

A CASE STUDY OF THE EVOLUTION OF HIGH SCHOOL ACADEMIES IN A
LARGE SUBURBAN SCHOOL SYSTEM

John Wittmann, Jr.

Dissertation submitted to the faculty of Virginia Polytechnic Institute and
State University in partial requirements for the degree of

DOCTOR OF EDUCATION

in

EDUCATIONAL LEADERSHIP AND POLICY STUDIES

Dr. Steve Parson, Chairman
Dr. David Parks
Dr. Richard Salmon
Dr. Cecelia Krill
Dr. Travis Twiford

April 2005
Blacksburg, Virginia

Keywords: Career Academies, High School Academies, Vocational Education,
Professional Technical Studies, Task Force

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ABSTRACT

In 1993 a Career and Technical Preparation Task Force was formed, in a northern Virginia suburb, to study and recommend changes to the vocational education curriculum and two high school vocational centers. The task force met for thirteen months and concluded its study in a report entitled "Securing Our Students' Future in a High Tech Global Economy." The Division Superintendent presented this report and its recommendations to the county school board on January 12, 1995. The Board voted unanimously to accept the recommendations of the task force. After that point an Implementation Task Force met from 1995 to 1996 to plan the implementation of the original task force's seven recommendations. The recommendations represented a paradigm shift by advocating the elimination of the traditional vocational education philosophy of training some students for jobs while academically preparing others for further education. Vocational education was transformed into Professional Technical Studies, an academic discipline that integrated academic and career education. High school academies were established to replace the two vocational centers located within two existing high schools. The history that surrounded the implementation of the task force recommendations is presented in this study.

DEDICATION

This study is dedicated to three important people in my life. To my wife, Phyl, who just would not let me quit and whose support helped me through this program. To Dr. Tom Beecroft whose constant encouragement of “just keep turning it in” helped me through the tough times. And finally to the late Dr. Nancy Sprague, the visionary behind the task force that made it possible for me to do this study.

ACKNOWLEDGMENTS

I would like to thank each member of my committee for their contributions to this study. Their support and contributions made this study successful. I especially thank Dr. Cecy Krill for her encouragement and belief in me during this endeavor. I am especially grateful to my advisor and committee chair, Dr. Steve Parson for his patience and commitment over the past 5 years. I am proud to have been his last successful doctoral student. It has truly been an adventure getting to know and having the opportunity to work with such dedicated educators.

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CHAPTER I – INTRODUCTION

The growth of high school career academies during the 1990's nationally is significant to education reform. High school career academies in the 1970's and 1980's were primarily vocational education programs targeted at students who appeared to be at high risk of dropping out of school (Kemple & Snipes, 2000). Primary goals were to keep students engaged in school, provide them with work-related learning experiences both in the classroom and on the job and establish clearer pathways between high school and post-secondary employment. In the late 1980's there was a shift in the primary goals to prepare students for both work and college in what has been called "the new vocational education" (Kemple & Snipes, 2000). High school career academies now seek to include a broad range of students and combine a strong academic career-related theme that provides exposure to a broad exploration of careers without necessarily preparing students for employment (Kemple & Snipes, 2000).

Purpose of the Study

The study of high school academies was selected because I was a member of a Career and Technical Education Task Force that established high school academies in a large suburban school district in Northern Virginia. I was the administrator of the first high school academy established in the school system. In the beginning, two high school academies replaced the existing two vocational centers and three new high school academies were established. The five high school academies within existing high schools enrolled over 3000 students in the 2003-04 school year, and another high school academy is planned for the future. The purpose of the study is to examine the historical process that resulted in the establishment of high school academies. This study documented the process and the changes that transformed vocational education in the county public schools to Professional Technical Studies.

Guiding Questions

According to Yin (2003), “a case study is when a “how” or “why” question is asked about a contemporary set of events, over which the investigator has little or no control” (p. 9).

The following “how” and “why” questions will be the guide to this case study:

1. Why did the county public school system implement a unique form of career academy?
2. Why did county public school system form the Career and Technical Preparation Task Force?
3. How were the task force recommendations implemented?
4. How was the success of the high school academies evaluated and what were the findings?
5. How do current issues such as transportation, high school scheduling, annual budget shortfalls, and high stakes testing affect the future of high school academies?

Need for the Study

The Career and Technical Preparation Task Force was a collaborative exercise involving the stakeholders in the county. It began with representatives from all levels of the school system, parents, community, and business who were interested in affecting a change in the education of students. All members of the task force had the opportunity for input, to question, to debate, to make recommendations and to approve the final report presented to the school board. This collaboration ensured that the final report and recommendations represented the views of the members of the task force rather than decisions solely made by school system personnel.

It has been more than 10 years since the recommendations of the Career and Technical Preparation Task Force were accepted and implemented. The recommendations have

dramatically changed the philosophy, curricula, and educational practices of how students were educated in the area of Professional Technical Studies. High school academies have since become the focal point of these changes. Except for the task force report there has been no official documentation of this process. As a former history teacher, I believe it is necessary to document this process for any person or persons that may in the future have an interest in how and why these changes occurred.

Limitations

There are limitations in historical research. Because this historical research will be partially based on interviews of task force participants, oral accounts may contain personal biases. Many of the interviewees are or were employed by county public schools. Their personal views, dislikes, and loyalties may bias the oral information gathered through the interview process. The interviewer's questions and the familiarity with interviewees may provide the possibility of bias. Another limitation could be the failure of participants to accurately remember events since it has been more than 12 years since the task force was formed. As a former employee of county public schools, I realize that personal biases may be involved in the interview and report writing process. To limit any personal biases to the most extent possible, I reviewed and discussed my research with professors at the university and with other students in the doctoral cohort. It was my intent to document and present the evolution of the high school academies as accurately as possible.

Another limitation may be the anonymity of names and other references imposed by the county school system that was the subject of the study. This limitation forced the researcher to delete names, references, and sections of the report that may have contributed to comprehension of events and their validity.

CHAPTER II - LITERATURE REVIEW

History of Vocational Education in the United States

To trace the roots of career academies, I reviewed literature that focused on the beginnings of vocational education in the United States. Vocational education was officially established by the passage of the Smith-Hughes Act of 1917. It was the first time that a national policy was created by the federal government to address national concerns such as a strong work force and a shortage of skilled labor (CenterWork, 1993). Vocational education combined practical and applied instruction to match students with work positions in industry and commerce. It was also known by other names such as industrial education, manual education, and career education in the 1990's (Gordon, 2003).

With the influx of immigrants in the early part of the 20th century, there was a need to provide skills and a supply of workers for farms, factories, and homes (Lynch, 2000). As a response to this need, The Smith-Hughes Act of 1917 appropriated federal funding for vocational education in agriculture, trades and industry, homemaking, and teacher training. The Act's purpose was to prepare youth for jobs resulting from the industrial revolution and to provide them with an alternative to the general curriculum of schools at that time. It separated vocational education from academic education (Gordon, 2003) and endorsed a new curriculum for students attending high school and headed for blue-collar jobs in factories, farms, and businesses (Gray, 1991).

The Smith-Hughes Act of 1917 established vocational education with a separate Federal Board for Vocational Education whose sole responsibility was to build a permanent system of vocational education. The Board mandated that students spend 50% of their time in shop work, 25% in related subjects, and 25% in academic courses (Gordon, 2003). The idea was to separate

vocational students from the regular academic curriculum and prepare them with skills and competencies for jobs in the factories, farms, and businesses (Hayward & Benson, 1993). At the beginning of World War I, there was a shortage of trained military and industrial workers, and the Board's main task was to train people in skilled occupations useful in combat. This was the first time that the federal government asked public schools to undertake vocational training (Gordon, 2003).

Since the Smith-Hughes Act of 1917, vocational education trained workers for occupations necessary to the nation's economic health (Gordon, 2003). New program areas such as distributive education (now known as marketing education), business education, health occupations, technical education, and industrial arts were developed to meet the needs of industry throughout the remaining part of the 20th century. Separate state teacher certifications were also developed for these new programs, with separate departments and supervisors at the state government level (Hayward & Benson, 1993).

Federal legislation and funding for vocational education changed in the 1920s to have states offer programs and training to support national defense. In the 1930s, the federal emphasis of vocational education was to help reduce unemployment. The 1940s saw an emphasis to assist in the training for the war effort. In the 1950s and 1960s, the emphasis was to establish junior colleges and shift industries to a peacetime economy. But the main focus of federal legislation was still to train the youth for jobs on the farms, in factories, and new businesses after World War II (Lynch, 2000). The passage of the Vocational Education Act of 1963 marked a significant change in federal policy towards vocational education. This legislation focused on primarily poor and disabled youth in economically depressed areas that had academic, socioeconomic, or other disadvantages that prevented them from being successful in regular vocational education

programs. Amendments to the Act in 1968 and 1972 offered services to students with disabilities, disadvantaged students, postsecondary students, and students preparing for non-traditional occupations (Lynch, 2000).

Congress passed the Carl D. Perkins Vocational Education Act in 1984. Two main objectives were contained in the Act: (a) the improvement of vocational programs, and (b) better services and increased access to vocational education for students with special needs. The Act changed the federal funding in vocational education to improve the skills of the labor force through program improvement with the emphasis on at-risk populations (Gordon, 2003).

A Congressional study in the early 1990s found that “three fourths of high school students in the United States enter the workforce without baccalaureate degrees, and many do not possess the academic and entry-level occupational skills necessary to succeed in the changing United States workplace” (The School-To-Work Opportunities Act of 1994, Sec. 2). Congress passed the School-To-Work Opportunities Act (STWOA) of 1994 to address the national skills shortage by providing a model to create a highly skilled workforce through partnerships between educators and employers. The STWOA was an attempt to make the high school curriculum more relevant and meaningful by creating pathways with career-related themes (Urquiola, Stern, Horn, Dornsife, Chi, Williams, Merritt, Hughes, & Bailey, 1997). Connections between classroom instruction and the world of work provided opportunities for collaborative partnerships, integrated curriculum, job shadowing, internships, and other kinds of work-related experiences (The School-To-Work Opportunities Act of 1994, Sec. 3). Many school-to-work programs articulated high school courses with postsecondary education at 2- or 4-year colleges. Most School-To-Work programs were designed to prepare students for postsecondary education while

equipping them with work-related knowledge and competencies rather than training students for specific jobs after high school (Stern, Dayton, & Raby, 2000).

