT scores and expectation for success were stronger predictors of freshman year performance for first-generation students than other students, first-generation students did not perform at lower levels than other students. Their ACT scores and freshman year grade point average were not significantly different than non first-generation students.

The Low-Income Student

The U.S. Department of Education defines a low-income student as “an individual whose family’s taxable income for the preceding year did not exceed 150 percent of the poverty level (Federal Register, Section 643.7b).” The poverty level amount is determined by using criteria of poverty established by the Bureau of the Census of the U.S. Department of Commerce and are published by the U.S. Department of Health and Human Services (see Table 1). Low-income students, like first-generation students, have specific characteristics that differentiate them from their counterparts.

Table 1: 2005 Annual Low-income Guidelines

Family Size	48 Contiguous States, D.C. and Outlying Jurisdictions	Alaska	Hawaii
1	\$14,355	\$17,925	\$16,515
2	\$19,245	\$24,045	\$22,140
3	\$24,135	\$30,165	\$27,765
4	\$29,025	\$36,285	\$33,390
5	\$33,915	\$42,405	\$39,015
6	\$38,805	\$48,525	\$44,460
7	\$43,695	\$54,645	\$50,265
8	\$48,585	\$60,765	\$55,890

Note: The poverty guidelines were published by the U.S. Department of Health and Human Services in the *Federal Register*, Vol. 70, No. 33, February 18, 2005, pp. 8373-8375.

Academic and Family Background Barriers

In 1996, the College Board partnered with Gallup International Institute (King, 1996) to survey 1994-1995 high school seniors who took the SAT college entrance examination. A family income of \$20,000 or less (regardless of family size) was used to delineate low-income status. Of all students who took the SAT in the 1994-1995 academic year, only 15% met this criteria. While 80-85% of students whose family income exceeded \$20,000 planned to attend a four-year college, only 66 % of students whose family income was \$20,000 or less (the 15% group) planned to do so. This small percentage of low-income students led the researcher to set about identifying factors which facilitate low-income students' aspirations to attend a four-year college.

As 42% of all students in this study had parents who either did not complete high school or did not have a baccalaureate degree, it is not surprising that all of the factors identified mirrored factors found to facilitate college pursuit by first-generation students. These factors included the following characteristics:

- **Family and Peer Support.** Low-income students whose parents provided college information and the promise of financial support were much more likely to pursue education at a four-year institution. This is similar to several research findings for first-generation students that suggest that first-generation students who received encouragement and support from their parents were more likely to pursue postsecondary education (London, 1989; Hellman & Harbeck, 1997; Hicks, 2005; Hossler & Gallagher, 1987; Hsiao, 1992; Thayer, 2000; Van T. Bui, 1999; Vargas, 2003; Willett, 1989).

- **Academic self-confidence and Personal Aspirations.** Low-income students who felt confident about their academic abilities were much more likely to pursue education at a four-year institution. This is similar to research findings for first-generation students that suggest that first-generation students who experienced academic successes in high school were more likely to pursue postsecondary education (Hicks, 2005; Pascarella, et al., 2004; Riehl, 2004).
- **Course Work and Academic Achievement.** Low-income students who took higher level math classes were more likely to pursue education at a four-year institution. This is similar to research findings for first-generation students indicating that first-generation students who took advanced math classes past Algebra II were more likely to obtain a baccalaureate degree (Adelman, 1999; Choy, 2001; Trusty & Niles, 2003).
- **College Information, Financing, and Preparation.** Low-income students who received guidance and information from the school counselor were much more likely to pursue education at a four-year institution. This is similar to research findings for first-generation students that suggest that the first-generation students who utilized the school counselor to assist with planning and preparing for college were more likely to attend a four-year college (Hutchinson and Reagan, 1989; Matthay, 1989; Rodriguez, 2003; Rowe, 1989).

Other similarities between first-generation students and low-income students emerged in Cabrera and La Nasa's (2000) study in which they investigated the college choice process of low-income students using Hossler & Gallagher's three-stage model.

The first stage of Hossler and Gallagher's model, predisposition, is the stage in which the student makes a decision as to whether he or she will pursue a postsecondary education. Low-income students, like first-generation students, tend to view college as preparation for work as opposed to middle class students who tend to view the college experience as one of self-discovery and a vehicle to becoming a more well-rounded person (Longwell-Grice, 2003).

As with first-generation students, the predisposition stage for low-income students is greatly influenced by parental support. This stage begins around the seventh grade and lasts through the ninth grade. During this time, low-income students need parental support and encouragement. Low-income students with parents who maintain high educational expectations and who assist them in securing college information are more likely to make the decision to pursue postsecondary education. This is a great barrier for low-income students according to King (1996), who found that low-income students are more likely to have parents who do not assist them in college planning. King (1996) observed that parent educational expectations for low-income children tend to be lower than the expectations middle income parents have for their children. Similar findings emerged with first-generation students in this stage.

In the second stage, the search stage, students begin to gather information about different postsecondary institutions. This stage occurs in the years between the tenth and twelfth grades. Students begin to examine enrollment requirements and tuition costs as they gather information about different postsecondary institutions. As with first-generation students, this stage is heavily influenced by the role the school counselor plays in the college planning process. King's research (1996) indicates that low-income

students who received guidance and information from the school counselor were much more likely to pursue education at a four-year institution. Berkner and Chavez (1997) had similar findings. Their research confirms that low-income students are more likely to use the school counselor as a resource in their college planning, especially related to financial aid, than are middle and high income students who most often use their parents as college planning resources.

In the third and final stage, the choice stage, students make a decision about which college they will attend. Low-income students often find their choices limited because of their lack of preparation and because of financial constraints. King (1996) identified course work and academic achievement as two of the factors that influence low-income students' pursuit of postsecondary education. Low-income students who had not taken a rigorous course load were much less likely to attend college than those low-income students who were more prepared. Additionally, Berkner and Chavez (1997) found that the low enrollment rates of low-income students into colleges were greatly affected by their lack of preparation.

All of these factors contribute to the large numbers of low-income students found in postsecondary settings other than a four-year college. Several studies have confirmed that low-income students are more likely to attend two-year community colleges and technical colleges because of their academic weaknesses and because the community college setting provides a less expensive alternative to the four-year college or university (Carnevale & Rose; Cunningham, 2002; Kipp, Price & Wohlford, 2002). Cunningham (2002) posits that a new pattern of enrollment in two-year colleges is emerging for the low-income students, in part due to rising tuition costs at four-year colleges and

universities. He found that 55% of low-income students, as compared to 45% of students from families with the highest incomes, attended two-year colleges in the 1999-2000 school year. The convergence of the low-income student on two-year colleges does not bode well for those students whose ultimate desire is to obtain the baccalaureate degree. According to Choy (2002), students at two-year colleges were far less likely than students who started at a four-year college or university to earn a baccalaureate degree. Low-income students, themselves, seem to believe that there is a difference in transferring into a four-year college as opposed to starting at one and completing the baccalaureate degree there. Rouse (2004) reported that low-income students believed that a four-year college education was more valuable than starting at a two-year college and transferring.

Financial Barriers

Even when low-income students are qualified, their college choices can be stunted because of finances. A study by the General Accounting Office (1995) shows that receiving grant funds, like Pell, decreased the likelihood that a low-income student would drop out of college. O'Brien & Shedd (2001) similarly show that financial aid, particularly grants and scholarships, greatly influence low-income students' persistence. Sanoff (2003) estimated that 1 million low-income students, who possessed no academic barriers, did not attend college because of financial considerations. Finklen & Stone (2002) determined that of all the academically prepared high school graduates of 2001-2002, almost 50% of the low-income students in this category would not be able to attend college and that many would likely not attend at all.

