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A STUDY TO DETERMINE IF THE TECH PREP PROGRAM AT DABNEY S.
LANCASTER COMMUNITY COLLEGE HAS ACADEMIC BENEFITS USING GRADE
POINT AVERAGE AS A PREDICTOR

A RESEARCH STUDY PRESENTED TO THE GRADUATE FACULTY OF THE
DEPARTMENT OF OCCUPATIONAL AND TECHNICAL STUDIES AT
OLD DOMINION UNIVERSITY

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE MASTER OF SCIENCE DEGREE

BY
SUSAN H. CARPER
AUGUST, 2005

SIGNATURE PAGE

Susan H. Carper prepared this research project under the direction of Dr. John M. Ritz in OTED 636, Problems in Occupational and Technical Studies. It was submitted to the Graduate Program Director as partial fulfillment of the requirements for the Master of Science in Occupational and Technical Studies degree.

APPROVED BY:

Dr. John M. Ritz

Occupational and Technical Studies

Old Dominion University

Date: _____

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CHAPTER I

INTRODUCTION

Tech Prep refers to a combined secondary and two-year postsecondary program of study that is seamless and has integrated options for work-based learning. Tech Prep places equal emphasis on academic and technical preparation. It also has a placement component that may lead to employment and/or further education that could lead to a four-year degree (Workforce Development Services website).

The Tech Prep consortium at Dabney S. Lancaster Community College consists of schools in Western Virginia including Dabney S. Lancaster Community College, Alleghany County, Bath County, Botetourt County, Buena Vista City, Covington City, Lexington City, Rockbridge County, and Jackson River Technical Center. Students involved in the Tech Prep consortium have guided access to career counseling, career and education fairs, job placement services, and tutoring and mentoring services among others. Students who are not participating in the Tech Prep program have access to these services through the community college, but Tech Prep students have the advantage of access before beginning their college careers.

STATEMENT OF THE PROBLEM

The problem of this study was to compare the grade point averages of students in the Tech Prep program at Dabney S. Lancaster Community College in Clifton Forge, Virginia, to students not in the Tech Prep program to determine if this career and technical education program has academic benefits.

RESEARCH GOAL

The hypothesis established to guide this study was:

H₁: Students participating in the Tech Prep program at Dabney S. Lancaster Community College will have higher grade point averages than those not participating in this schooling option.

BACKGROUND AND SIGNIFICANCE

Tech Prep developed in the 1990s after the passage of the Carl D. Perkins Vocational and Applied Technology Act Amendments, also called Perkins II, containing Title III E, the Tech Prep Educational Act. This legislation targeted federal policy and funding toward the implementation of 2+2 programs linking curriculum in secondary schools and two-year colleges. The Tech Prep initiative encouraged the integration of academic and vocational education, applied and contextual learning, teacher and counselor in-service, and other instructional and support strategies (Bragg, 2000).

In the early 1990s, Tech Prep began as a means to responding to the needs of high school students between the 25 and 75 percentiles who were largely ignored by other educational reform agendas. Over time, Tech Prep broadened its scope to be associated increasingly with systematic reforms for all high school students. By 1995, Tech Prep had become a part of “almost 70% of US school districts serving 88% of all American high school students” (Bragg, 2000).

Tech Prep studies emerged in literature such as doctoral dissertations during the 1990s. Studies examined implementation of Tech Prep, teacher attitudes toward the consortia, and role and essential elements for high quality Tech Prep programs.

In relation to this particular research project, in the late 1990s, more studies examined student outcomes. In 1999, Donelan presented a doctoral dissertation researching the effects of Tech Prep on South Carolina student success in secondary schools. Denson (1998) examined Tech Prep on mathematics scores for students in Tech Prep schools and non-Tech Prep schools in Mississippi. Also in 1998, Warren presented a doctoral dissertation for East Carolina State University that studied Tech Prep and student achievement in North Carolina.

The research in this study provides up-to-date information beneficial to the local Tech Prep program and community college. This study will support the need for articulation programs such as Tech Prep in high schools and community colleges. It will show that students achieve higher grades in college if involved in programs focusing on academics beginning in high school.

LIMITATIONS

The limitations of this study were as follows:

1. The results of this study were confined to Tech Prep students and two sections of an Orientation class at Dabney S. Lancaster Community College in Clifton Forge, Virginia.
2. The results of this study were confined to the Fall 2004 semester grade point averages.
3. The results of this study were confined to students in their first semester of college at Dabney S. Lancaster Community College.
4. The study was not able to document any tutoring or mentoring services students not in the Tech Prep program received.
5. Students in the Tech Prep program are 18-20 years old, while ages of students in Orientation courses vary.