Although many career academies were established before the School-To-Work Opportunities Act of 1994, they used career-related themes to increase the relevance of the high school curriculum (Stern et al., 2000). Career academies provided internships and other career experience opportunities to connect the classroom to the world of work and prepared students for careers and postsecondary education. Career majors were named as one of the most promising practices at the high school level for preparing all students for further education and careers (The School-To-Work Opportunities Act of 1994, Sec. 2). This was the first mention of career majors in federal legislation and helped stimulate interest in the career academy concept (Stern et al., 2000).

High school vocational education programs nationally experienced a significant growth of special needs student populations in the late 1980's and 1990's. This growth was primarily due to general education students' choosing to take more academic courses that prepared them for postsecondary education (Lynch, 2000).

Further Amendments to the Carl D. Perkins Vocational and Technical Education Act in 1990 and in 1998 emphasized school reform and mandated the use of federal funding to improve student performance and achievement (Academic Innovations, 2003). This was the first time that emphasis was placed on academics and funds could be used not just to educate special populations, but also to the total high school student population. The Perkins Act of 1990 focused on the integration of academics and vocational proficiencies while the Perkins Act of 1998 identified the development of rigorous academic standards and accountability (Academic Innovations, 2003).

The Perkins Act of 1998 did not specifically target at-risk students or students with disabilities. “The purpose of this Act is to develop more fully the academic, vocational, and technical skills of secondary students and post-secondary students who elect or enroll in vocational and technical education programs” (Carl D. Perkins Vocational and Applied Technology Education Act Amendments, 1998, p. 2).

The Carl D. Perkins Vocational and Technical Act of 1998 focused on continuing the development of the academic, vocational, and technical skills of students through high standards in vocational programs and links to postsecondary programs. States were still to provide services to special populations in high quality vocational programs, but federal policy no longer dictated the nature of those services (Carl D. Perkins Vocational and Applied Technology Education Act Amendments, 1998). Federal legislation in the Amendment did require that states were to provide information on four core indicators of performance: (a) attainment of academic and vocational/technical proficiencies, (b) attainment of secondary diploma or General Educational Development Certificate, (c) placement in, retention in, and completion of postsecondary education or advanced training, placement in military service, or employment, and (d) participation in and completion of programs that lead to nontraditional training and employment (Carl D. Perkins Vocational and Applied Technology Education Act Amendments, 1998). The Perkins Act of 1998 mandated that students were to be educated and prepared to work successfully in an ever changing technologically and internationally competitive workplace (Carl D. Perkins Vocational Education and Applied Technology Act Amendments, 1998). Lynch (2000) summarized this new concept:

In essence, today’s workplaces call for an increasingly educated workforce for the 21st century. The major difference is that as a society is no longer economically sound to track

and separate students into those with only (or primarily) a classical curriculum and those with only (or primarily) a vocational curriculum or with relatively narrow job-specific skills. Both head and hands, and theoretical and applied will be needed by most students in most workplace at some point in their lives (pp. 10-11).

Career academies were in the forefront of vocational education reform movement because of the concepts of integrating academic, vocational, and technical skills. Career academies are also meeting the mandates of the Carl D. Perkins Vocational and Technical Education Act of 1998 by preparing students not only for the workplace but also for post-secondary education through programs such as Tech Prep and direct articulation with 4-year colleges and universities (Lynch, 2000). Tech Prep is defined as a program that:

1. Combines a minimum of 2 years of secondary education with a minimum of 2 years of postsecondary education in a non-duplicative, sequential course of study;
2. Integrates academic and vocational/technical instruction, and utilizes work-based work site learning;
3. Provides technical preparation in a career field;
4. Builds student competence in math, science, reading, writing, communications, economics, and workplace skills through applied, contextual academics;
5. Leads to an associate, baccalaureate degree or postsecondary certificate in a career field;
6. Leads to appropriate employment or further education (Gordon, 2003, p. 101).

Characteristics of Career Academies in the United States

According to the Career Academy Support Network located at the Berkeley campus of the University of California (Stern et al., 2000), there are central elements that high school career

academies have in common. These elements are: (a) small learning communities with approximately 50 students per grade level in grades 9 through 12; (b) college preparatory curriculum with a career theme; and c) partnerships with employers, communities, and higher education (Stern et al., 2000).

Studies of high school career academies found five common characteristics (U.S. Department of Education, 1999). These were (a) clusters of students in grades 9 through 12 who share many of the same classes each day with many of the same teachers, (b) sufficient depth and breadth of academic courses that met both high school graduation requirements and college entrance requirements, (c) career and technical courses that composed a career major, (d) work-based learning experiences built into the curriculum, and (e) a group of business persons who advised the school system on curriculum, work-based learning experiences, finances, specific course and equipment requirements. The Manpower Development Research Corporation (Kemple & Rock, 1996) defined high school career academies as “schools-within-schools” where groups of students take several career focus classes each year with the same group of teachers. Thus, there seems to be agreement among researchers that career academies share common characteristics of career exploration and college preparatory programs, groups of students sharing the same group of teachers, and work-based learning experiences.

In Virginia, the county’s high school academies shared some of these characteristics such as a career and academically integrated curricula and business partnerships; there were major differences. This county’s high school academies were developed for a suburban school system and technically were not “schools within schools” since students did not take their regular academic schedule at the high school academies (Sockwell & White, 2002). Academy courses were offered only to juniors and seniors as 1- or 2-hour daily electives, and students took the

remainder of their academic schedule at their base high schools. Students drove or were provided bus transportation to academies on a daily basis. The academies enrolled approximately 400 students to 1200 students in each of the five different academies for a total of more than 3000 students in 2003. These differences made these academies unique among the nation's academies and a good candidate for a special study.

Evolution of Career Academies in the United States

To fully understand the context of high school academies, I reviewed the history and development of career academies nationwide. The history of career academies can be traced to the establishment of an electrical academy at Thomas Edison High School in Philadelphia in 1969 (Burnett, 1992). The electrical academy's purpose was to keep students in school and prepare them for employment. The electrical academy was successful in keeping students in school, thus other academies in different career areas were established in Philadelphia high schools throughout the 1970s and 1980s. In 1982 all Philadelphia academies were organized into the Philadelphia Academies, Inc., a non-profit foundation that coordinated funding and curriculum development (Burnett, 1992). The Philadelphia public school system maintained responsibility over teachers and facilities in all academies. By 2003, 31 different academy programs were operating in 16 Philadelphia high schools enrolling over 7,000 students in grades 9 through 12. Different high school academies offered courses in business, hotel management, restaurant management, tourism, automotive technology, electrical, environmental technology, horticulture, fitness, health, and sports education (Philadelphia Academies, Inc., 2000).

Initially these academies were designed to prepare students for occupations that did not require a 4-year college degree (Burnett, 1992). By the end of the 1980s, the Philadelphia Health Academy began focusing on preparing students for college by integrating academic and

vocational education. The executive director of the health academy stated, “While the other academies infused a vocational training program with academics, in the health academy we infused an academic curriculum with a vocational orientation” (Snyder & McMullan, 1987, pp. d-29). This transformation from job preparation and training followed the national trend in public high school education and narrowed the division between traditional vocational and academic education.

In 1981, Sequoia Union High School District on the peninsula south of San Francisco established the Peninsula Academies with a computer academy and an electronics academy based on the Philadelphia Academies model. The initial concept for the Peninsula academies was dropout prevention by keeping students in school and preparing them for work (California State Department of Education, 2000). Administrators for the Peninsula Academies decided to forgo the traditional vocational education curriculum and make the curriculum academically rigorous because “no one could possibly predict what types of jobs students would ultimately have, and a solid academic foundation was required to be prepared for future work” (Stern, Raby, & Dayton, 1992, p. 39).

The Peninsula Academies were successful, and in 1984, the state of California selected and funded 10 new academy sites throughout the state. In 1987, the name of the Peninsula Academies was formally changed to California Partnership Academies, thus establishing a statewide academy network (Stern et al., 1992.). In 1990, the California Department of Education endorsed the integration of academic and vocational education that gave a new importance to academies as models of educational reform. This was the first time that a state government assisted in the funding and development of high school academies. As of 2000, there

were more than 290 state-funded academies and an estimated 500 total academies in the state (California State Department of Education, 2000).

In 1982, in New York City, an Academy of Finance was established by a partnership between New York City Public Schools and Shearson Lehman Hutton. The partnership implemented a high school finance and career-oriented curriculum through a comprehensive two or four year program. The purpose of the finance academy was to prepare students for entry-level positions in the finance industry (Stern et al., 1992).

The success of the Academy of Finance led to the establishment of other academies. In 1986, American Express established an Academy of Travel and Tourism in New York City and Miami. By 1991 there were plans to implement 19 academies of travel and tourism in 14 cities (Stern et al., 1992). The purpose of the academies was to prepare students for entry-level positions in the travel and tourism industry.

The growth of the Academy of Finance and the Travel and Tourism Academies led to the formation of the National Academy Foundation (NAF) in 1989 (Stern et al., 2000). Unlike most other academies nationally, the academies of the NAF were the first to be specifically designed to prepare students for post-secondary education rather than job training. The main purpose of NAF was to “maintain the quality of the academy programs, support expansion and the development of new academies, and encourage corporations to support the development of a competitive workforce” (Stern et al., 1992, p. 49). Besides finance, and travel and tourism, the NAF offered programs in public service, manufacturing sciences and in Information Technology in 20 states, Washington, DC, and Mexico City (Stern et al., 2000).

In the 1990’s the Illinois Board of Education established 20 academies patterned after the California academies and expanded to approximately 50 academies in 2000. Throughout the

decade of the 1990's, academies were established in Atlanta, Chicago, Denver, Sacramento, Oakland, Virginia Beach, Montgomery County, Maryland, and Washington, DC (Stern et al., 2000).

Since 1997 the county school system in Virginia established two Engineering and Scientific Technologies academies, two International Studies and Business academies, one Communication and the Arts academy, and one Health and Human Services academy. Another Health and Human Services high school academy is planned for the future. Career academies are one of the fastest growing high school reforms (Sockwell & White, 2001). In 2000 it was estimated that there might be more than 2,000 high school career academies throughout the United States (Stern et al., 2000).