In a statistical analysis report for the National Center for Education Statistics (2000), Susan Choy used data from the 1995-1996 National Postsecondary Student Aid Study,

the 1992-1993 National Postsecondary Student Aid Study, and the Beginning Postsecondary Students Longitudinal Study to identify characteristics of low-income students and examine the different avenues they traversed in order to pay for college. Choy defined low-income students as those students whose “family income was below the 125 percent poverty level for their family size (Choy, 2000, p. 2).” Using this definition, she determined that 26% of all undergraduates in 1995-1996 school year were low-income students. Patterns emerged that identified characteristics that increased a student’s likelihood of being low-income. These characteristics are

- **Independent Status.** Married students or students age 24-29 were more likely to be low-income because they are considered independent students and their parents’ income is not considered when making financial aid determinations;
- **Race/Ethnicity.** Minority students (African-Americans, Hispanics, Asians, Native Americans, etc.) were more likely to be low-income than White students;
- **Single parents.** Students with children are also considered independent students. Of this group, single parents are particularly vulnerable to low-income status as there is only one income to count, unlike married students with dependents;
- **First-generation Students.** Students whose parents did not complete high school and students whose parents never attended college were more likely to be low-income than students whose parents had some college attendance. This is consistent with some research findings dealing with first-generation

students (Inman & Mayes, 1999; Pascarella, et al., 2004; Van T. Bui, 2002).

In this study, 38% of all low-income students had parents who did not complete high school and 31% of all low-income students had parents who had never attended college.

Additional results from this study focused on the financial needs of low-income students and the financial aid awards they received. In this study, 86% of all low-income students who attended college full-time for the entire school year received financial aid. This aid included grants, loans, and work-study. Low-income students were less likely to receive other types of aid (veteran's benefits, military tuition aid, JTPA funds, etc.), with only 10% of the low-income students in this study receiving this type of aid. When examining the total cost of attending college and the total amount of financial aid that low-income students received, 87% of these students still had a financial need. This need is called unmet need and means that most low-income students needed more money to attend college than they were awarded. To attend college then, these low-income students closed this gap by

- **Work.** 68% of all low-income students worked
- **Parental financial support.** 35.3% received funds from parents
- **Loans from Parents.** 18.9% borrowed money from their parents and family

These findings were later corroborated in the 2003 study by Choy and Berker (2003) in which they investigated how low-income families and middle-income families pay for college. Although the federal student aid program was originally instituted to increase access of low-income students to postsecondary education, over the past few

decades the student aid program has relaxed its guidelines to assist middle income families in paying for college as well. This expansion of the federal student aid program, coupled with the rise of merit awarded scholarships (scholarships based on academic performance), have resulted in a decrease in the amount of federal aid reaching low-income students (Sanoff, 2003). Georgia's Helping Outstanding Pupils Educationally (HOPE) Scholarship is an example of merit aid. To qualify for a HOPE scholarship, a student must have graduated high school with a B average in his or her college preparatory courses (www.gsfc.org). As it has already been documented that low-income students are more likely to be academically unprepared or under-prepared, HOPE funds are most often received by students from middle and upper middle class families.

The gap between low-income and middle-income students' college attendance rates has widened and has persisted over the past three decades regardless of academic performance indicators such as college admissions' test scores and high school grade point average (Advisory Committee on Student Financial Assistance, 2001). The Advisory Committee on Student Financial Assistance (2001) found that compared to 1972 when 45% of low-income high school graduates and 74% of middle-income graduates pursued postsecondary education, 2000 saw only 54% of low-income students and 82% of middle income students going to college. The Mortenson Research Seminar on Public Policy Analysis of Opportunity for Postsecondary Education (1999) calculated the access to postsecondary education for low-income students by dividing the number of low-income students who were in college by the total number of low-income students in the same age group and determined that the chance of a low-income student attending college in Alabama was only 18.2%.

ETS Assisting First-Generation, Low-Income Students

The Educational Talent Search program, as one of the five TRIO programs offering direct services is a pre-college initiative geared toward sixth through twelfth grade first-generation, low-income students. The ultimate goal of the ETS program is to increase the number of first-generation, low-income students who graduate from high school and pursue postsecondary education. This goal is to be met by providing encouragement and support, information and guidance regarding postsecondary options, and academic advising to assist with educational preparation. The ETS program focuses on providing workshops and in-school sessions on such topics as: career exploration and interest inventories, academic advising (college prep versus tech prep), goal setting, critical thinking and decision making skills, study skills, test-taking tips, and college admissions and financial aid. Supplemental activities and services include the provision of fee waivers for the SAT, ACT, and college admissions application fees, free tutoring, cultural fieldtrips, and college tours (Mathematica Policy Research, Inc., 2002).

There has only been one comprehensive study conducted on the Educational Talent Search program and its effectiveness in assisting first-generation, low-income students in graduating from high school and pursuing postsecondary education. In 2004, the Mathematica Policy Research Company conducted an intensive, ongoing national evaluation of the Educational Talent Search program and its effect on program participants. The results of the evaluation show that although the Educational Talent Search program is primarily serving first-generation and low-income students, the program did not meet its goal of 75% of these students enrolling in a postsecondary institution. Seventy-one percent of ETS seniors enrolled in a postsecondary institution

after high school. Of the students enrolled in ETS projects, 75% were first-generation and low-income students; 14% were first-generation students, but did not meet the income criteria to be considered low-income (first-generation only); and 7% were low-income students, but had at least one parent who had a baccalaureate degree (low-income only). These students tended to come to the ETS program with college aspirations, contrary to research findings that suggested that first-generation and low-income students tend to have lower educational aspirations than their counterparts (Hicks, 2005; King, 1996; Pascarella, Pierson, Wolniak, & Terenzini, 2004; Riehl, 2004). According to the Mathematic study (2004), there was one full-time staff member for every 125 students served by ETS projects, which is considerably less than the 500:1 ratio of school counselors to students in the public school system (King, 1996).

Summary

First-generation and low-income students face many obstacles in their pursuit of postsecondary education. Both groups are more likely to pursue postsecondary education and persist to graduation if they have 1) family and peer support, 2) academic self-confidence and personal aspirations, 3) rigorous course work, and 4) school counselors who work with them to obtain college information, financial aid information, and who actively advise them toward appropriate postsecondary options. In addition to these barriers, low-income students must also overcome financial constraints such as 1) lack of knowledge about financial aid, 2) higher rates of student loan acceptance to cover unmet need left over by grants, and 3) lower rates of merit aid awards to assist with financial needs.

To assist these first-generation, low-income students, the Educational Talent Search program provides encouragement and support, information and guidance regarding postsecondary options, and academic advising to assist with educational preparation. This assistance is accomplished by providing workshops and in-school sessions on such topics as career exploration and interest inventories, academic advising (college prep versus tech prep), goal setting, critical thinking and decision making skills, study skills, test-taking tips, and college admissions and financial aid. Supplemental activities and services include the provision of fee waivers for the SAT, ACT, and college admissions application fees, free tutoring, cultural fieldtrips, and college tours.

CHAPTER 3

METHODOLOGY

Introduction

First-generation and low-income students face many obstacles in their pursuit of postsecondary education. Both groups are more likely to pursue postsecondary education and persist to graduation if they have 1) family and peer support, 2) academic self-confidence and personal aspirations, 3) rigorous course work, and 4) school counselors who work with them to obtain college information, financial aid information, and who actively advise them toward appropriate postsecondary options. In addition, low-income students must also overcome financial constraints such as 1) lack of knowledge about financial aid, 2) higher rates of student loan acceptance to cover unmet need left over by grants, and 3) lower rates of merit aid awards to assist with financial needs. To assist these first-generation low-income students, the Educational Talent Search program provides information, encouragement and support, academic advising, and guidance regarding postsecondary options to assist with educational preparation.

The purpose of this current study is to determine if there are specific ETS services/activities that facilitate high school graduation and postsecondary enrollment, and specifically enrollment at the four-year college/university level for first-generation, low-income students.

Research Questions

1. To what extent do gender differences exist in reference to the provision of ETS services?

2. To what extent do gender differences exist in reference to the outcome variables (high school graduation, postsecondary enrollment, and four-year college enrollment)?
3. To what extent do ETS services contribute to high school graduation?
4. To what extent do ETS services contribute to postsecondary enrollment?
5. To what extent do ETS services contribute to four-year college enrollment?