ASSUMPTIONS

Assumptions in this study were as follows:

1. All students in the Tech Prep program used services available to them such as tutoring, mentoring, and career guidance.
2. Students not in the Tech Prep program were introduced to campus services during the Orientation course but chose not to use them as often as Tech Prep students did.
3. All students in Tech Prep receive similar guidance.
4. All students in the Orientation course were in their first semester of college.

PROCEDURES

All Orientation classes from Fall 2004 were used to conduct this study. The data were divided into two groups: one consisting of Tech Prep students and the other non-Tech Prep students. The grade point averages of all of these students were collected at the end of the semester with help from the Tech Prep Director and Director of Student Services and Institutional Research at Dabney S. Lancaster Community College. The non-Tech Prep students semester grade point averages were compared to those of Tech Prep students to determine if there was a significant difference in grades from those in the Tech Prep program to those not in the program.

DEFINITION OF TERMS

The following contains a list of terms and abbreviations and their meanings in relation to this study:

1. DSLCC: abbreviation for Dabney S. Lancaster Community College.

2. GPA/s: abbreviation for grade point average/s.
3. Orientation class: “STD 100: College Success Skills. 1 credit. Assists students in transition to college. Provides overview of college policies, procedures, curricular offerings. Encourages contact with other students and staff. Assists students toward college success through information regarding effective study habits, career and academic planning, and other college resources available to students. May include English and placement testing. Strongly recommended for beginning students. Required for graduation. Lecture 1 hour per week.” (DSLCC 2004-2006 Catalog, 2004, p. 101).
4. Tech Prep means “a program of study that -
 - is carried out under an articulation agreement between the participants in the consortium;
 - combines at a minimum two years of secondary education (as determined under State law) with a minimum of two years of postsecondary education in a nonduplicative, sequential course of study, with a common core of required proficiency in mathematics, science, reading, writing, communications, and technologies designed to lead to an associate's degree or a postsecondary certificate in a specific career field;
 - integrates academic, and vocational and technical, instruction, and utilizes work-based and worksite learning where appropriate and available;
 - meets academic standards developed by the State;

- provides technical preparation in a career field such as engineering technology, applied science, a mechanical, industrial, or practical art of trade, agriculture, health occupations, business, or applied economics;
- links secondary schools and 2-year postsecondary institutions, and if possible and practicable, 4-year institutions of higher education through nonduplicative sequences of courses in career fields;
- builds student competence in mathematics, science, reading, writing, communications, economics, and workplace skills through applied, contextual academics, and integrated instruction, in a coherent sequence of courses;
- leads to an associate or baccalaureate degree or a postsecondary certificate in a specific career field; and
- leads to placement in appropriate employment or to further education (“Tech Prep”, n.d.).

OVERVIEW OF CHAPTERS

This chapter provided the components that are involved in the study. It explained the Tech Prep program and the advantages for students in the program. The problem of this study was to compare the semester GPAs of students in the Tech Prep program at DSLCC in Clifton Forge, VA, to students not in the Tech Prep program.

Chapter II, Review of Literature, will provide in-depth information on other findings about Tech Prep and student achievement. Chapter III, Methods and Procedures, will explain how the actual study was conducted. Chapter IV, Findings, provides and explains the results of the study. Chapter V, Summary, Conclusions, and

Recommendations, concludes the study and offers suggestions that could improve a similar study in the future.

CHAPTER II

REVIEW OF LITERATURE

Chapter II of this study is the Review of Literature. It will show support for Tech Prep and show examples of studies in states other than Virginia that benefit from the Tech Prep initiative.

TECH PREP

Tech Prep places equal emphasis on academic and technical preparation. It has a placement component that may lead to employment and/or further education commencing in a four-year degree ("Tech Prep", n.d.). One thing tech prep was licensed to do was to promote more enrollments in community and technical colleges. In Georgia, this seems to have happened. Kathy Jo Elliott, 2002-2003 ACTE president and tech prep director with the Georgia Department of Education, stated, "Our enrollment numbers in the technical colleges in Georgia have dramatically increased. I think tech prep has done that. Tech prep was meant to raise career and technical education to the next level, and I think it has also done that." (Reese, 2003, p. 24).