Studies of Career Academies in the United States

In researching career academies, I discovered that there were many articles written about career academies but fewer significant research studies. Most of the articles summarized or referred to existing studies of career academies. I have reviewed below the studies of career academies that I felt were most significant.

The Manpower Demonstration Research Corporation (MDRC) conducted a 10-year national study on career academies funded by the the U.S. Departments of Education and Labor and 17 private foundations and organizations (Kemple & Rock, 1996) The study focused on over 1,700 students who applied for 1 of 10 career academies participating in the evaluation. The academies offered a diversity of technical, service-oriented, and business-related career themes and were located in small cities and large urban school districts. Students in the sample were identified in the eighth or ninth grades and were followed through the end of their twelfth grade year. The methodologies in this study were a random assignment research design and a student

and teacher questionnaire. From the full sample, 1,406 students and 468 teachers were asked a range of questions regarding their experiences, behaviors, and attitudes about school. The responses were used to create factors that were likely to affect students' engagement and performance (Kemple, & Snipes, 2000). Data were analyzed with a two-tailed t-test that was applied to differences between academy and non-academy groups. Career academies produced only modest improvements in students' engagement and performance during high school. Only 59% of academy students completed the academic core courses as compared to 61% of non-academy students. Seventy-one percent of academy students applied to college compared to 79% for non-academy students. Drop out rates for career academy students declined to 10% compared to 12% for non-academy students. Academies increased graduation rates for at-risk high school students. About 86% of academy students met graduation requirements, compared to 75% of non-academy students (Kemple & Snipes, 2000).

University of California's Maxwell and Rubin (2001) conducted 9-year study by of 33 high school academies in a large, inner city public school system in California. The school system served over 50,000 students and contained six comprehensive high schools. Over 90% of the students were ethnic minorities, 25% of limited English proficiency, nearly 40% on free lunches, and the average daily student attendance rate of 80%. The purpose of the study was to answer questions relating to the ways career academies could reform urban high schools to increase education and workplace knowledge and skills. During the 9-year time period, the study included newly formed academies as well as established national models.

Maxwell and Rubin (2001) gathered both quantitative and qualitative data for the study. Quantitative data included information from transcripts of three classes in the districts high school, students from the district who applied to or attended the nearby state university, and a

survey of district high school students. Qualitative data included information from site visits over 9 years. All directors of academies, five of six high school principals, district program administrators, and various academy partners were interviewed. The study followed 10,102 high school students who as sophomores had enrolled in career academies. A survey was sent to these students 1 to 3 years after they had graduated from high school to which 1,200 students responded. Individual records were studied for approximately 1,500 former academy and non-academy students from the district who had applied to enroll or attended the local California State University. The results were used to assess the career academy's influence on students in high school, in the labor market after high school, and in postsecondary education.

Maxwell and Rubin (2001) concluded that the career academy model had the potential to positively affect educational outcomes in California. The career academies increased high school graduation, measured by lower drop out rates. Two years after leaving high school, more than 92% of former academy students had a high school diploma as compared to 82% of students from other programs. The researchers attributed this to the academy building students' academic knowledge and skills that increased high school GPA and increased the probability of graduating from high school as compared to those in regular high school programs. Career academy students were more likely to attend postsecondary education than non-academy students. In combining attendance rates at 2- and 4-year institutions, a 10% difference was found between academy and non-academy students. In surveying attendance rates at 4-year institutions, a 40% difference was found in favor of academy students. "This difference is a striking indicator of academies having fostered academic success, and increased probability of graduating from the university for a group of students who otherwise may not have continued their education" (p.13).

A New York City study by Crain, Allen, Thaler, Sullivan, Zellman, Little, and Quigley (1999) of the Teachers College of Columbia University was specifically designed to examine the impact of curriculum and instruction of urban career magnet high schools as compared to comprehensive high schools. Subjects of the study were 110 graduates of four-career magnet high schools and comprehensive high schools in New York City. Fifty-one students graduated from career academy magnet schools and 59 graduated from comprehensive high schools. The students were randomly chosen from lists obtained from the Board of Education that also gave permission to interview the students. The methodology was a random-design format in which students were selected in pairs, one from a career magnet school academy and one from a comprehensive high school. The random selection process was used to maximize group equality and minimize any selection bias. All 110 graduates were surveyed using a closed-ended Likert scale and open-ended structured interviews. Graduates were contacted by their high school counselors and paid \$40 if they agreed to be interviewed. In almost all cases, the interviewers were specially trained and matched the students in race or ethnicity and gender.

Crain et al. (1999) found that graduates of career magnet schools were absent on average from their occupational classes only a few days a semester compared to graduates of comprehensive high schools who were absent from their occupational classes an average of once a week. Career magnet graduates were less likely to engage in behavior associated with poor school performance such as fights, tobacco use, substance abuse, pregnancy, or being arrested. Overall, 41% of career magnet graduates reported no-risk behaviors while only 19% of comprehensive graduates reported no increase in at-risk behaviors. More career magnet graduates said they planned to go to college, but the same percentage actually started college

classes (80%) as comprehensive graduates. Career magnet graduates indicated a starting wage higher per hour (\$7.27) than comprehensive graduates (\$6.28) after high school.

In 1998, Sockwell and White began a 4-year evaluation of two high school academies in a large suburban school system in Virginia. The high school academies were not designed specifically for at-risk students, but for the general eleventh and twelfth grade student population. The study was conducted to determine the long-term impact of academies on student employment and post-secondary education enrollment. A longitudinal research design compared survey results from academy graduates and demographically matched non-academy graduates (Sockwell & White, 2002). Multiple data sources were used to gather information.

Students' demographic characteristics, course enrollment, grades and contact information were provided by the school system's Department of Information Technology, and academy students completed surveys prior to graduation (Sockwell & White, 2002). Two cohorts of academy graduates and demographically matched comparison groups of non-academy students completed the surveys both 1 and 2 years after graduation.

Survey results were analyzed in four ways: (a) Separate analyses were conducted for graduates attending 2- and 4-year colleges; (b) the trend comparing high school and college grades was analyzed rather than just college grades; (c) the analyses of job skills and wages were restricted to graduates with full-time employment; (d) analysis of covariance was used to control for effects of grades, gender, or special education status where necessary (Sockwell & White, 2000). Results of the study indicated that high school academy enrollment had neither positive nor negative effects on students' high school grades. Academy students had lower overall grades when compared to a control group of their peers. Academy students' average GPA for grades nine through twelve was 2.485 compared to 2.800 for non-academy students. Two years

following graduation, 22% of academy students attended a 2-year college compared to 11% of non-academy students. Only 50% of academy students attended a 4-year college compared to 79% of non-academy students. The greatest impact appears after students graduate from high school resulting in clear wage benefits 2 years after high school graduation. Academy graduates were more likely to be employed at skilled jobs that paid \$15 to \$25 per hour, where non-academy graduates typically worked in jobs that paid \$8 to \$12 per hour and required less skill (Sockwell & White, 2002).

Among 2-year college students, academy students demonstrated improvement in GPA (3.01) from high school to college when compared to the GPA (2.99) of non-academy graduates. A comparison of 4-year college students showed that the GPA for academy students was (2.98) and the GPA (2.94) for non-academy students. The majority of academy graduates continued with their academy career area of study, either by employment or taking college courses related to their academy career area focus (Sockwell & White, 2002).

Summary

In reviewing the literature, it may be concluded that career academies have a positive impact on reducing high school dropout rates and increasing attendance and graduation rates (Stern et al., 1992). The Virginia study concluded there was a positive impact on academy students' career focus, employment, and postsecondary education (Sockwell & White, 2002).

History of Vocational Education in the County's Public Schools

To understand the evolution to high school academies, I traced the evolution of vocational education in county and the establishment of high school regional vocational centers. Three of these vocational centers later became the foundations for the present high school academies.

The first mention of vocational education in the county was in the 19th century. By the middle of the 19th century there were a few one-room schools established, whose purpose was to educate the sons and daughters of farmers and the poor (Netherton, Sweig, Artemel, Hickin, & Reed, 1978). Student attendance was sporadic and dictated by the weather, planting seasons, harvest seasons, and the economic conditions of the time. Boys and girls attended the same classes for basic education subjects such as reading and writing. Girls were directed to the “womanly arts” of cooking and sewing while the boys were separately taught science and mathematics (Netherton et al., 1978, p. 470). Most sons and daughters of the wealthy were sent to private boarding academies in nearby Washington, DC, the city of Alexandria, and in small towns such as Sully, Little Falls, and Centreville in Virginia.

The next mention of vocational education was in private academies. Private academies were first established in the early part of the 19th century and were usually associated with some religious organizations (Netherton et al., 1978). In 1786, the Alexandria Academy was founded as a free school to educate the poor and was supported by donations from wealthy individuals such as George Washington (Hinkle, 1978). In 1800, an Academy for Young Ladies was opened in Alexandria. Girls were taught reading writing, arithmetic, grammar, composition, geography, and French, but no sciences. This curriculum for girls was highly unusual for the times since girls were generally educated in the “womanly arts” of homemaking, cooking, and sewing. (Netherton et al., 1978, p. 470). In 1806, an Academy opened in Centreville and offered geography, mathematics, reading, writing, and moral education. In 1812, a Female Free School was established by endowments from wealthy citizens.

After the Revolutionary War, many slaves were freed upon the death of their owners. Education for freed slaves was almost non-existent (Hinkle, 1978). There were efforts by private

organizations to provide public education for black students. The Howell School opened in 1833 and enrolled more than 100 black students. The Freedmen's Bureau established schools for black children and by 1866 there were eight black schools in the county. In 1877, the Quakers formed a Benevolent Society to assist in the education of freed slaves. In 1894, the Manassas Industrial School was established as a private institution for the education of black students in the northern Virginia region. It initially provided an elementary curriculum since its major focus was vocational training but added a secondary curriculum in 1915 (Hinkle, 1978). By 1939 it became a public school when the school boards of three local counties took over the operation of the school.

There was no public high school for black students in the county. Black students had to attend the Industrial High School in Manassas or provide their own transportation to high schools in Washington (Netherton et al., 1978). By 1950 the school had become the Manassas Regional High School for black students.