Research Design

Sample

The primary data source of this study is the Blumen database system at a small two-year college in Georgia. The Blumen database contains demographic and post high school graduation data, as well as all program and activity contacts with participants. The target group of this study is the 203 ETS participants who were in the twelfth grade during the 2003-2004 and 2004-2005 academic years.

Variables and Measures

Dependent Variables

Three variables will comprise the dependent or outcome variables for this study. These dependent variables are taken from the Educational Talent Search program's mission, and they, along with their measures are listed below:

High School Graduation. A dichotomous variable measuring whether or not a participant graduated from high school (graduated/didn't graduate).

Postsecondary Enrollment. A dichotomous variable measuring whether or not a participant attended a postsecondary institution (enrolled/didn't enroll).

Four-Year College Enrollment. A dichotomous variable measuring whether or not a participant attended a postsecondary institution (enrolled/didn't enroll).

Independent Variables

The independent variables that were selected for this study are based on their prevalence and importance in the existing literature pertaining to the first-generation and the low-income student and are also based on federal regulations for the ETS program's services and activities. These independent variables can be divided into two major categories: One category is an index of participant demographic characteristics such as race, gender, and eligibility status (i.e. first-generation and low-income, first-generation only, low-income only, neither first-generation nor low-income). The second category is a measure of the services and activities provided to the participants by the Educational Talent Search program such as Academic Advising, Technical Assistance with Financial Aid Applications, Admissions and Financial Aid Information, SAT/ACT Preparation, Georgia High School Graduation Test/End of Course Preparation, Career Counseling, Tutoring/Academic Support, College Tours, College Fairs, Cultural Activities, Parental Involvement Activities, Study Skills/Test Taking Tips, Goal Setting/Life Skills, Critical Thinking/Decision Making, and Self Esteem/Self Concept Assessment. These are the activities and services set forth by the U.S. Department of Education in the Educational Talent Search regulations (Federal Register, 643.40).

Data Analysis

A mixed qualitative and quantitative approach was used in this study. Descriptive statistics such as frequency and percentages will be calculated for the data in this study as a preliminary data analysis. In addition to the descriptive statistics, the data from this

study will also be analyzed using a chi-square test to determine if the frequency with which phenomena are observed in the data are statistically significant (Springthall, 2000), and binomial logistic regression to measure the effects of participant demographics and program services on receipt of financial aid information, high school graduation, and postsecondary enrollment. Logistic regression is used to describe the relationship between a dichotomous, categorical dependent variable and a set of independent or explanatory variables (Woldbeck, 1998). The independent variables may be continuous or in the case of this study, discrete with dummy variables used to code the data. The dependent variable will be nominal with the value assigned to it holding no real numerical value. Logistic regression, like linear regression, is used to calculate the probability of the dependent variable as a function of the values of the independent variables (King, 2002).

All data will be entered into, and analyzed using the Statistical Package for the Social Sciences (SPSS) statistical software package. SPSS was created to help graduate students in their analysis of public policy data and since that time has been used by college students at all levels to analyze data and understand the phenomena under study (Kirkpatrick & Feeney, 2005). Logistic regression was added to SPSS in version 4 and is fairly straightforward to use if one is familiar with the REGRESSION commands (Kirkpatrick & Feeney, 2005).

Following the initial data analysis, it was determined that an interview was needed to clarify some ambiguities that existed in the data. To this end, an interview was scheduled with the administration and staff of the Educational Talent Search project used in this study. The Executive Director is responsible for administrative and budgetary

issues with all of the TRIO programs (including ETS) that are hosted by the college. The ETS Coordinator is responsible for the day-to-day administration of the ETS program, including recruitment and retention. The Educational Advisor is the person who works directly with ETS participants by providing resources and information and facilitating workshops. Due to travel and time constraints, a group telephone interview was conducted with Executive Director, ETS Coordinator, and ETS Educational Advisor.

Reporting the Data

Once all data have been analyzed, data will be reported in both text and tabular form according to the corresponding overarching research question. Because this study has three primary research questions, data will be grouped and results reported according to relevance to 1) ETS activities and services that are most effective in facilitating high school graduation, 2) ETS activities and services that are most effective in facilitating postsecondary enrollment, and 3) ETS activities and services that are most effective in facilitating four-year college enrollment.

Summary

The purpose of this current study is to determine if there are specific ETS services/activities that facilitate high school graduation, postsecondary enrollment, and specifically enrollment at four-year colleges and universities. This study is a mixed methods study with the quantitative side on collecting data from the 2003-2004 and 2004-2005 academic years from the Blumen database of a small two-year college in Georgia where the Educational Talent Search program is hosted. The data collected included participant demographic information, ETS activities and services, participant contacts for each student, high school graduation information, and postsecondary options

on each student. The data was analyzed using SPSS to perform the descriptive statistical analysis and logistic regression and is reported in both tabular and text form. The qualitative side consists of a group telephone interview with the TRIO Executive Director, the ETS Coordinator, and the ETS Educational Advisor.

CHAPTER 4

REPORT OF DATA AND DATA ANALYSIS

Introduction

This study is interested in the first-generation, low-income college participant and the challenges these participants face in graduating from high school and pursuing postsecondary education. Of particular interest is the Educational Talent Search (ETS) program and its impact on improving outcomes for this group of participants. To assist these first-generation, low-income participants, the Educational Talent Search program provides encouragement and support, information, and guidance regarding postsecondary options, and academic advising to assist with educational preparation.

The purpose of this current study is to determine if there are specific ETS services/activities that facilitate high school graduation, postsecondary enrollment, and specifically enrollment at four-year colleges and universities.

Research Questions

1. To what extent do gender differences exist in reference to the provision of ETS services?
2. To what extent do gender differences exist in reference to the outcome variables (high school graduation, postsecondary enrollment, and four-year college enrollment)?
3. To what extent do ETS services contribute to high school graduation?
4. To what extent do ETS services contribute to postsecondary enrollment?
5. To what extent do ETS services contribute to four-year college enrollment?

Research Design

Data for this study was collected from the Blumen database system at a small two-year college in Georgia that hosts the Educational Talent Search program. The target group for this study was the 203 ETS participants who were in the twelfth grade during the 2003-2004 and 2004-2005 academic years. The Blumen database contains demographic and post high school graduation data, as well as all program and activity contacts with participants.

Three variables comprised the dependent or outcome variables for this study. Two of these dependent variables are taken from the Educational Talent Search program's mission—high school graduation and postsecondary enrollment. The third dependent variable, four-year college enrollment, is a contingent dependent variable that was measured for those participants who did, in fact, graduate from high school and enroll at a postsecondary institution.

The independent variables that were selected for this study are based on their prevalence and importance in the existing literature pertaining to the first-generation and the low-income participant and are also based on federal regulations for the ETS program's services and activities. These variables include demographic factors such as race, program eligibility status, and gender, as well as the services and activities provided to the participants by the Educational Talent Search program. These activities are academic advising, technical assistance with financial aid applications, admissions and financial aid information, SAT/ACT prep, Georgia High School Graduation Test/End of Course prep, career counseling, tutoring/academic support, college tours, college fairs, cultural activities, parental involvement activities, study skills/test taking tips, goal

setting/life skills, critical thinking/decision making, and self esteem/self concept assessment.

Data Analysis

A mixed qualitative and quantitative approach was used in this study. Descriptive statistics such as frequency and percentages were calculated for the data in this study as a preliminary data analysis. In addition to the descriptive statistics, the data from this study was analyzed using a chi-square test to determine if the frequencies with which phenomena are observed in the data are statistically significant, and a binomial logistic regression to measure the effects of participant demographics and program services on receipt of financial aid information, high school graduation, and postsecondary enrollment. All data was entered into, and analyzed using the Statistical Package for the Social Sciences (SPSS) statistical software package.