Several states have been studied to determine the effectiveness of Tech Prep in their schools. Across eight consortia studied in South Carolina, at least 70% of Tech Prep participants entered a postsecondary institution, usually a two-year college, within one to three years after high school graduation. Most students also held part- or full-time jobs often related to their chosen field (Bragg, 2000).

There was also a study conducted in Texas by Carrie Brown, Director of the Texas State Leadership Consortium for P-16 Partnership. Brown studied five years of outcomes of cohorts at a high school (Bragg, 2000). She compared students

participating in tech prep not just with other career tech students, but with the general population students as well (Reese, 2003). The study showed that Tech Prep students in their senior year had higher graduation rates than comparison groups (Bragg, 2000). It also showed that the tech prep students had slightly higher annual attendance rates and lower dropout rates (Reese, 2003). This led to the conclusion for this study that Tech Prep is consistently making a positive difference in the academic achievement of high school students in Texas (Bragg, 2000).

A more in-depth look at a study conducted in New York between the New York City Board of Education and City University of New York demonstrated positive effects on achievement in academic subjects and grade point averages. The study focused on integrating the Med-Tech program from the University into the high school curricula in a 2+2 model. The study showed a high correlation that high school students who graduated from the Tech Prep program entered college better prepared than non-Tech Prep students. The indicator for this correlation was freshman placement exam results. These students had fewer required remedial courses, had higher college grade point averages, and had higher retention/completion rates (Shimony, Russo, & Ciaccio, 2002).

A study was conducted in Ohio with the Miami Valley Tech Prep consortium covering 58 area high schools in seven counties. The programs in these high schools emphasized mathematics, science, communication and technology, as well as hands-on learning, workplace experience, critical thinking, problem solving and teamwork. The study, "Performance of Tech Prep and Non-Tech Prep Students in Select Courses, 2001" was completed by Sinclair Community College in Dayton, Ohio. It examined

whether tech prep students performed differently than non-Tech prep students in select courses at the Community College. The analysis showed that tech prep students did indeed perform better than their classmates in some areas. The students were general population students, thus showing a positive result for career and technical education. Business and engineering tech prep students achieved higher grades in English composition and elementary algebra and had higher overall cumulative grade point averages than non-tech prep students had in these subjects. Allied health tech prep students earned “significantly better” grades in allied health mathematics and human biology than non-Tech prep students did in those classes. Withdrawal rates were “considerable lower” for tech prep students also (Reese, 2003).

Students’ emotional needs are also being met with Tech Prep programs. While these results are not easily measured, it is important to address them. Because students have the opportunity to interact closely with other students in a program, they develop close friendships with their classmates and describe themselves as happier than they were before beginning the program. These students are often more confident about their futures because they are more career and goal oriented. Parents are often pleased with the program because their children now desire to achieve postsecondary educations and are being accepted into colleges (Shimony et. al., 2002). Elliott, of the Georgia Board of Education, also supported these findings. She stated, “Tech prep also establishes high expectations, and because of increased opportunities, students gain the confidence to go on to postsecondary education” (Reese, 2003, p. 24).

FURTHER INVESTIGATION

It was a consensus that further investigation into the success of Tech Prep programs was needed across the United States. Tech Prep can differ widely from state to state. Ron Kindell, Director of Miami Valley Tech Prep Consortium, displayed the variety of programs nicely by stating, "We have 50 different flavors of tech prep in this country" (Reese, 2003, p. 25). This makes tracking and documenting the benefits of Tech Prep difficult. Hopefully, documentation among programs will continue to occur, making a successful case for Tech Prep. If so, it will offer further proof that career and technical education can play a role in leaving no child behind (Reese, 2003).

SUMMARY

The review of literature presented further information on the tech prep program and provided support for the initiative from all over the United States. Studies have been completed from many states, all showing the success of Tech Prep in their areas. While further investigation is still needed, the studies discussed reveal an undeniable success rate of students in Tech Prep that will continue to progress career and technical education across America.

The following chapter, Chapter III, will outline the Methods and Procedures used to conduct this study. Chapter III will define the population, the research variables, the methods of data collection, and the statistical analysis.

CHAPTER III

METHODS AND PROCEDURES

This chapter outlines the methods and procedures used to conduct this study. This was an experimental study. In this chapter the population, research variables, instrument design, methods of data collection, and statistical analysis will be discussed.