The Mann High School Act of 1906 established the public high school system in Virginia (Hinkle, 1978) and by 1910 new courses of study were published for high schools. These courses of study included core academics of English, math, history and science, and two electives. Students could select two electives from the manual arts that included cooking, sewing, manual training, and drawing. In 1915, bookkeeping, stenography, typing, agriculture, and household arts were added (Hinkle, 1978). In 1911, for the first time in the county public schools, preparing students for agriculture was not the main educational goal. Emphasis for a new high school was on athletics and commerce and by 1924 "the school had the county's first athletic director, two basketball courts and two tennis courts, a baseball diamond and a 220-yard track" (Netherton et

al., 1978, p. 283). In 1925, the county's first business course and commercial department were added to the general high school curriculum.

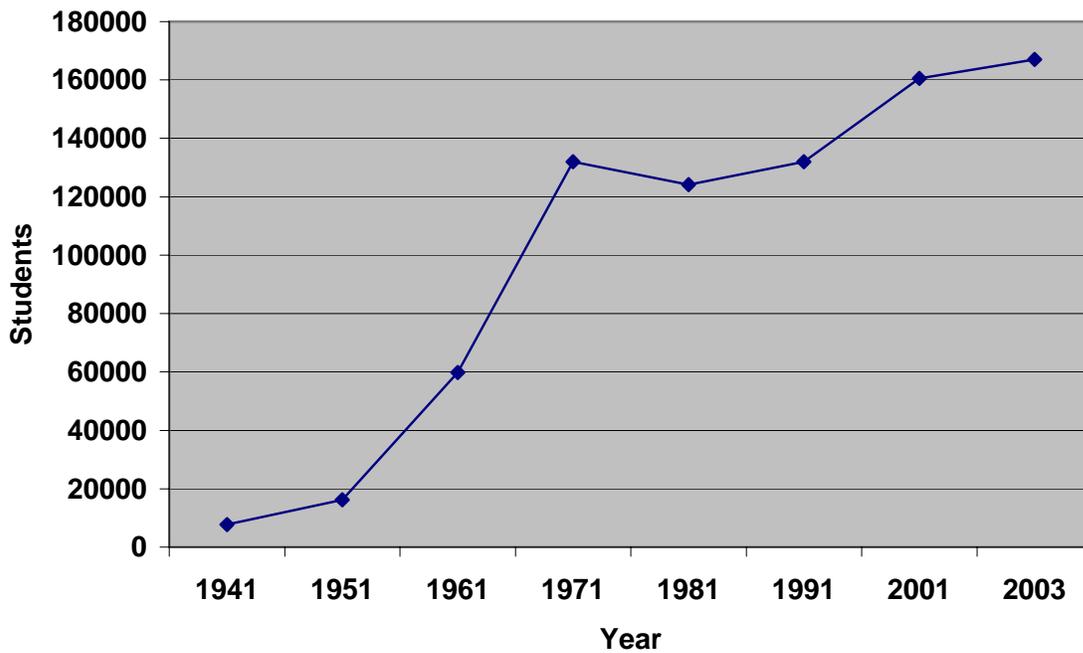
World War I brought economic changes to the county. There was a shortage of farm labor due to the institution of the draft and the prospect of better-paying jobs in war industries in Washington, DC and surrounding areas. Farmers lobbied for an agricultural high school that would meet the farm labor shortage (Netherton et al., 1978). A county agricultural agent gave the following reasons for the need of an agricultural high school:

The splendid opportunities for an education in our county agricultural high school at Floris...our schools give absolutely no assistance in agricultural education...A very small percentage of our farm boys go on to college and agriculture should be the elective course where the students does not expect to go farther...Of what use will be the Latin or French learned by a farm boy except to cuss something in a language unknown to his companion...The present curriculum is absolutely unfair to the 90% of our farm children who do not go beyond the grades (Netherton et al., 1978, p. 521).

To help alleviate this farm labor shortage, the county Board of Supervisors in 1920 allocated funds to convert an existing high school in the rural western section of the county to a Vocational Agricultural High School. The passage of the Smith Hughes Act of 1917 may have been influential in this decision though no substantiation was found in any of the research. The Vocational Agricultural High School operated until 1929 when it was consolidated with the local high school, and the agricultural curriculum was offered as part of the regular high school curriculum. This was part of the county's consolidation effort begun in 1925 to consolidate or close smaller schools (Netherton et al., 1978).

By 1940 there were 39 elementary and 4 high schools with total enrollment of 6,899 students in the county. Upon the return of war veterans, and the growth of the businesses and the federal government, the student population grew from 7,755 students in 1941 to 16,163 students by 1951. The decades of the 1950s and 1960s saw the greatest growth, while the decades of the 1970s and 80s saw an actual decline in the student population, as depicted in the following chart.

Student Growth 1941-2003



The post World War II era saw a growth in businesses and industries with people moving away from the cities such as Washington, DC, and into the suburbs. In 1961, there were 59,870 students in the public schools in 93 buildings (Netherton et al., 1978). The public passed bond referendums to support new school construction and expanded curriculum at the high school level. Nine new intermediate schools were opened in 1961 housing grades seven and eight. By 1968 the student population had grown to 122,000 students in grades 1 through 12 with an annual budget of almost \$80 million (Netherton et al., 1978). The county public schools added kindergartens with an enrollment of 8,076 new students.

The population growth in the county continued, and in 1970 there were more than 133,000 students enrolled in the school system (Hinkle, 1978). In 1972, a new high school opened with a regional vocational center in the western part of the county. By 1972 there were five regional high school vocational centers offering students a variety of courses such as barbering, cosmetology, trowel trades, auto body repair, auto mechanics, machine shop, refrigeration, and heating and air conditioning (former assistant superintendent for vocational education, personal communication, October 15, 2003). New vocational courses were offered off high school property such as Classroom-on-the-Mall, a student-built house project, Sports and Entertainment Marketing, and Travel and Tourism located at Dulles International Airport (former division superintendent, personal communication, October 15, 2003). In 1975, student growth peaked at 136,944 students and began to decline to a low of 122,367 students in 1983. This decline occurred mainly in the eastern part of the county due to older families whose children had graduated from high school replaced by younger families with no children (Netherton et al., 1978).

In 1984, the population in the county again began to increase, especially with new residential development in the western part of the county. New schools were being built to alleviate the growth in the western areas of the county. With the tremendous population growth came pressures from the community for more academic courses in high schools. Thomas Jefferson High School for Science and Technology opened in 1985 and quickly became the elite academic high school in the county and one of the elite academic high schools in the nation (Netherton & Netherton, 1992). As the community pressures for more academic and college-oriented courses increased, community and school board support for vocational education decreased (former assistant superintendent for vocational education, personal communication, October 15, 2003).

With the increased emphasis on academics and postsecondary education, student enrollment in academic courses increased, while enrollment in vocational courses in regular high schools and the regional vocational centers declined. By 1992 the vocational centers at three high schools had closed and most of their facilities were converted to regular academic classrooms. The remaining two high school vocational centers also experienced declining enrollments, while offering outdated vocational courses with obsolete equipment (former assistant superintendent for vocational education, personal communication, October 15, 2003).

In 1992, the county's Department of Vocational Education was merged with the Department of Instructional Services and came under the supervision of a new Assistant Superintendent of Instruction. After reviewing the existing conditions of vocational education programs at the county high schools and the two remaining vocational centers, the Assistant Superintendent recommended to the Division Superintendent that a task force be convened to study the vocational education system and recommend changes. The Career and Technical

Preparation Task Force was convened in the fall of 1993 and made its recommendations to the Division Superintendent who presented them to the school board on January 12, 1995. It is the Task Force’s recommendations and the implementation of these recommendations that will be discussed in this case study.

The timeline on the following pages was used to guide this study. The Business Coordinator developed the part of the timeline from 1994 through 1996 in response to an information request letter dated March 13, 1996 from the Associate Superintendent of Prince William County Public Schools.

Timeline of the Career and Technical Preparation Task Force

<u>Time</u>	<u>Activity</u>
January 1993-March 1993	Preliminary discussions were held which centered on the state of vocational education and the formation of a Vocational Technology Task Force.
August 1993-October 1993	Forty-eight members were selected for the new Career and Technical Preparation Task Force.
November 1993	At the opening meeting-the Assistant Superintendent for Instructional Services gave overview of the mission of task force and existing vocational program overviews. Meeting # 2--The task force vision was established and key issues such as need for change and integration of academic and vocational education were discussed.

Meeting #3--A steering committee was formed and suggestions for subcommittees were presented.

Members discussed and determined what research was necessary to address major issues.

December 1994

Guest speaker, Dr. Willard Dagget presented his vision of vocational education to task force members, principals, counselors, Area administrative staff, and Chamber of Commerce members.

January 1994

An overview of county existing vocational programs was given by vocational curriculum specialists. Five subcommittees were formed from task force members with chairs forming a steering committee.

1. Core programs within career clusters.
2. High school work experience programs.
3. Core vocational technical programs and offsite programs: staffing, credits, etc.
4. Research trends in industry, skills standards and successful models.
5. Articulation with 2- and 4-year postsecondary institutions of higher education.

February 1994-March 1994	Subcommittees' timelines were developed for meetings and preliminary reports to the members of the task force.
May 1994	Final reports and recommendations were presented to task force for discussion.
June 1994	Final reports and recommendations were presented and voted upon.
July 1994-August 1994	A draft report was written by task force volunteers with seven recommendations.
September 1994-October 1994	Task force convened to discuss report draft and make final recommendations.
October 1994- November 1994	The final task force report was written.
December 1994	Division Superintendent presented task force report to school board for review.
January 1995	School board unanimously voted to accept the report and its recommendations.
February 1995-March 1995	An Implementation Task Force of four committees was established with approximately 160 members. <ol style="list-style-type: none"> 1. Career Experience 2. Career Pathways 3. Course Review 4. Academy

April 1995	The Assistant Superintendent for Instruction presented overview of previous task force, purpose and goals of current committees.
April 1995-May 1996	Costs of implementing recommendations were developed by central office staff. Committee members made on-site visits to the two existing high school vocational centers.
May 1996	An interim report and budgetary implications on implementing recommendations were presented to school board.
September 1996- June 1997	Career Pathways committee field-tested student portfolios that provided interest and aptitude tests at selected schools. Other committees continued work on recommendations.
September 1997- June 1998	Academies established at two high schools, one replacing an existing vocational center. A Career Experience Specialist added to each of the new academies. The Course Review committee recommended deletion of obsolete courses. A follow-up study was piloted at one career academy.