Following the initial data analysis, it was determined that an interview was needed to clarify some ambiguities that existed in the data. To this end, an interview was scheduled with the administration and staff of the Educational Talent Search project used in this study. The Executive Director is responsible for administrative and budgetary issues with all of the TRIO programs (including ETS) that are hosted by the college. The ETS Coordinator is responsible for the day-to-day administration of the ETS program, including recruitment and retention. The Educational Advisor is the person who works directly with ETS participants by providing resources and information and facilitating workshops. Due to travel and time constraints, a group telephone interview was conducted with Executive Director, ETS Coordinator, and ETS Educational Advisor.

Demographic Profile

Prior to data collection, three demographic factors were of interest in assessing differences in the three outcome variables. These demographic factors were program eligibility status which is based on parental education and family income, race, and gender. Once the data was collected and analyzed, it was discovered that the population is undifferentiated by program eligibility status or race.

Table 2 shows the eligibility breakdown for academic years 2004 and 2005. For both years, the eligibility distribution followed the same pattern. Participants who were both first-generation and low-income comprised the vast majority of the population with 83.3% (75 out of 90 participants) in 2004 and 89.3% (101 out of 113 participants) in 2005. While the other three eligibility categories contain negligible numbers, they nonetheless follow the same pattern from one year to the next with low-income only participants comprising the group with the next highest distribution (8.9% in 2004 and 5.3% in 2005) and neither first-generation nor low-income participants comprising the smallest group (2.2% in 2004 and 2.7% in 2005). The eligibility distribution confirms that the ETS participants for both 2004 and 2005 conformed to the U.S. Department of Education mandate that at least two-thirds (or 67%) of all participants each year be both first-generation and low-income.

Table 2: Frequency and Percentage for Program Eligibility

Program Eligibility Status	Academic Year			
	2004		2005	
	F	%	F	%
First-generation & Low-income	75	83.3%	101	89.3%
First-generation Only	5	5.6%	3	2.7%
Low-income Only	8	8.9%	6	5.3%
Neither First-generation Nor Low-income	2	2.2%	3	2.7%

Table 3 shows the racial distribution for the participants. This demographic factor showed even less variability than eligibility status. For the 2004 and 2005 academic years, only two participants each year were identified as a race other than Black, meaning that 97.8% of all of the 2004 participants and 98.2% in 2005 were Black.

Table 3: Frequency and Percentage for Race

Race	Academic Year			
	2004		2005	
	F	%	F	%
Black/African-American	88	97.8%	111	98.2%
White/Caucasian	2	2.2%	2	1.8%

As stated previously, gender is the only demographic factor that showed some variability. Table 4 shows the participant distribution by gender for the 2004 and 2005 academic years. Females comprise the vast majority of the population with 71.1% (64 out of 90 participants) in 2004 and 73.5% (83 out of 113 participants) in 2005. Males are just less than 30% of the total population each year (28.9% in 2004 and 26.5% in 2005).

Table 4: Frequency and Percentage for Gender

Gender	Academic Year			
	2004		2005	
	F	%	F	%
Male	26	28.9%	30	26.5%
Female	64	71.1%	83	73.5%

Tables 5 through 10 show gender distribution for high school graduation, postsecondary enrollment, and college type (four-year college vs. two-year college/technical college) for academic years 2003-2004 and 2004-2005. As females were recorded as participants in the Educational Talent Search program in greater numbers than males, chi-square tests were conducted to determine if any significant gender differences exist with regard to the outcome variables high school graduation, postsecondary enrollment, and college type. For both 2004 and 2005, females graduated high school, enrolled in postsecondary institutions, and enrolled in four-year colleges in greater percentages than males, but these differences were not greater than what could be expected by chance given the small sample size. Based upon the data results, it does not

appear that graduation rates, enrollment rates, or four-year college enrollment rates differ between males and females.

Table 5: Chi-Square and Descriptive Statistics for Gender & Graduation 2004

Graduation Status	Gender	
	Female	Male
Graduated	61 (95.3%)	22 (84.6%)
Did Not Graduate	3 (4.7%)	4 (15.4%)

Note. Numbers in parentheses indicate column percentages.
 $\chi^2 = 2.95$, $df = 1$, $p = .086$

Table 6: Chi-Square and Descriptive Statistics for Gender & Enrollment 2004

College Enrollment Status	Gender	
	Female	Male
Enrolled	46 (76.7%)	14 (53.8%)
Did Not Enroll	18 (28.1%)	12(46.2%)

Note. Numbers in parentheses indicate column percentages.
 $\chi^2 = 2.704$, $df = 1$, $p = .100$

Table 7: Chi-Square and Descriptive Statistics for Gender & College Type 2004

College Type	Gender	
	Female	Male
4-yr College or University	20 (43.5%)	4 (28.6%)
2-yr College/Technical College	26 (56.5%)	10 (71.4%)

Note. Numbers in parentheses indicate column percentages.
 $\chi^2 = .994$, $df = 1$, $p = .319$

Table 8: Chi-Square and Descriptive Statistics for Gender & Graduation 2005

Graduation Status	Gender	
	Female	Male
Graduated	60 (72.3%)	20 (66.7%)
Did Not Graduate	23 (27.7%)	10 (33.3%)

Note. Numbers in parentheses indicate column percentages.
 $\chi^2 = .337$, $df = 1$, $p = .562$

Table 9: Chi-Square and Descriptive Statistics for Gender & Enrollment 2005

Enrollment Status	Gender	
	Female	Male
Enrolled	30 (36.1%)	9 (30.0%)
Did Not Enroll	53 (63.9%)	21 (70.0%)

Note. Numbers in parentheses indicate column percentages.
 $\chi^2 = .368$, $df = 1$, $p = .544$

Table 10: Chi-Square and Descriptive Statistics for Gender & College Type 2005

College Type	Gender	
	Female	Male
4-yr College or University	9 (30.0%)	2 (22.2%)
2-yr College/Technical College	21 (70.0%)	7 (77.8%)

Note. Numbers in parentheses indicate column percentages.
 $\chi^2 = .207$, $df = 1$, $p = .649$

Though gender differences in the three outcome variables were not shown to be statistically significant due to the small sample size, there was a noticeable gap in the

performance of male and female participants. In the follow-up interview with the ETS staff and administration, the interviewees were asked their perceptions of gender differences in relation to high school graduation and post-secondary enrollment. The interviewees were also asked if their ETS project was doing anything to address any perceived gender differences. All three agreed that there were, indeed, differences in the rates at which their project's male and female participants graduated high school and pursued postsecondary education. They each went on to describe the project's efforts in addressing these gaps. The ETS Coordinator volunteered that the project was actively recruiting males and that the 2006 summer program had an almost equal number of male and female attendees. The TRIO Executive Director spoke about a male mentor that had been hired to create a better relationship with current male participants and to help recruit more males into the program. The Educational Advisor added that the ETS project also hosted an annual male retreat that is focused on assisting male participants in setting educational goals and working through other issues they might be facing. As the TRIO Executive Director pointed out, the gender differences observed in this study are not an indictment of the ETS project used in this study, but seem to be indicative of the trend seen nationally by many other ETS projects.

Provision of ETS Services and Activities

Table 11 shows the frequency and percentage distribution for each of the 16 designated ETS services for 2004. The overall trend for provision of ETS services is dramatically different for each of the academic years. In 2004, the frequency distribution shows that for all of the service categories except Technical Assistance with Financial Aid, SAT/ACT Prep, GHSGT/End of Course Prep, College Fairs, and Parental

Involvement Activities, more participants received each category of ETS service than did not receive the service. This means that more participants received a service than did not receive a service in 11 out of 16 service categories.

For 2005, the overall trend is that more participants did not receive a particular service than did receive. Of the 16 service categories, only two—Admissions & Financial Aid Information and College Tours—had more participants that received the service than did not receive the service. Table 12 shows the frequency and percentage distribution for each of the 16 designated ETS services for 2005.