POPULATION

The population of this study consisted of both Tech Prep and non-Tech Prep students enrolled in the Orientation courses during the Fall 2004 semester at Dabney S. Lancaster Community College in Clifton Forge, VA. In Group A, students participating in Tech Prep, there were 47 students and 107 students in Group B, students not participating in Tech Prep.

RESEARCH VARIABLES

The independent variables in this study were Group A, students participating in Tech Prep and Group B, students not participating in Tech Prep. The dependent variable was Grade Point Average (GPA). Both groups were enrolled in Orientation during the Fall 2004 semester.

INSTRUMENT USE

The instrument used to evaluate the hypothesis was grade point average (GPA). The semester GPAs of the population were gathered and evaluated based on his or her participation in Tech Prep.

PROCEDURES

This study was conducted based on enrollment in Orientation classes at Dabney S. Lancaster Community College in Clifton Forge, Virginia, during the fall semester of

2004. Enrollment data were divided between Tech Prep participants versus non-Tech Prep participants and semester GPAs were evaluated.

METHODS OF DATA COLLECTION

To collect data for the study, assistance was needed. In May 2005 letters were sent to Ms. Mary Wilson, Director of Student Services and Institutional Research, and Ms. Teresa Hammond, Director of Tech Prep, both of Dabney S. Lancaster Community College (DSLCC). A list of all students enrolled in the Orientation class at DSLCC during Fall 2004 semester was requested from Ms. Wilson. A list of all enrolled Tech Prep participants during Fall 2004 was requested from Ms. Hammond. The material requested was received August 9, 2005. The lists were reviewed for students that appeared in both categories: enrolled in Orientation class and a Tech Prep participant. This made up Group A. Group B consisted of those students enrolled in Orientation, but not participating in Tech Prep. The Fall 2004 semester GPAs were then compared.

STATISTICAL ANALYSIS

The GPAs from Group A and Group B were collected and then analyzed using a t-test. This test was used to determine if there was a significant difference between the GPAs of students participating in Tech Prep and those not participating in this schooling option.

SUMMARY

Chapter III outlined the methods and procedures used in conducting this experimental research study. The topics outlined included the population, research variables, instrument use, procedures, methods of data collection and statistical analysis. Chapter IV, Findings, will explain results of the study.

CHAPTER IV

FINDINGS

The problem of this study was to compare the grade point averages of students in the Tech Prep program at Dabney S. Lancaster Community College to students not in the Tech Prep program to determine if this career and technical education program has academic benefits. This chapter contains the results of the data that were collected. The data were used to determine if there was a significant difference in the GPAs of students in the Tech Prep program versus those not participating in the program.

t-Test Information

Data were collected during the Summer 2005 semester for Fall 2004. Group A represents students participating in Tech Prep and Group B represents those students not participating in Tech Prep. All students were in STD 100 - Orientation during Fall 2004 semester. A t-test was used to compare the results of the data collected (See Table I).

There were a total of 154 students used in this research. The mean GPA of students in Group A, Tech Prep participants, was lower than the mean GPA of those in Group B, non-Tech Prep participants. The mean of Group A was 2.091 while the mean of Group B was 2.424. A t-test was calculated to determine if there was a significant difference in the GPAs of students that participated in Tech Prep compared with those who did not participate in the educational program.

The t-test value calculated was 1.865. The degree of freedom was 152. The level of significance at the $p > .05$ was 1.960 and at the $p > .01$ level was 2.576.