September 1998- June 1999

Evaluations were developed for career academies.

Career Pathway program was expanded to nine more schools.

A third and fourth academy was established at two more high schools.

A Career Experience Specialist was added to the new academies.

Course reviews were continued to recommend courses for deletion.

Follow-up studies were conducted at academies at the first two high schools.

Formal evaluations of academies were conducted at the first two high schools

September 1999- June 2000

A fifth academy was established at another high school. A follow-up study was conducted on all graduating academy seniors.

Career Pathways model was expanded to all schools.

Evaluations of academies were continued.

June 2001

Evaluations of academies at the first two high schools were completed and presented to the school board.

CHAPTER III – METHODOLOGY

Historical Case Study

I used the historical case study as the methodology for this research. According to Gray (1991), the study of history leads to understanding and wisdom. “He who seeks to learn anything about the past will profit from the knowledge of the methods by which it is reconstructed for later use” (p. 8). A historical case study focuses on a specific organization and traces its development (Merriam, 1998). McDowell (2002) stated, “Historical research represents a systematic inquiry into the past and an attempt to separate true from fictionalized accounts of historical events, based upon the examination of a wide range of relevant source material” (p. 5). “In applied fields such as education, historical case studies have tended to be descriptions of institutions, programs, and practices as they have evolved in time” (Merriam, 1998, p. 35). This is a historical case study of the evolution of a suburban school system’s high school academies from 1993 to the present that includes their purposes, development, and implementation.

In conducting historical research, the conditions or motivations under which the source was produced should be considered. Howell and Prevenier (2001) stated, “Historical context must also be considered since the significance of any event depends as much upon what comes after as what came before” (p. 19).

K. Gray (1991) organized historical research into six steps: (a) Selection of the appropriate topic, (b) the tracking down of relevant evidence, (c) taking of notes, (d) critical evaluation of the evidence, (e) the arrangement into meaningful patterns, and (f) the presentation so it will command interest and communicate to the readers the fullest understanding of the subject. Data for the historical case study is collected from primary and secondary source

materials. According to Howell and Prevenier (2003), “A source is the basis of our knowledge about the past” (p. 17). Primary sources include persons directly connected with the specific event or written records compiled at the time of the event. Testimonies are oral or written reports that describe an event. Secondary sources include items written at a later date by people who were not present at the event (McDowell, 2002).

Data Collection from Interviews

I collected primary sources of data from interviews of key individuals of the Task Force, Task Force notes, draft reports, the final Task Force report, school board minutes and tapes of school board meetings. Secondary sources included local newspapers and magazine articles written at a later date.

I used an interview protocol that contained rules and procedures to be followed before conducting interviews. Yin (2003) suggests that using a protocol increases the reliability of a case study and should include: (a) introduction to the case study and the purpose of the protocol, (b) data collection procedures, (c) outline of case study report, (d) case study questions, and (e) evaluation (p. 68).

I selected the persons to be interviewed and attempted to ensure a representation from all members of the Career and Technical Preparation Task Force and subcommittees. This included central administration, high school, middle school, elementary administration, counselors, and teachers, community members, business members, and parents. I was not successful in interviewing many prospective interviewees because of the inability obtain contact information regarding their employment with the school system or their current residency.

Ritchie (2003) describes oral history as “an interview that records a person’s recollection of experiences, thoughts, and feelings about a specific event or a period of time. Oral history

adds a personal dimension to the study of the past” (p. 19). After selecting the interviewees, I will ascertain what historical information could be obtained in the interview, whether the person would be willing to participate, and the time needed to complete the interview (Ritchie, 2003).

The following procedures were used for interviews (Creswell, 1998):

(a) Identify the interviewee based on purposeful sampling or selecting a person who can supply the most relevant information; (b) determine the type of interview that will gain the most useful information; (c) use a tape recorder that is sensitive enough to the acoustics of the room, the interviewee and the interviewer and take good notes; (d) design four to five pages of open-ended questions and leave enough room to write responses to interviewees’ comments; (e) determine the place for the interview, preferably a quiet location free from distractions; (f) obtain consent by having the interviewee sign a consent form; (g) explain the purpose of the study, time needed to complete the interview and the plans for using the results; (h) stick to the questions during the interview and complete within the time specified; (i) be courteous and respectful and offer no advice; (j) listen rather than speak during the interview (p. 35).

Interviewers should help interviewees be as accurate as possible by providing names, dates, and other information to keep the dialogue moving by guiding but without leading. Ritchie (2003) stated the goal is “to move the interviewee beyond reluctance to an honest and perhaps self-critical evaluation of the past” (p. 84).

In the interview process, I used the following recommendations set forth by the American Historical Association:

1. Interviews should be recorded on tape but only after the person to be interviewed has been informed of the mutual rights and responsibilities involved in oral history, such

as editing, confidentiality, disposition, and dissemination of all forms of the record.

Interviewers should obtain legal releases and document any agreements with interviewees.

2. The interviewer should strive to prompt informative dialogue through challenging and perceptive inquiry should be grounded in the background and experiences of the person being interviewed, and if possible, should review the sources relating to the interviewee before conducting the interview.
3. To the extent practicable, interviewers should extend the inquiry beyond their immediate needs to make each interview as complete as possible for the benefit of others.
4. The interviewer should guard against possible social injury to or exploitation of interviewees and should conduct interviews with respect to human dignity.
5. Interviewers should be responsible for proper citation of oral history sources in creative works, including permanent location (p. 110).

Data Collection from Documents

Documents are written materials that are another source used in the collection of qualitative data. Documents can include public or archival records, personal documents, and physical artifacts (Merriam, 1998) and films, photographs and videotapes (Yin, 2003).

“Documentary evidence is more likely to exist where it has been compiled and retained as a matter of policy, such as in the minutes of organizations, government departments or corporations” (McDowell, 2002, p. 54). I used any primary and secondary source documents that contain factual material relevant to the study.

Data Analysis

Once collected, the data were authenticated as original documents. I asked questions about documents such as: (a) Are the documents original or have they been edited? (b) Who was the author and what were the sources used? (c) Was there a bias mentioned? (d) Are there other documents that might corroborate the accuracy of the same events? (Clark, 1967).

I used triangulation of data where possible to validate findings of the study. Triangulation is the collection of information from multiple sources aimed at corroborating the same facts or phenomenon (Yin, 2003). Information from multiple sources was evaluated by assessing its reliability (consistency) and validity (accuracy). I asked interviewees to verify collected documents as accurate and also asked them to review transcribed interview transcripts for accuracy. Where relevant, I compared interviewees' recollection of events with gathered documents to ensure reliability as well as accuracy.

CHAPTER IV - A CASE FOR CHANGE

Vocational Technology Task Force

Background

The Assistant Superintendent for Adult, Community and Vocational Education previously stated that the enrollment in high school and center vocational programs declined in the 1980s due to the lack of school board support and the increased emphasis on academic education. Along with the Vocational Education Director, he expressed concerns of the future of vocational education programs in the school system in a memorandum dated August 11, 1989 to the Assistant Superintendent for Instruction. These concerns centered on the potential reductions in vocational course offerings mainly due to decreasing enrollments. They presented various options to try to resolve these concerns and asked for her support.

Some of the solutions proposed were (a) Petition the State Department of Education for flexibility in scheduling traditional three and three daily blocks vocational classes such as one, two and three or two, two, two blocks to attract more academic students; (b) integrate more math, English, science into the vocational instructional programs; (c) streamline courses to reduce class hours with fewer block courses and more single period offerings to attract more students; (d) provide a wider range of co-op programs so students have more opportunities to earn credits while gaining work experience; and (e) initiate a flexible period day or seven period day (which was initiated in the early 1990's). Another suggestion was to increase guidance support for vocational programs by (a) providing counselors with more information on vocational programs and courses offered, and (b) exposing counselors to industry leaders and programs to make them aware of the opportunities available when counseling students. They also advocated stronger

support of principals at the high school level to show the positive value and importance of vocational programs.

Further suggestions were to develop and support awareness programs at the middle school level and to increase school board support for more funding of vocational programs by emphasizing the value and importance of vocational education to all students. No follow up or any reaction to this memorandum by the Assistant Superintendent for Instruction could be found in my research. All of these concerns and suggestions would be later addressed in the work of the Career and Technical Preparation Task Force.

In the fall of 1990, the Virginia Department of Education began its Challenge 2000 initiative, a high school reform movement in vocational education. Challenge 2000 focused on the negative image and declining enrollments in vocational education in Virginia's public school system (Director of Vocational Education, personal communication, January 23, 2004). The Assistant Superintendent and a team of educators, including the acting Director of Vocational Education, represented the school system at the state Challenge 2000 meetings. The team members were given the charge to look at how the school system could integrate vocational and academic content and increase the focus on career awareness in middle and high school programs (Director of Vocational Education, personal communication, January 23, 2004). A new Assistant Superintendent of Instruction was appointed in 1992 and continued forward with the Challenge 2000 initiative.

In January of 1993, I was appointed Vocational Administrator of a vocational center within one of the county's high schools. My main responsibility was to supervise the remaining 13 programs at the vocational center as well as all the vocational programs at the high school. Later in January the high school principal and I were asked to attend a meeting at the office of

the Assistant Superintendent for Instruction. Others in attendance were the principal of the other high school that contained a vocational center, the Vocational Administrator, Superintendents from Area I where this high school was located and Area IV where my high school was located. Also included were the Vocational Director, Area I Director of High School Programs, Area IV Director of High School Programs, and the Coordinator of Trade and Industrial programs. The meeting centered on the state of the two existing vocational centers and vocational education programs in the county high schools. The decision was made that a Vocational Technology Task Force be formed to study and make recommendations regarding the future of the vocational centers and vocational education courses (Assistant Superintendent, personal communication, February 8, 1993).