The provision of services and activities by the Educational Talent Search program is important because the literature indicates and the very mission of the program dictates that first-generation and low-income participants require encouragement and support, information, guidance regarding postsecondary options, and academic advising to assist with educational preparation and transition from high school to postsecondary education. The fact that more participants did not receive so many services, especially in 2005, could be seen as absence of the guidance and support that is required and could also be interpreted as a contributing factor to the decline in high school graduation and postsecondary enrollment seen in the 2005 academic year.

When asked about their perceptions of the strongest and most challenging aspects of their ETS project, the three interviewees had different responses that all seem to revolve around provision of services. The ETS Coordinator and Educational Advisor listed “disseminating information to students,” “exposing students to cultural enrichment events,” and “college visits” as the strongest aspects of the program. This information correlates with the data that shows for both the 2004 and 2005 academic years College

Tours was one of the activities most attended. In terms of the most challenging aspect of the project, the Coordinator and Advisor were once again in agreement that getting parents involved and getting them to return required paperwork was the most challenging aspect. This, too, is confirmed by the data which shows very marginal parental involvement, especially in the 2005 academic year.

The strengths and challenges faced by an ETS project can change from year to year. When asked about their perceptions of any changes in their project, the interviewees had differing views. The Executive Director felt that each new cohort of twelfth graders is different in relation to the college admissions' process, with some cohorts needing minimal assistance and some needing vigorous prodding. The Educational Advisor, however, sees the lack of parental involvement as a consistent challenge from year to year. All agreed, however, that 2005 was a particularly challenging year. In that year, the ETS project had a major site visit from the U.S. Department of Education, as well as some major staff turnover. The Executive Director felt that these events likely had a negative effect on the participants that year, especially the twelfth graders. This conclusion can be confirmed by the 2005 data which shows a sharp decline in the number of participants graduating high school, pursuing postsecondary education, and enrolling in four-year colleges.

Table 11: Frequency (and Percentage) for ETS Services and Activities for 2004

ETS Service	Percentage	
	Received	Did Not Receive
Academic Advising	73 (81.1%)	17 (18.9%)
Technical Assistance-Financial Aid	1 (1.1%)	89 (98.9%)
Admissions & Financial Aid Information	85 (94.4%)	5 (5.6%)
SAT/ACT prep	42 (46.7%)	48 (53.3%)
GHS/GT /End of Course Exam Prep	34 (37.8%)	56 (62.2%)
Career Counseling	69 (76.7%)	21 (23.3%)
Tutoring/Other Academic Support	66 (73.3%)	24 (26.7%)
College Tours	66 (73.3%)	24 (26.7%)
College Fairs	12 (13.3%)	78 (86.7%)
Cultural Activities	64 (71.1%)	26 (28.9%)
Parental Involvement Activities	8 (8.9%)	82 (91.1%)
Study Skills/Test Taking Tips	56 (62.2%)	34 (37.8%)
Goal Setting/Life Skills	69 (76.7%)	21 (23.3%)
Technology/Computer-Aided Instruction	73 (81.1%)	17 (18.9%)
Critical Thinking/Decision-Making	46 (51.1%)	44 (48.9%)
Self-Esteem/Self-Concept Assessment	48 (53.3%)	42 (46.7%)

Table 12: Frequency (and Percentage) for ETS Services and Activities for 2005

ETS Service	Percentage	
	Received	Did Not Receive
Academic Advising	19 (16.8%)	94 (83.2%)
Technical Assistance-Financial Aid	3 (2.7%)	110 (97.3%)
Admissions & Financial Aid Information	79 (69.9%)	34 (30.1%)
SAT/ACT prep	25 (22.1%)	88 (77.9%)
GHS/GT /End of Course Exam Prep	4 (3.5%)	109 (96.5%)
Career Counseling	19 (16.8%)	94 (83.2%)
Tutoring/Other Academic Support	16 (14.2%)	97 (85.8%)
College Tours	60 (53.1%)	53 (46.9%)
College Fairs	26 (23.0%)	87 (77.0%)
Cultural Activities	35 (31.0%)	78 (69.0%)
Parental Involvement Activities	1 (.9%)	112 (99.1%)
Study Skills/Test Taking Tips	19 (16.8%)	94 (83.2%)
Goal Setting/Life Skills	18 (15.9%)	95 (84.1%)
Technology/Computer-Aided Instruction	22 (19.5%)	91 (80.5%)
Critical Thinking/Decision-Making	16 (14.2%)	97 (85.8%)
Self-Esteem/Self-Concept Assessment	15 (13.3%)	98 (86.7%)

High School Graduation, Postsecondary Enrollment, and College Type

High School Graduation

In 2004, 83 of the 90 (92.2%) Educational Talent Search participants graduated from high school. In 2005, the percentage of participants who graduated high school dropped to 70.8%. Only 80 of the 113 participants graduated that year. For both years, females comprised the majority of those graduating. Of those that graduated in 2004, 75% were females. In 2005, females made up 73.5% of the graduating class. These gender differences, however, were not greater than what could be expected by chance given the small sample size. Based upon these data, it does not appear that high school graduation rates differ between males and females.

When ETS services were regressed against high school graduation for academic year 2004 using logistic regression, none of the services significantly increased the likelihood that a participant would graduate. For academic year 2005, however, there is one ETS service—Admissions & Financial Aid Information—that increased the likelihood of high school graduation. Participants who received admissions and financial aid information were 60 times more likely to graduate high school than participants who did not receive this service. Of the students who graduated high school in 2005, 83.8% of them received admissions and financial aid information.

Chi-square tests revealed similar findings for academic year 2005. Admissions and Financial Information ($\chi^2=24.939$), College Tours ($\chi^2=3.515$), and College Fairs ($\chi^2=5.097$) were all significantly associated with high school graduation. Among students who graduated, 84.8% received Admissions and Financial Aid Information, 78.3% attended at least one College Tour, and 88.5% attended at least one College Fair. These

differences are greater than what could be expected by chance. Table 8 shows the services provided by the Educational Talent Search program and their relationship to high school graduation.

When questioned about the types of services, if any, that were offered to those participants who do not graduate from high school or enroll in a postsecondary institutions, the interviewees made the following comments: The ETS Coordinator stated that they had purchased a computer software package to help students who were struggling to pass the graduation exam. The Executive Director added that any participants who did not graduate high school or enroll in a postsecondary institution were sent information regarding the opportunities for assistance still available to them through the ETS project. In addition, he stated that these students were also referred to the Educational Opportunity Center (another TRIO program hosted by the college) once the student turned 19 years old (as stipulated by federal regulations for the EOC program).

Postsecondary Enrollment

In 2004, 60 of the 90 (66.7%) Educational Talent Search participants enrolled in a postsecondary institution. In 2005, the percentage dropped to 34.5%. Only 39 of the 113 participants enrolled in a postsecondary institution that year. For both years, females comprised the majority of those enrolling. Of those that enrolled in 2004, 76.7% were females. In 2005, females made up 76.9% of those who enrolled in a postsecondary institution. These gender differences, however, were not greater than what could be expected by chance given the small sample size. Based upon these

data, it does not appear that postsecondary enrollment rates differ between males and females.

When ETS services were regressed against postsecondary enrollment for academic year 2004 using logistic regression, three services were shown to significantly increase the likelihood that a participant would enroll in a postsecondary institution. Table 13 shows the results from the logistic regression for 2004. Participants who attended College Tours were nine times more likely to enroll. Cultural Activities were also significantly associated with college enrollment, but they did not increase the likelihood of postsecondary enrollment even 1%. Participants who receive Academic Advising are almost 13 times more likely to enroll in an institution of postsecondary education than participants who did not receive this service. Information obtained in the follow-up interview with ETS staff suggest that participants and their parents who attend Academic Advising activities are given detailed information regarding the differences between the college prep curriculum and technical prep curriculum and are encouraged to pursue the college prep track. Middle school participants are encouraged to participate in the summer enrichment program where vital information such as academic advising and other information regarding the transition to high school is shared. In addition, these participants are also given the ASVAB, a career exploration test.