TABLE 1
Data for t-Test

Tech Prep						NonTechPrep					
GPA	D1	D1 ²	GPA	D2	D2 ²	GPA	D2	D2 ²	GPA	D2	D2 ²
1.813	-0.278	0.077	2.867	0.443	0.196	2.222	-0.202	0.041	3.500	1.076	1.158
1.588	-0.503	0.253	3.636	1.212	1.469	3.250	0.826	0.682	2.614	0.190	0.036
1.850	-0.241	0.058	3.270	0.846	0.716	3.647	1.223	1.496	2.929	0.505	0.255
1.083	-1.008	1.016	2.647	0.223	0.050	1.300	-1.124	1.263	3.788	1.364	1.860
2.333	0.242	0.059	2.538	0.114	0.013	2.000	-0.424	0.180	2.143	-0.281	0.079
3.167	1.076	1.158	2.944	0.520	0.270	3.847	1.423	2.025	4.000	1.576	2.484
3.435	1.344	1.806	2.700	0.276	0.076	0.706	-1.718	2.952	3.200	0.776	0.602
2.077	-0.014	0.000	2.267	-0.157	0.025	0.125	-2.299	5.285	3.692	1.268	1.608
3.130	1.039	1.080	3.438	1.014	1.028	1.000	-1.424	2.028	2.714	0.290	0.084
0.778	-1.313	1.724	3.222	0.798	0.637	4.000	1.576	2.484	28.580	6.764	8.166
1.500	-0.591	0.349	0.750	-1.674	2.802	3.636	1.212	1.469			
2.357	0.266	0.071	1.455	-0.969	0.939	2.176	-0.248	0.062			
1.364	-0.727	0.529	3.786	1.362	1.855	1.769	-0.655	0.429			
0.429	-1.662	2.762	2.214	-0.210	0.044	1.286	-1.138	1.295			
2.571	0.480	0.230	1.125	-1.299	1.687	1.882	-0.542	0.294			
2.167	0.076	0.006	1.286	-1.138	1.295	4.000	1.576	2.484			
2.824	0.733	0.537	3.136	0.712	0.507	2.560	0.136	0.018			
2.643	0.552	0.305	2.778	0.354	0.125	2.143	-0.281	0.079			
2.000	-0.091	0.008	4.000	1.576	2.484	4.000	1.576	2.484			
2.250	0.159	0.025	0.875	-1.549	2.399	2.560	0.136	0.018			
1.643	-0.448	0.201	1.286	-1.138	1.295	2.143	-0.281	0.079			
2.143	0.052	0.003	0.938	-1.486	2.208	3.636	1.212	1.469			
0.273	-1.818	3.305	0.800	-1.624	2.637	1.818	-0.606	0.367			
0.545	-1.546	2.390	3.000	0.576	0.332	3.727	1.303	1.698			
3.118	1.027	1.055	1.333	-1.091	1.190	3.417	0.993	0.986			
2.214	0.123	0.015	3.000	0.576	0.332	1.000	-1.424	2.028			
2.182	0.091	0.008	4.000	1.576	2.484	3.314	0.890	0.792			
1.600	-0.491	0.241	2.821	0.397	0.158	1.750	-0.674	0.454			
3.222	1.131	1.279	0.643	-1.781	3.172	3.656	1.232	1.518			
3.000	0.909	0.826	1.692	-0.732	0.536	2.125	-0.299	0.089			
1.800	-0.291	0.085	0.500	-1.924	3.702	3.000	0.576	0.332			
1.800	-0.291	0.085	3.680	1.256	1.578	0.100	-2.324	5.401			
3.059	0.968	0.937	2.933	0.509	0.259	1.250	-1.174	1.378			
3.160	1.069	1.143	3.667	1.243	1.545	1.308	-1.116	1.245			
2.818	0.727	0.529	2.067	-0.357	0.127	2.614	0.190	0.036			
1.167	-0.924	0.854	2.767	0.343	0.118	1.883	-0.541	0.293			
1.125	-0.966	0.933	4.000	1.576	2.484	2.594	0.170	0.029			
2.000	-0.091	0.008	2.909	0.485	0.235	3.429	1.005	1.010			
2.400	0.309	0.095	3.190	0.766	0.587	2.231	-0.193	0.037			
3.188	1.097	1.203	0.750	-1.674	2.802	2.000	-0.424	0.180			
3.000	0.909	0.826	4.000	1.576	2.484	2.533	0.109	0.012			
2.214	0.123	0.015	2.250	-0.174	0.030	3.625	1.201	1.442			
2.250	0.159	0.025	2.059	-0.365	0.133	2.667	0.243	0.059			

TABLE 1 Continued

3.655	1.564	2.446	1.929	-0.495	0.245	1.929	-0.495	0.245
1.000	-1.091	1.190	0.300	-2.124	4.511	3.154	0.730	0.533
2.077	-0.014	0.000	0.364	-2.060	4.244	2.000	-0.424	0.180
0.273	-1.818	3.305	2.389	-0.035	0.001	3.500	1.076	1.158
98.285	0.008	35.057	2.933	0.509	0.259	1.818	-0.606	0.367
			0.500	-1.924	3.702	0.833	-1.591	2.531
			113.63	-5.142	62.008	117.16	-1.613	53.016

GPA Totals	
Tech Prep	98.285
Non TP	230.79

Means	
TP	2.091
Non TP	2.424

D1 Total	0.008
D2 Total	0.009

D1 ² Total	35.057
D2 ² Total	123.19

SUMMARY

Chapter IV reported the data that were collected for Groups A and B; students participating in Tech Prep and students not participating in Tech Prep respectively. There was a smaller number of students in Group A (47) than Group B (107), and the mean GPA was lower for Group A (2.091) than Group B (2.424). A t-test was used to determine the significance, if any, in the GPAs of students participating in Tech Prep versus those not participating in Tech Prep. Chapter V will provide the Summary, Conclusions, and Recommendations for this study.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter will discuss the summary, conclusions, and recommendations for the research studied. Several interesting issues were discovered during this investigation.