Each of the participants was to meet with various stakeholders to get input regarding the goals, purposes, and task force composition prior to the next meeting scheduled for March of 1993. The two Area Superintendents and the Assistant Superintendent for Instruction were to discuss issues and ideas with the superintendent's leadership team and their senior staffs. The three directors were to get input from the members of the Directors' Council, and the two high school principals would get input from other high school principals. I and the other vocational administrator were to get input from the staffs of the two vocational centers. As stated in the memo, the following questions were to be addressed:

1. What programs should be offered at the centers?
2. How do these programs interface with school-based programs?
3. What are other vocational-technical centers doing?
 - a) assess models
 - b) visit other programs

4. How should centers be staffed?
 - a) recruitment
 - b) staff quality
 - c) ratios
5. What should the relationship of the vocational administrator be with the regular high school where the center is located or where the students come from (discipline, staffing)? What support is needed to involve ESL or special education students in regular vocational-technical programs?
6. What is the image and role of vocational education?
 - a) Is it an alternative program?
 - b) What are counselor attitudes?
 - c) Drop the “vocational education” term?
 - d) Image should be hi tech.

Issues to be addressed were:

1. National/state initiatives in technical preparation--interfacing with community colleges and 4-year institutions.
2. Magnet school? Stand-alone school?
3. Interface with adult education.
4. Personnel regulations/salaries. Background of individuals to be hired.
5. Image and expectations regarding employment.
 - a) Switch to program-driven as opposed to enrollment-driven.
 - b) Interface with system and industry. Apprenticeship programs, links to Northern Virginia Community College (NOVA) and certificate programs.

- c) Relation to advisory committees. Unions and appropriate representation with internal/external stake holders.
- d) When are programs phased in?/out? Keeping programs vital. Staffing.
- e) Facilities, sites, appearance, updated equipment.
- f) Extending apprenticeship.
- g) Prerequisites-sequences-expectations, noise standards-again image. Staff development.
- h) College and career preparation with seven period day for all kids.
- i) Job scan and involvement of community. Quality of future workforce.
- j) Extra curricular opportunities.
- k) Busing, scheduling, alternatives, Local Student Information System (LSIS) support (Assistant Superintendent, personal communication, February 3, 1993, p. 3).

Composition of the task force committee:

1. School Board involvement.
2. Counselor and guidance director, two vocational administrators, and teacher representatives from program areas.
3. Transportation representative.
4. Management Information System representative.
5. Representation from the Director's Council, School Board, Leadership Team, Advisory Committee.

6. Two high school principals, curriculum people from programs, NOVA, math/science person(s) (Assistant Superintendent, personal communication, February 3, 1993, p. 3).

The next meeting was held on March 8, 1993 to discuss the questions and the feedback each had received from their assigned groups. It was during these discussions that the decision was made to expand the task force from 12 members to 45 members. This would lend credibility to work of the task force and also involved persons to include more stakeholders from the school division, parents, the community and business who were supportive and were able to possibly influence or effect changes recommended by the task force (Vocational Director, personal communication, January 23, 2004). The name of the task force was changed from “Vocational Technical Task Force” to “Career and Technical Preparation Task Force.” According to the Vocational Education Director, the name change was necessary because, “We had to have changes in a lot of different areas, like in the career pathways component of it, and that was another initiative coming down from the state level, career pathways. So we wanted to incorporate all of that together and not just show that it was only a change in vocational courses” (Vocational Director, personal communication, January 23, 2004).

Career and Technical Preparation Task Force

Member Selection

The time period from March 1993 to October 1993 was spent on the selection of task force members. Because the school year was ending in June, the decision was made to wait until the fall of the new school year to initiate the task force (Vocational Education Director, personal communication, January 23, 2004).

In September of 1993, prospective task force members were contacted verbally and by letter from the Assistant Superintendent for Instruction and the Area I Superintendent co-chairs of the task force. The letter explained the purpose of the task force, anticipated results, proposed meeting dates, and requested their participation. A confirming letter again outlined the purpose of the task force, anticipated results, proposed meeting dates, and thanked them for their willingness to participate. (Assistant Superintendent for Instruction, personal communication, October 19, 2003).

First Meeting

The first meeting of the Career and Technical Preparation Task Force was held on November 3, 1993 at one of the instructional centers. The Assistant Superintendent for Instruction welcomed the members and asked each member to introduce themselves and their reasons for serving on the task force. Each member received a notebook in which to keep all relevant materials. She reviewed the purpose of the task force that was to develop a plan to restructure the existing vocational/technical programs in grades nine through twelve (Assistant Superintendent for Instruction, personal communication, September 2, 1993). The concept and members of the task force Steering Committee were introduced. The Assistant Superintendent in consultation with the Director of the Office of Vocational Education selected the Steering Committee members. Two members of the Steering Committee would lead each of the task force subcommittees. Their responsibilities included guidance to ensure that timelines were met, that the subcommittee stayed on task, and to report progress to the Assistant Superintendent. Steering committee members would also meet periodically with the Assistant Superintendent to discuss issues, concerns, and topics for discussions for entire task force meetings (Director of Vocational education, personal communication, November 3, 1993)

The Assistant Superintendent listed four goals she hoped the task force would accomplish within a year's timeline:

1. To reconceptualize the purpose of vocational and technical education in relation to regular education and the national emphases on a well-prepared workforce.
2. To establish the sequences of vocational/technical programs in occupational career clusters and coordination with post-secondary opportunities in college, technical preparation, and apprenticeship programs.
3. To determine which vocational/technical courses and programs to be offered in each high school.
4. To determine the purpose, structure, staffing, and courses to be offered at vocational/technical centers and specialized vocational off-site programs (Director of Vocational Education, personal communication, November 3, 1993).

Agendas for future meetings were discussed. The first meeting would be used to establish a common knowledge base and a vision for the task force would be developed at the second meeting with a discussion of the four goals of the task force. At the third meeting, subcommittees would be organized and research necessary determined to address the major issues. This research by the subcommittees would be used to develop recommendations to present to the school board (Director of Vocational Education, personal communication, November 3, 1993).

The Director of Vocational Education presented a historical overview of vocational education. She discussed federal legislation, assessment and evaluation of vocational instructional programs, and federal funding of vocational programs. Her presentation was followed by four of the six curriculum coordinators, who gave brief descriptions of the existing vocational and technical courses in Business Education, Industrial Technology, Trade and

Industrial, and Work and Family Studies (Career and Technical Task Force Minutes, November 3, 1993).

The Assistant Superintendent informed the members that Dr. Willard Daggett, from the International Center for Leadership in Education, would be the guest speaker at the meeting on December 21, 1993. Dr. Daggett, a nationally respected educational consultant on high school reform, would also conduct workshops and presentations for restructuring instructional programs to adequately prepare students to meet the future workforce needs (Task Force Minutes, November 3, 1993).

Second Meeting

The second meeting of the Career and Technical Task Force was held on November 10, 1993 at one of the county school system's instructional centers. The agenda was as follows: (a) the completion the Health Occupations and Marketing program overviews, (b) a presentation on the introduction to Tech Prep and articulation, (c) an overview of apprenticeship programs, (d) an overview of the Secretary of Labor's Commission on Achieving Necessary Skills (SCANS), and (e) develop a vision for vocational/technical education for the school system. The members of the task force received SCANS report information that identified five competencies needed in the work-ready level of proficiency. These competencies were resources, interpersonal, information, systems, and technology. The SCANS report also listed basic skills, thinking skills, personal qualities, and workplace ethics as foundation skills needed for all workers (Task Force, Minutes, November 10, 1993).

The two remaining vocational curriculum coordinators gave brief overviews of existing clusters in Health Occupations and Marketing Education. Some specific issues discussed were: (a) Employment trends, (b) expansion of programs, (c) the lack of supervised work experiences

to foster school to work transition, and (d) sufficient release time during the school day to supervise cooperative education students.

The Apprenticeship Coordinator from Office of Adult and Community Education gave a brief overview of the apprenticeship program to the task force members. The school system's apprenticeship program consisted of two parts: on-the-job training and related classroom instruction. She stated that the majority of students enrolled in the apprenticeship program ranged in ages from 18 to 50 years old. There were two existing high school apprenticeship programs at the two existing vocational centers in electricity and heating/air conditioning. Two issues of specific concern, brought up for group discussion, were staffing and flexible scheduling for students.

These presentations concluded the review of existing vocational/technical programs in the school system. Due to time constraints, the development of the vision for vocational/technical education was moved to the next meeting on December 10, 1993.

Third Meeting

The total task force next met on December 13, 1993 at the school system's other instructional center. Members were asked to sign in, but I found no records or documentation in any of my research of who or how many actually attended the meetings. The agenda for the meeting included an introduction to Tech Prep and articulation agreements with the local community college, and a discussion of the proposed vision for the school system's Career and Technical education programs.

The Business Education coordinator presented an overview of the status Tech Prep and the community college. She informed the task force members that Tech Prep was in its first developmental year at the community college. Curriculum was being coordinated and developed

with the community college in the areas of business, graphic communications, welding, automotive, and health occupations. Prior articulation agreements had already been developed between the school system and the community college to enable students to earn advance placement or college credits in certain curriculum areas.

The Assistant Superintendent for Instruction then presented her vision for career and technical education for the school system. She listed the emergence of the information age and the global economy, higher expectations and standards for all students, and the changing student demographics as key issues that impacted the instructional programs. Small subgroups were formed to discuss how society had changed technologically from 1980 to 1993 and how schools needed to change to meet instructional needs (Task Force Minutes, December 13, 1993).

She also emphasized the following two main goals for all students:

1. All students should have the knowledge and skills needed for the world of work.
2. All students should have the knowledge and skills needed for further education (Task Force Minutes, December 13, 1993).

She stated that the Career and Technical Task Force should develop recommendations for the following:

1. A structure for all students to achieve work, skills, and education knowledge.
2. A fundamental change in vocational education to include an integration of vocational education and regular education (Task Force Minutes, December 13, 1993).
3. The next meeting was held on December 21, 1993 at a local hotel. Willard Daggett, an educational consultant, presented his vision of why vocational education had to change. In addition to task force members, all building principals, guidance directors,

counselors, area office staff, and chamber of commerce members were invited to attend (Task Force Minutes, December 21, 1993).

Fourth Meeting

The task force met at one of the instructional centers on January 10, 1994. The agenda included a discussion of the Willard Dagget presentation, the formation of subcommittees, subcommittee objectives, future timeline for meetings of the entire task force, and subcommittee meetings (Task Force Minutes, January 10, 1994).