Chi-square test results for academic year 2004 reveal similar findings as the logistic regression analysis. For that year, Admissions and Financial Aid Information and College Tours were both significantly associated with postsecondary enrollment. Among students who enrolled in postsecondary institutions, 69.4% received Admissions and Financial Aid Information, and 75.8% attended at least one College Tour. These

differences are greater than what could be expected by chance. Table 10 shows the services provided by the Educational Talent Search program and their relationship to postsecondary enrollment.

Results for academic year 2005 were very different. In 2005, only Admissions & Financial Aid Information significantly increased the likelihood of postsecondary enrollment. Participants who received Admissions and Financial Aid Information were almost eight times more likely to enroll in a postsecondary institution than participants who did not receive this information. In addition, SAT/ACT Prep ($p=.058$) was borderline statistically significant at the .05 level.

Chi-square test results, in contrast to logistic regression results, show nine of the sixteen ETS services as significant. For that year, Academic Advising, Admissions and Financial Aid Information, Career Counseling, College Tours, College Fairs, Study Skills, Goal Setting, Critical Thinking, and Self-Esteem were all significantly associated with increasing the likelihood of postsecondary enrollment. Among those who enrolled in a postsecondary institution, 10.5% received Academic Advising, 44.3% received Admissions and Financial Aid Information, 10.5% received Career Counseling, 43.3% attended at least one College Tour, 53.8% attended at least one College Fair, 10.5% received Study Skills, 11.1% received Goal Setting, 6.3% received Critical Thinking Skills, and 6.7% received Goal Setting. These differences are greater than what would occur by chance.

Table 13: Logistic Regression: ETS Services on Postsecondary Enrollment for 2005

	Coefficient	Standard Error	Wald Statistic	P-Value	Odds Exp (Coefficient)
Academic Advising	2.547	1.175	4.703	.030*	12.774
Assistance-FinAid	20.444	40192.969	.000	1.000	7.57E+08
Adm&Fin Aid Info	-.632	1.336	.224	.636	.532
SAT/ACT prep	-1.142	.689	2.746	.097	.319
GHS GT Prep	-.310	.630	.242	.623	.733
Career Counseling	-.760	1.039	.535	.464	.468
Tutoring	1.282	.843	2.313	.128	3.602
College Tours	2.215	.849	6.811	.009*	9.164
College Fairs	1.815	1.255	2.091	.148	6.140
Cultural	-2.163	1.074	4.052	.044*	.115
Parental	.291	1.054	.076	.783	1.337
Study Skills	-1.080	.855	1.596	.207	.340
Goal Setting	-.297	1.299	.052	.819	.743
Technology	-1.456	.867	2.820	.093	.233
CritThinking	.410	.771	.283	.594	1.507
Self-Esteem	.446	.804	.307	.579	1.562
Overall Model Evaluation					
	Wald	N	Ch-Sq		
	13.569*	90	28.207*		

* p<.05

Four-Year College Enrollment

In 2004, 24 of the 60 (40.0%) Educational Talent Search participants who enrolled in a postsecondary institutions attended four-year colleges. In 2005, the percentage dropped to 28.2%. Only 11 of the 39 participants enrolled in four-year colleges that year. For both years, females comprised the majority of those enrolling at four-year colleges. Of those that enrolled in four-year colleges in 2004, 83.3% were females. In 2005, females made up 81.8% of those enrolled at four-year colleges. These gender differences, however, were not greater than what could be expected by chance given the sample size. Based upon these data, it does not appear that four-year college enrollment rates differ between males and females.

When ETS services were regressed on college type for academic year 2004 using logistic regression, only goal setting was statistically significant ($p=.022$). Surprisingly, the relationship between goal setting and college type was a negative association. While the effects on college type were negligible (decreasing likelihood less than one percent), receiving goal setting made a participant less likely to enroll in a four-year college. When ETS services were compared against college type for academic year 2005 using logistic regression, none of the services significantly increased the likelihood that a participant would attend a four-year college. Chi-square test results for academic year 2004 and 2005 reveal similar findings as the logistic regression analysis. For both years, none of the Educational Talent Search services were significantly associated with enrolling at a four-year college.

When questioned about the types of goal setting information provided and possible reasons why participants receiving goal setting were more likely to enroll in a

two- year college or technical school, the interviewees gave mixed responses. The ETS Coordinator stated that the goal getting activities they use are geared toward all participants and that the large number of participants that enrolled in two-year or technical schools had more to do with the community climate than any programmatic issues. The TRIO Executive Director and the Educational Advisor both agreed with this statement, and the Executive Director added that it is easier for many of their participants to enroll in a two-year school and then transfer into a four-year school. The Educational Advisor stated that another advantage of two-year schools is the fact that students can graduate sooner with less student loan debt. She further stated that two-year schools offer degrees with which students could immediately go out and start working.

When asked if this type of information is explicitly given to participants in goal setting activities, the ETS Coordinator adamantly stated that it was not and that their ETS program strictly advocated four-year colleges. When this researcher pointed out the discrepancies in their responses, the Executive Director firmly stated that as a TRIO program, they promoted four-year colleges. This comment was immediately followed by the Educational Advisor stating that some careers, such as nursing, could be entered into with a two or four-year degree and that students pursuing the two-year degree could graduate and enter the workforce while their four-year counterparts were still in school pursuing the four-year degree. To this response, the ETS Coordinator reiterated that the ETS project advises all participants that it is best to complete a four-year degree. As this researcher had some difficulty in distinguishing the true message of the goal-setting activities of this ETS project, it was assumed that the same might hold true for some of

the participants and thus explain why those participants who attended goal setting activities were more likely to enroll into two-year or technical colleges.

Summary

The purpose of this current study is to determine if there are specific ETS services/activities that facilitate high school graduation, postsecondary enrollment, and specifically, enrollment at four-year colleges and universities. Data from this study was analyzed using a chi-square test to determine if the frequencies with which phenomena are observed in the data are statistically significant, and a binomial logistic regression to measure the effects of participant demographics and program services on receipt of financial aid information, high school graduation, and postsecondary enrollment. In addition, a group telephone interview was conducted with the TRIO Executive Director, the ETS Coordinator, and the ETS Educational Advisor for clarification purposes.

Prior to data collection, three demographic factors (race, gender, and eligibility status) were of interest in assessing differences in the three outcome variables. While gender was the only demographic factor that showed variability, no gender differences were observed in the three outcome variables. In looking at the two years of data, startling differences emerged. Overall, more positive participant outcomes occurred in 2004. A larger percentage of participants graduated high school, enrolled in postsecondary institutions, and specifically, enrolled in four-year colleges in 2004. While none of these outcomes were statistically significant, there did emerge three ETS services that were shown to statistically increase the likelihood of postsecondary enrollment. These services were Academic Advising, College Tours, and Cultural Activities. In a

surprising turn, Goal Setting emerged as a service that was negatively associated with four-year college enrollment.

While the 2005 academic year revealed decreases in the high school graduation, postsecondary enrollment, and four-year college enrollment percentages from 2004, data from this year provided a great deal more significant associations between the ETS services participants received and the outcome variables. Receiving Admissions and Financial Aid Information made a participant 60 times more likely to graduate high school. In addition to Admissions and Financial Aid Information, eight other ETS services were shown to be significantly associated with postsecondary enrollment.

The ETS staff seemed to be not only aware of the issues affecting their high school graduation and postsecondary enrollment rates, but actively seeking ways to improve the quality of the services provided to participants. The ETS Coordinator and TRIO Executive Director stated that in the coming 2006-2007 academic year, the program was looking to shift the focus of the program from a cultural enrichment center to one that is more academically focused and in line with the No Child Left Behind guidelines.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

The Educational Talent Search (ETS) program was created in 1965 by the Higher Education Act of 1965 as an information dissemination program that works with potential first-generation, low-income sixth through twelfth graders. The goal of the Educational Talent Search program is to increase the number of first-generation, low-income students graduating from high school and enrolling in programs of postsecondary study. To assist these first-generation, low-income students, the Educational Talent Search program provides encouragement and support, information, and guidance regarding postsecondary options, and academic advising to assist with educational preparation.