SUMMARY

The problem of this study was to compare the GPAs of students participating in Tech Prep program at Dabney S. Lancaster Community College to the GPAs of students not participating in Tech Prep to determine if this career and technical education program has academic benefits. The hypothesis established for this study was that students participating in the Tech Prep program at Dabney S. Lancaster Community College will have higher grade point averages than those not participating in this schooling option.

All Orientation classes in the Fall 2004 semester were used to conduct this study. The data was divided into two groups: one consisting of 47 Tech Prep students and the other consisting of 107 non-Tech Prep students. The GPAs of all these students for the end of the Fall 2004 semester were collected with help from the Director of Tech Prep and Director of Student Services and Institutional Research at Dabney S. Lancaster Community College. The non-Tech Prep students semester GPAs were compared to those of Tech Prep students to determine if there was a significant difference in averages between the two groups.

The data from both groups were recorded and a t-test was calculated. The t-test was used to determine if there was a significant difference in the GPAs of Tech Prep students versus non-Tech Prep students.

CONCLUSIONS

The findings of this study indicated that there was not a significant difference in GPAs of students in the Tech Prep program as compared to those of students not in the Tech Prep program. The researcher's hypothesis was that Tech Prep students would have higher GPAs than non-Tech Prep students. The results of t as determined by the t -test was 1.865. The level of significance at $p > .05$ was 1.960 and at $p > .01$ was 2.576, therefore showing that the researchers' hypothesis was insignificant.

Based on GPAs, Group B, non-Tech Prep students, had higher GPAs than Group A, Tech Prep students. Therefore, the researcher had to reject the hypothesis based on the findings.

RECOMMENDATIONS

As with all studies, this study is not complete until others are able to bring different ideas and views to the study through further investigation. Therefore, the researcher suggests the following recommendations:

1. Additional research and study needs to be done on the types of services Tech Prep students actually use versus what they are encouraged to use to ensure there is a difference in these students. These services include tutoring, the Learning Resource Center, and individual instructor meetings. This will determine if more encouragement is needed for students to use the services to improve their grades.
2. Additional research should be completed with a set age range of students for both Group A and Group B to factor out the adult learners who tend to do better than traditional college age students. This will give a better understanding of the traditional age college students. Tech Prep participants are coming immediately from high schools

and should be compared with other students coming immediately from high school instead of the non-traditional student.

3. Further research should be done studying students that are strictly in their first semester of college. This will allow the researcher to study a group of students on the same level – incoming freshmen.

4. Further research should be done across a larger scale to obtain more accurate results. More accurate results might prove to be more substantial for Tech Prep programs to use for administrative purposes such as grant proposals.

5. Further research should be completed at other community colleges to determine the effectiveness of their Tech Prep programs. This alleviates the chance of getting inaccurate results because of happenings within a community college.

6. Further research should compare students at the community college in just Occupational and Technical programs, as these are the programs in which Tech Prep students participate. They usually seek certificates or Associate in Applied Science degrees. The STD 100 course encompasses students from all degrees. Studying just the Occupational and Technical programs can eliminate the students in transfer programs, giving a closer look at the OT students.

BIBLIOGRAPHY

- Bragg, D. D. (2000). Editorial: Reflecting Back, Looking Forward – Tech Prep and Integration of the Past, Present and Future. [Electronic Version]. *Journal of Vocational Education Research*, 25.
- Reese, S. (2003). Making the Case for Tech Prep. [Electronic Version]. *Techniques*, 78, p. 23-5, 42.
- Shimony, R. , Russo, J.W., Ciaccio, L. (2002). Medical laboratory technology: a New York State tech-prep model that improves academic skills. [Electronic Version]. *The Journal of Educational Research*, 95, 300-7.
- “Tech Prep”. (n.d.). Retrieved January 31, 2005, from <http://www.so.cc.va.us/workforce/techprep/program.htm>.