There was a discussion of the Dagget presentation and how it related to the task force mission. Members were also informed of the Hedrick Smith (a Pulitzer prize winning reporter) documentary, *Challenge to America*, being shown on the local public broadcasting networks. This documentary compared the high school education in the United States and that of Germany. It followed a high school senior in a business curriculum and compared this to a senior in the business curriculum in Germany. It attempted to demonstrate the lack of real-world job preparation skills provided by the education system of the United States, while the German system prepared students for jobs in high school through its apprenticeship program. One of the high school principals provided the task force with a taped copy that could be shown to the task force at a later date.

The concept and objective of the five subcommittees was introduced with each having to develop a mission statement and objectives to be accomplished. Each mission statement was to begin with “What we believe...” (Task Force Minutes, January 10, 1994). The purpose of the subcommittees was to research and make recommendations to the future of vocational education for the school system.

The five subcommittees and their missions were:

1. Subcommittee One would investigate and report on exploratory programs within occupational clusters and connections with regular education.
2. Subcommittee Two would investigate and report on high school work experience programs.
3. Subcommittee Three would investigate and report on the staffing class ratios, and credits of core vocational technical/specialty programs and other offsite programs.
4. Subcommittee Four would research trends in industry, skill standards, work experiences, and successful educational models. This information would be provided to task force members during the course of the task force study to keep members informed and possibly assist committee members in making recommendations. Subcommittee Four would also develop a draft of the task force philosophy and mission statement.
5. Subcommittee Five would investigate articulation with higher education including Tech Prep, two plus two programs, and apprenticeships (Task Force Minutes, January 10, 1994).

Members of the task force signed up for subcommittees and were given a timeline for reporting back to the task force. The subcommittees planned their own meeting times and places and met a minimum of five times. Each subcommittee gave periodic update activity reports during the months of February and March of 1994. Their final recommendations were due to the entire task force by the end of May 1994 (Task Force Minutes, January 10, 1994).

Fifth Meeting

The next task force meeting was held on February 7, 1994, again at an instructional center. The agenda included a presentation and discussion of the draft of the task force

philosophy and mission statement developed by Subcommittee Four, meeting and reporting dates, and the adoption of a subcommittee report format. The following draft was presented to the task force for comments and consideration:

What will it mean to be educated in the 21st century? Will students be truly educated if they cannot apply what they have learned? How can educators bridge the widening gap between what schools are doing for students and what society needs them to do? These questions posed challenges for educators attempting to embrace the demands of the coming century.

New technologies and global competitions are redefining the employability skills needed by today and tomorrow's working Americans. The continuing transition from the Industrial Age to the Information Age is changing the way employees must function in the workplace. The jobs and careers of the future will require proficiency in technology, information acquisition and processing, problem solving, and the flexibility to learn new skills to keep pace with the continuous change in the workplace.

The traditional segregation between education and employability has ceased to address the reality of post graduation. Dividing students into thinkers and doers, and curriculum into the theoretical and the applied is fast becoming obsolete. *Applied knowledge*, once thought of as solely the domain of the vocational track, has become the standard for any entry-level position.

The public schools must teach both academic and workplace knowledge, and skills. In addition to knowing subjects such as history, math, science, literature, and the arts, all students must be competent in reading, writing, speaking, listening, and problem solving. To be successful in a career, the student must be able to interact with others, use

technology, acquire and use information, effectively use resources, and understand relationships in the work world (Task Force Minutes, Subcommittee Four, February 7, 1994).

There was a discussion of timelines and reporting dates. The following timeline and reporting dates for subcommittees were presented:

February 28, 1994	Preliminary report for Subcommittee One
March 14, 1994	Preliminary report for Subcommittee Three
April 4, 1994	Preliminary report for Subcommittee Two
April 18, 1994	Preliminary report for Subcommittee Five
April 25, 1994	Final report for Subcommittee Four
May 9, 1994	Final report for Subcommittee One
May 23, 1994	Final report for Subcommittee Three
June 4, 1994	Final reports for Subcommittees Two and Five

(Task Force Minutes, February 7, 1994).

The proposed report timeline was also to be completed in four phases:

1. Preliminary subcommittee recommendations and discussions.
2. Detailed recommendations by subcommittee and future meeting dates of April 25, May 9, May 23, and June 6, 1994.
3. A draft report prepared by the summer to include costs, priorities, and implementation plans.

Each subcommittee would use the following format for their report:

1. Purpose
2. National and state programs and trends

3. Current status in county public schools
4. Recommendations (Task Force Minutes, February 7, 1994)

After explanations and discussions of the proposed dates and reports format, the meeting was adjourned and the next meeting was scheduled for February 28, 1994 at one of the local high schools.

Sixth Meeting

The task force met on February 28, 1994 at 4:15 p.m. The agenda included the Subcommittee Four report on the Task Force Philosophy and Mission statement, a presentation by Subcommittee One on Core Technical programs, and a discussion and feedback of Subcommittee One's draft report.

Task force members discussed recommended changes to the second draft of the philosophy and mission statement. A decision was made that the mission statement would not be finalized until all the preliminary subcommittee reports were completed to determine if any additional information from those reports needed to be included.

Subcommittee One presented its preliminary report on Core programs and occupational clusters. The report discussed the four major areas of career clusters, career exploration, high school core technical programs, and staff development. Each section of the report was presented in the required format for consistency and stated the mission statement, purpose, national and state trends, current practices, and recommendations. The preliminary report was presented in the following format:

Subcommittee One

The mission of Subcommittee One was to prepare students with the knowledge and skills to perform in both technical and academic worlds in order to meet success in a global society and

focused on exploratory and core technical programs within occupational clusters for middle and high school students (Task Force Minutes, Subcommittee One, February 28, 1994).

Career Clusters

The purpose of career clusters was to explore the use of career exploration in the education of students progressing through elementary, middle, and high school. The use of career clusters (occupational) would help students narrow their focus on a career field and provide greater interdisciplinary approaches to preparing students with relevant learning experiences an appropriate academic instruction. Both academic and technical programs would be defined in each cluster (Task Force Minutes, Subcommittee One, February 28, 1994).

National and state trends in career clusters (occupational) documents were reviewed from the Commonwealth of Virginia, St. Mary's County, Maryland, Montgomery County, Maryland, Bethel School District, Washington, and Camas School District, Washington. These school divisions had established career clusters in which academic and technical courses were listed as prerequisites depending upon the entry, skilled, or professional levels chosen by the student (Task Force Minutes, Subcommittee One, February 28, 1994).

Current Practices in the school system showed that technical programs have no specific prerequisites for admission. It was recognized, however, that certain careers required adequate preparation in math, science, and communication skills.

The Subcommittee made recommendations that the school system should adopt the following career clusters as defined by the Virginia Department of Education Adolescent Restructuring Team (1992):

1. Agriculture and Natural Resources
2. Business and Marketing

3. Communication and Arts
4. Engineering and Industrial Technologies
5. Health, Human, and Public Services
6. Academic and technical program would determine specific courses needed in each of the career cluster. These clusters should be used in students' elementary, middle and high schools instructional programs to prepare students for post secondary education or employment after high school (Task Force Minutes, Subcommittee One, February 28, 1994).

Career Exploration

The purpose of exploratory career and technical programs should be included in the school system's Program of Studies. These programs, as defined by career clusters, should be initiated at both the middle and high school levels. National and state trends were presented from information gathered from the Commonwealth of Virginia and other states regarding the possible models for career exploratory opportunities. A state committee was formed to prepare the *Career Education for Virginia Curriculum (K12)*. House Bill 797 before the Virginia General Assembly reemphasized the need for career education (already in the Code of Virginia). Bill 797 proposed that school boards implement:

1. Career education programs into the K through 12 curricula that promote knowledge of careers and all types of employment opportunities including but not limited to apprenticeships, the military, and career education schools, and emphasize the advantages of completing school with marketable skills. School boards may include career exploration opportunities in middle school grades.

2. Competency based vocational education programs that integrate academic outcomes, career guidance and job-seeking skills for all secondary students that reflect employment opportunities, labor market needs, and applied basic skills. Career guidance shall include employment counseling designed to furnish information on all available employment opportunities to all students...each school board shall develop and implement a plan to ensure compliance with this subsection.
3. Academic and vocational preparation for students who plan to continue their education beyond secondary school or plan to enter employment [Code of Virginia §. 22.1-253.13:1, D].

Current practices in the school system did not include career clusters or exploratory programs as part of the Program of Studies. Counselors in the elementary or middle schools provide limited and inconsistent guidance activities. The school system's *Career Education Handbook* is used by guidance counselors in selected elementary schools to introduce lessons on career awareness and exploration with follow up activities based on teacher interest and confidence in teaching career education.

High school guidance counselors provide career information units at each grade level. Little is being offered in career interests or career aptitude assessments either in high schools or middle schools. The *Armed Services Vocational Aptitude Battery (ASVAB)* is available for all interested high school students. Other interest inventories being considered are *Harrington-O'Shea, Level 2 Interest Inventory, the Career Occupational Preference System (COPS)*, and *Holland's Self-directed Search* (Task Force Minutes, Subcommittee One, February 28, 1994).

Students in special education programs are given formal assessments as part of the *Individualized Transition Plan* of their *Individualized Education Plan (IEP)*. Formal assessments area available in grade nine at one of two vocational assessment centers or at their schools.

Career centers at each high school contain information regarding post-graduation opportunities. Many centers focus primarily on college information rather than occupational information. *Choices* software provides interactive analysis of students' interests and information in the areas of occupation, 2- and 4-year undergraduate schools, graduate schools, and financial aid (Task Force Minutes, Subcommittee One, February 28, 1994).

Recommendations were made that the school system should:

1. Provide career exploratory electives through career clusters to all students beginning in middle school.
2. Career counseling beginning in seventh grade at the middle school, and administer occupational tests in tenth grade at the high schools.
3. Distribute the *Career Education Handbook* to all elementary schools for integration into the curriculum and include grades K through 3.
4. Employ a career education itinerant resource teacher for each pyramid to provide career education to sixth grade classes not located in middle schools.
5. Utilize *Choices* software for all high school students to help them define their career or occupational areas and plan for future training and education while in high school and after graduation (Task Force Minutes, Subcommittee One, February 28, 1994).

High School Core Technical Programs

The Committee stated that the purpose of core technical programs in high schools should be redefined. Technical centers should offer more advanced and specialized courses than those offered in high schools.