Each ETS project is evaluated through the submission of the Annual Performance Report to the U.S. Department of Education. The Annual Performance Report documents a particular project's progress toward their self-determined goals. It compares a project's actual yearly performance to its expected yearly performance. It does not compare one project's performance to another, nor does it have a specified level of performance that all projects must meet. More importantly, the Annual Performance Report does not have a mechanism in place to determine which ETS services, or combination of services, are most beneficial in facilitating high school graduation and postsecondary enrollment.

The purpose of this current study is to determine if there are specific ETS services/activities that facilitate high school graduation, postsecondary enrollment, and specifically enrollment at four-year colleges and universities. A mixed quantitative and qualitative approach was used in this study. Data from this study was analyzed using a chi-square test to determine if the frequencies with which phenomena are observed in the

data are statistically significant, and a binomial logistic regression to measure the effects of participant demographics and program services on receipt of financial aid information, high school graduation, and postsecondary enrollment. After these initial data analyses, a group telephone interview was conducted in an attempt to clarify some of the occurrences observed in the data.

Analysis of Research Findings

- 1. To what extent do gender differences exist in reference to the provision of ETS services?**
- 2. To what extent do gender differences exist in reference to the outcome variables (high school graduation, postsecondary enrollment, and four-year college enrollment)?**

Prior to data collection, three demographic factors (race, gender, and eligibility status) were of interest in assessing differences in the three outcome variables. Once the data was coded and analyzed, it was discovered that the population was undifferentiated by race or eligibility status, which is based on parental education and family income. While gender was the only demographic factor that showed variability, no significant gender differences were observed in high school graduation, postsecondary enrollment or four-year college enrollment based on the sample size. As females were recorded as participants in the Educational Talent Search program in greater numbers than males, chi-square tests were conducted to determine if any significant gender differences exist with regard to the outcome variables high school graduation, postsecondary enrollment, and college type. For both 2004 and 2005, females graduated high school, enrolled in postsecondary institutions, and enrolled in four-year colleges in greater percentages than

males, but these differences were not greater than what could be expected by chance given the small sample size. Based upon the data results, it does not appear that graduation rates, enrollment rates, or four-year college enrollment rates differ between males and females.

In looking at the two-years of data, surprising differences emerged. Overall, more positive participant outcomes occurred in 2004. A larger percentage of participants graduated high, enrolled in postsecondary institutions, and specifically, enrolled in four-year colleges in 2004. While none of these outcomes was statistically significant, there did emerge three ETS services that were shown to statistically increase the likelihood of postsecondary enrollment. These services were Academic Advising, College Tours, and Cultural Activities. Participants who receive Academic Advising are almost 13 times more likely to enroll in an institution of postsecondary education than participants who did not receive this service. Likewise, participants who attended College Tours were nine times more likely to enroll. Cultural Activities were also significantly associated with college enrollment, although they increased the likelihood of postsecondary enrollment by less than 1%. In a surprising turn, Goal Setting emerged as a service that was negatively associated with four-year college enrollment. This turn of events might be explained by the discrepancies found in the three interviewees' responses to questions surrounding the type of information given to participants in goal setting activities. While the Executive Director firmly maintained a position of advocating four-year colleges for participants, there were some inconsistencies in the ETS Coordinator and Educational Advisor's stance on advocating four-year colleges. While they both seemed to advocate four-year colleges as a long-term goal, they seemed to steer students toward two-year or

technical colleges as an immediate goal that would allow them to accumulate less student loan debt and enter the workforce sooner.

While academic year 2005 revealed decreases in the high school graduation, postsecondary enrollment, and four-year college enrollment percentages from 2004, data from this year provided a great deal more significant associations between the ETS services participants received and the outcome variables. Receiving Admissions and Financial Aid Information made a participant 60 times more likely to graduate high school. In addition to Admissions and Financial Aid Information, eight other ETS services were shown to be significantly associated with postsecondary enrollment.

Demographic Profile

In the current study, Black/African-American participants accounted for approximately 98% of the Educational Talent Search program participants for both 2004 and 2005. This prevalence of African-American participants is not typical of the racial profile of ETS participants nationwide. In their 1999-2000 profile of the ETS program, the U.S. Department of Education (2002c) found that 35% of ETS participants nationwide were African-American. The large number of African-American participants in this study may be the result of geographical factors. The ETS program that provided data for this study serves very rural communities where African-Americans are predominately low-income individuals with low levels of education, making their children the perfect target audience for the program.

This same Educational Talent Search profile (U.S. Department of Education, 2002c) indicated that the ETS programs nationwide were predominantly serving first-generation, low-income students. They report that 74% of all ETS participants for the

academic year surveyed were both first-generation and low-income. In comparison, the number of first-generation, low-income participants of this study was only marginally larger than the national average (83% in 2004 and 89% in 2005). Again, the geographic factors inherent in the target area served by the ETS program in this study may provide clues to the slightly larger percentage of first-generation, low-income participants assisted by the program.

The final demographic factor of concern to this study is gender. In the current study, females comprised the majority of all participants for both academic years. In 2004, 71% of participants were female and 73% were female in 2005. The U.S. Department of Education (2002c) reported that 60% of all Educational Talent Search participants nationwide were female.

Overall, the current study's demographics are not very different from the Educational Talent Search's national profile, especially when sample size is considered. The U.S. Department of Education surveyed all 360 ETS projects in the nation. Their sample size was 320,854 (U.S. Department of Education, 2002c) compared to the current study which only used data from one ETS project, and yielded a total sample size of 203 for the two years.

3. To what extent do ETS services contribute to high school graduation?

In 2004, 83 of the 90 (92.2%) Educational Talent Search participants in this study graduated from high school. In 2005, the percentage of participants who graduated high school dropped to 70.8%. Only 80 of the 113 participants graduated that year. The U.S. Department of Education reported that 94% of ETS participants nationwide graduated high school (U.S. Department of Education, 2002b) in the 1999 academic year. The

Department's graduation rate represents a great increase over the 2005 graduation rate in this study. From 2004 to 2005 the graduation rate in this study dropped 21%.

Admissions and Financial Aid Information, College Tours, and College Fairs were services that were significantly associated with high school graduation. These services occurred among high school graduates in greater numbers than could be expected by chance. Educational Talent Search participants in this study who received Admissions and Financial Aid Information were 60 times more likely to graduate high school than participants who did not receive the information. There has been some research that indicates that admissions and financial aid information are a key factor in first-generation, low-income students enrolling in postsecondary education, but none of the research has shown this information to be a factor in facilitating high school graduation. Likewise, College Tours and College Fairs are not present in the literature as factors that might aid high school graduation.

4. To what extent do ETS services contribute to postsecondary enrollment?

In 2004, 60 of the 90 (66.7%) Educational Talent Search participants enrolled in a postsecondary institution. In 2005, the percentage dropped to 34.5%. Only 39 of the 113 participants enrolled in a postsecondary institution that year. From 2004 to 2005 the graduation rate in this study dropped 32%. The U.S. Department of Education reported that 71% of ETS participants nationwide enrolled in postsecondary institutions (U.S. Department of Education, 2002b) in the 1999 academic year. The Department's postsecondary enrollment rate represents a 36.5% increase over the 2005 graduation rate in this study.

In the 2004 academic year, Academic Advising was found to increase the likelihood that a participant would enroll in postsecondary institution 13 times; attendance at a College Tour increased the postsecondary enrollment likelihood by nine times and attendance at Cultural Activities marginally increased postsecondary enrollment likelihood by about 1%. As with high school graduation, Admissions and Financial Aid Information was found to be significantly associated with high school graduation. Participants who enrolled in postsecondary institutions received Admissions and Financial Aid Information in greater numbers than could be expected by mere chance.

These findings are supported by other research concerning first-generation and low-income students and their postsecondary enrollment rates. A study sponsored by College Board found that low-income students who received guidance and information from the school counselor were much more likely to pursue education at a four-year institution (King, 1996). This is similar to research findings for first-generation students that indicate that the first-generation students who utilized the school counselor to assist with planning and preparing for college were more likely to attend a four-year college (Hutchinson and Reagan, 1989; Matthey, 1989; Rodriguez, 2003; Rowe, 1989).

College Tours, as a vehicle for exploring the college environment and obtaining specific admissions and financial aid information, serve to demystify the college experience and thus the influence of college tour attendance on increasing postsecondary enrollment can be understood. Terenzini and Springer (1996) and Thayer (2000) determined that first-generation college students who found their environment as

welcoming were less likely to experience anxiety or feel alien in their new surroundings which in turn increased the likelihood that they would remain.

Admissions and Financial Aid Information emerged as the greatest single predictor of postsecondary enrollment. This conclusion is supported by research that indicates that admissions and financial aid information are a key factor in first-generation, low-income students enrolling in postsecondary education (Hellman & Harbeck, 1997; Hsiao, 1992; Van T. Bui, 1999; Willett, 1989). The major premise behind the disparities in postsecondary enrollment between first-generation and low-income students and their counterparts is that the lack of exposure to the college culture will result in significant deficit in first-generation student's knowledge. By familiarizing the first-generation, low-income student with the college admissions and financial aid processes, the university's expectations, and the student's role in the active acquisition of knowledge during the college experience, these students become the recipient of the same knowledge as their counterparts, thus leveling the playing field (London, 1989; Hicks, 2005; Hossler & Gallagher, 1987; Thayer, 2000; Vargas, 2003).

5. To what extent do ETS services contribute to four-year college enrollment?

In 2004, 24 of the 60 (40.0%) Educational Talent Search participants who enrolled in a postsecondary institutions attended four-year colleges. In 2005, the percentage dropped to 28.2%. Only 11 of the 39 participants enrolled in four-year colleges that year. The U.S. Department of Education reported that 52% of ETS participants nationwide enrolled in four-year colleges (U.S. Department of Education, 2002b) in the 1999 academic year. The Department's four-year college rate represents a

great increase over the 2005 graduation rate in this study. From 2004 to 2005 the graduation rate in this study dropped 12%.

The low levels of four-year college enrollment, while disappointing, are supported by the literature. There have been several studies that have suggested that first-generation and low-income students through a number of academic factors tend to be limited to community colleges and other institutions like technical schools that offer remediation (Riehl, 1994; Pascarella, Pierson, Wolniak, & Terenzini, 2004; Willet, 1989). While there is no concrete data in this study to substantiate academic issues as the determining factor in the prevalence of participants who attended two-year institutions, it is certainly not beyond the realm of possibility that academic issues, as well as the information given as part of Goal Setting activities, might have played a part in these participants' decision not to enroll in four-year institutions.

Neither gender nor any of the Educational Talent Search services were significantly associated with enrolling at a four-year college. Goal Setting, however, was found to have a negative association with enrollment at a four-year college. While the effects on four-year college enrollment was negligible (decreasing likelihood less than one percent), participating in a Goal Setting activity made a participant less likely to enroll in a four-year college.

Conclusions

Regardless of the academic year, Admissions and Financial Aid Information emerged as the greatest single predictor of this study. Receiving Admissions and Financial Aid Information greatly increased the likelihood that an ETS participant would not only graduate high school, but also enroll in a postsecondary institution. Because the

data was undifferentiated by eligibility status or race, there are no conclusions that can be drawn about the cumulative effect of race, sex, socioeconomic status, and parental level of education on the high school graduation, postsecondary enrollment, or four-year college enrollment rates of these students.

The Educational Talent Search services and activities failed to consistently demonstrate their impact on the three outcome variables. Perhaps a larger sample size or a more heterogeneous sample would offer greater insight, but this study can only show admissions and financial aid information as a consistent determinant of success at the secondary level and pursuit of higher education at the postsecondary level.

Implications

The greatest implication of this study lies in the fact that Admissions and Financial Aid Information was the single greatest predictor not only of postsecondary enrollment, but also of high school graduation. These findings represent new knowledge in the area of fostering high school completion and postsecondary entry and have far reaching implications for both K-12 and higher education. For teachers, counselors, and administrators at the K-12 level, this information can be used to modify how admissions and financial information is given to students and also used to expand who gets this information. Typically, only students deemed as college material would be privy to detailed information regarding the college admissions and financial aid process. The results of this study, however, suggest that this information might also serve as a mitigating factor in high school graduation. It would therefore seem prudent to ensure that all students, regardless of the track in which they are placed (college prep track or tech prep track), should receive admissions and financial aid information, not for the sake

of postsecondary enrollment, but for high school graduation! This is especially relevant in light of the demands of our ever expanding global community and the new accountability standards enforced by No Child Left Behind.

The second greatest implication from this study lies not in the data analysis, but in the data collection process and involves Educational Talent Search administrators. At the onset of this study, ETS administrators and the entire TRIO community were identified as the group that stood to benefit most from this study. This study represented an opportunity for ETS administrators to add a much needed piece of research regarding ETS's impact on the students who are served, to revolutionize the way in which the TRIO community collects, uses, and reports student outcome results, and to consider new ways to provide services to project participants. As a former ETS administrator, this researcher saw the promise of this study and expected great levels of cooperation from the other ETS administrators within the state.

The reality, however, was much different. This researcher was met with open distrust and suspicion by ETS administrators. Even when assured that no identifying student or program information would be disclosed in this study, administrators from nine of the fourteen ETS projects in Georgia declined to participate. Administrators from the other five projects said they would consider participating; however, all but the one project that was used in this study declined to participate before the data collection process began citing such reasons as possible legal issues with releasing data, student confidentiality, and fear of data manipulation for their decision not to participate. The lack of cooperation in the data collection process necessitated that the scope of this study

be modified and because of this modification, the implications for Educational Talent Search administrators has been tempered.

There remain several unanswered questions regarding the obstacles encountered in securing participation in this study:

- If all ETS projects are required to submit Annual Performance Reports regarding the assistance they provide first-generation, low-income students in graduating high school and enrolling into college, why were so many projects so secretive about how well they have met these two goals?
- Are these projects sharing any information with their constituents (schools, parents, participants) regarding their performance?
- In light of all of the political and legislative furor surrounding TRIO programs, what would prompt a project to refuse to participate in a research study that could help statistically legitimize their work to the academic community at large?
- Why are no ETS projects conducting research using their own data?
- If ETS projects are not comprehensively tracking their progress from year to year, how are they able to identify their participants' needs and modify their programs to address these needs?

Recommendations

Based on the data collection difficulties, findings, and conclusions of this study, the following recommendations are made in regard to further study:

1. Replication of this study with other ETS projects, preferably projects serving students in an urban setting. First-generation and low-income students in urban

areas face different challenges than those in rural communities with regard to successfully completing high school and pursuing postsecondary education.

What is the impact of the Educational Talent Search program for these students?

2. Expansion of the population of this study to include a random sampling of ETS projects in a given state. A random sampling would theoretically provide a mix of urban-serving and rural-serving ETS projects and thus provide more varied background from which to test hypotheses.
3. Expansion of this study to include a random sampling of ETS projects across the country. A random sampling of ETS projects from across the country would provide the most comprehensive background for determining the true impact of the Educational Talent Search program on the high school graduation and postsecondary enrollment of first-generation and low-income students in America.
4. A new study focused on looking more intensively at the gender differences in performance related to high school graduation and postsecondary enrollments. Of particular interest are the possible cultural, institutional, and social factors that contribute to these gaps in performance by males and females.
5. A new study focused on comparing the effects of ETS Educational Specialist/Advisor involvement and the school counselor's involvement on the high school graduation rates and postsecondary enrollment rates of first-generation, low-income students.

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