National and state trends came from a survey in the summer of 1992 of six school districts nationwide and six Virginia school districts to determine what core technical programs were offered at high schools and at center or magnet programs. Nationwide school districts surveyed were : (a) Anne Arundel County, Maryland; Cobb County, Georgia; (b) Jefferson County, Colorado; (c) Jefferson County, Kentucky; (d) Montgomery County, Maryland; and (e) Orange County, Florida. Virginia school districts surveyed were: (a) Arlington County; (b) Chesapeake City; (c) Henrico County, Virginia; (d) Newport News City; and (e) Virginia Beach City (Task Force Minutes, Subcommittee One, February 28, 1994).

Results of these surveys indicated that all of the school districts offered courses at high schools in business, home economics (work and family studies), industrial technology, and marketing. Several districts offered basic course in trade and industrial such as cosmetology and auto mechanics and introductory health occupations courses at all schools with advanced-level courses offered at designated technical centers. The remaining trade-specific and highly specialized course only offered at technical centers.

In half of the school districts, technical centers were part of an existing high school while the rest based students to designated vocational-technical centers in separate buildings. These centers were sometimes called technical academies or magnet career academies (Task Force Minutes, Subcommittee One, February 28, 1994).

Current practices in the system indicated that trade-specific courses except for cosmetology and auto mechanics are offered at the two existing vocational technical centers. Health occupations courses in Nursing Assistant and Veterinary Assistant are offered only at the two vocational centers. The practical nursing program is offered at one of the local high schools. Hotel Management, a marketing education course, is offered at the two vocational centers and at two other high schools. Three Classroom-on-the-Mall marketing courses are located at three local shopping malls. A partnership with a local airport and United Airlines provides on-site experiences for students in the Travel and Tourism course (Task Force Minutes, Subcommittee One, February 28, 1994).

The Subcommittee recommended that the school system should:

1. Offer basic and exploratory technical courses defined by career clusters at every high school. The high school courses would be used as recruitment opportunities for technical centers.
2. Expand the existing two vocational centers to four centers strategically located for easier transportation of students.
3. Utilize the magnet career academy concept by designing courses offered around career clusters and designate that each center would focus only on one or two career clusters. Expand technical course offerings to include advanced level and highly specialized courses.
4. Redesign existing technical center course offerings to provide students with the greatest opportunities for relevant skills development to meet the needs of the workforce (Task Force Minutes, Subcommittee One, February 28, 1994).

Staff Development

The purpose of staff development was to establish a system-wide method for providing staff development for teachers to infuse academic preparation with career and technical instruction. Teachers needed to prepare students for career goals and provide relevant learning experiences.

National and state trends were discussed. The State of Washington made a commitment to assist school districts in developing model career programs. The initiative expanded from the initial 4 districts to 33 districts totally integrating math, science, and communications with vocational/technical programs designed around career cluster exploratory courses. The Washington State Department of Education funded a “Train the Trainer” program for teams of teachers and administrators. School districts allocated additional funding for academic and technical teacher training to connect academic and technical competencies in their instructional programs.

Dade County, Florida initiated a multi-year effort to integrate academics and vocational education. The district will implement concepts developed by the Secretary of Labor’s Commission on Achieving Necessary Skills (SCANS) to begin in 10 to 12 schools and expand to all schools.

A high school in a St. Paul, Minnesota school district participated in a research project with the University of Minnesota to integrate vocational and academic instruction. Strategies learned would be applied to the districts other high schools. The Commonwealth of Virginia initiated a commitment to career education to prepare a motivated workforce in its *Choice and Challenges: Career Education in Virginia*, Program Management Guide.

Current practice in the school system indicated no system wide staff development initiative to infuse career development; however, career education continues to be one of the

school board initiatives. A draft document exists for infusing career education in grades 4 through 6, but no evidence could be found that it is being incorporated into the instructional program.

Recommendations were made that the school system should:

1. Provide system wide staff development on career education and the integration of academic and vocational/technical programs with particular emphasis on the middle schools.
2. Establish school teams for training to include administrators, counselors, and teachers from a variety of disciplines.
3. Refocus the goal of high school career centers to include both career goals and college selections.
4. Provide career training for guidance counselors.
5. Expand career training at the elementary school level (Task Force Minutes, Subcommittee One, February 28, 1994).

Since the recommendations in this report would have major influences on other subcommittee's recommendations and reports, the decision was made to devote the next meeting on March 14, 1994 to the following topics:

1. Rename the clusters of Engineering and Industrial Technologies to Engineering and Industrial Scientific Technologies.
2. Integrate career center courses with the adult education program.
3. Offer 2-hour blocks to replace the traditional 3-hour blocks in trade-specific and advanced level courses.

4. Investigate flexible or block scheduling. Explore offering center courses as semester courses.
5. Specify required academic courses as prerequisites for technical courses as appropriate.
6. Integrate academic content to technical content in center/magnet/career school programs to provide students with more relevant instructional programs.
7. Determine the type of technical center-school-within-a-school, magnet career schools for various clusters, two or four centers, and grade levels.
8. Provide exploratory technical programs for base schools with focus on recruitment for technical centers in grades 11 and 12.
9. Offer 2-week summer camps on exploratory technical classes for middle school students, counselors, and academic teachers.
10. Determine technical programs for comprehensive high schools to serve as prerequisites for technical center courses (Task Force Minutes, Subcommittee One, February 28, 1994)

Seventh Meeting

The meeting was held on March 14, 1994 at a local high school. The agenda consisted of an overview of the issues from preliminary report of Subcommittee One, small group discussions of the issues, and summarization session of the small group discussions.

The issues were discussed and voted upon to be included in the final report of Subcommittee One. The next meeting was scheduled for April 4, 1994.

Eighth Meeting

Subcommittee Two and Subcommittee Three

The meeting followed the same format with Subcommittee Two and Subcommittee Three presenting their report. The Subcommittee Two's mission was to research existing work experiences for high school students. These high school work experiences included apprenticeships, cooperative education, community service, or school-based enterprises. The Subcommittee stated that every student should have a structured workplace experience or skill through a structured work experience and/or classroom instruction prior to high school graduation.

Apprenticeship

National and state trends were presented. The U.S. Departments of Education and Labor have revealed plans for a \$1.2 billion national school-to-work apprenticeship program. The states of Oklahoma, California, Maine, Arkansas, Massachusetts, and Pennsylvania had initiated youth apprenticeship programs. There were about 80 apprenticeship programs across the state of Virginia.

Current practice in the school system was that there were between 30-40 student apprentices per year in the electrical and air conditioning trades that earn 1 or more years of credit toward the 4 years required apprenticeship related instruction in the regular state approved apprenticeship program. A non-vocational student is occasionally sponsored by an employer and takes apprenticeship-related classes one or two nights per week.

Cooperative Education

Cooperative education is a planned and supervised job experience, which includes on the job training and related classroom instruction in vocational education and required academic

courses. The school coordinator initiates a training agreement and the coordinator and the employer develop an individualized training plan.

National and state trends indicated there was national support for the cooperative education as a tool for transitioning students from school to work. The length, number of credits, and number of program areas offering distributive education varies from state to state. Georgia adopted a program that links academic credits to projects completed in conjunction with the cooperative job.

In current practices, cooperative education (COE) was offered in Business Education, Marketing Education, Work Experience Cooperative Education Program (WECEP), and Trade and Industrial Education (ICT). Coordinators had release time to supervise students on the job. Students were awarded one high school graduation credit for 270 hours of work and two credits for 540 hours of work experience. The WECEP program for disadvantaged students offered two high school graduation credits for 300 hours of work experience.

Internship/Mentorship

These are generally one-time agreements for a determined period of time that may be paid or unpaid. National and state trends show indicate the term “internship” was used by many state and federal agencies to describe programs that do not fit the apprenticeship or cooperative education definitions. Teachers were being employed to supervise students in summer internship programs.

Current practices at the school system’s science and technology high school, a coordinator matched students to participating businesses based on student interests and skills. The students earned a senior technology credit after working a minimum of 180 unpaid hours and must have completed a specified project at the workplace.

The two vocational centers were developing a Senior Work Experience Program (SWEP) for students enrolled in vocational courses. SWEP enabled students to get on-the-job training part of the week and attend their vocational classes the remaining part of the week. Vocational teachers would coordinate the student's business experience.

School-based Enterprises

School-based enterprises were individual high school courses set up as actual student-run businesses. Students studied the business as they develop specific occupational skills. Examples were retail stores, construction programs, auto repair and service centers, print shops, nurseries, restaurants, and childcare centers.

National and state trends indicated that school and business partnerships were increasing in numbers. The "Carpentry Qualified Framers" program was a joint construction project between Henrico County Public Schools and the Home Builders Association of Richmond where students built a house to be sold to generate scholarship funds. The Tidewater Builders Association and the Southwestern Virginia Training Administration was a public/private partnership dedicated to building affordable housing. They completed their first house that was built at their new training facility and moved to a predetermined site.

Current practices in the county public schools indicated that in 1972, a construction job site was established. Students learned carpentry, masonry, and other skills while building a house to be sold to the public.

The Student Auto Dealership was sponsored by the Foundation for Applied Technical/Vocational Education, Inc (FATE). Students repaired and serviced autos donated by the public to be sold to the public in a showroom at a local high school. "Santa's Little Helpers" was a student-operated retail store at a local shopping mall also sponsored by the FATE.

Subcommittee Two made the following recommendations:

1. Conduct a survey to determine how many students are currently employed.
2. Require students to show evidence of participation in a work experience program.
3. Seek involvement of employers in career guidance, curriculum development, work-site instruction, skills certification, job placement, and evaluation.
4. Advocate the frequent use of vocational interest and aptitude tests for students including administration, follow-up, and individualized career planning.
5. Require all students to develop career plans and update them yearly.
6. All high school students should have access to apprenticeships, cooperative education, internships/mentorships, school-based enterprises, community service, and work experience opportunities.
7. Require employer certification of students' work experience or instructor certification of program completer status.
8. Provide differentiated staffing to support high school work experiences for all students to ensure adequate teacher/coordinator supervision.
9. Integrate school-to-work into the total school curriculum.
10. Provide professional development for teachers, counselors, and administrators to enhance academic and technical competencies (Task Force Minutes, Subcommittee Two, April 4, 1994).

During the second half of the meeting, Subcommittee Three presented its preliminary report on core vocational/specialty and offsite programs. A small group discussion was held on issues raised in the report and followed by a summarization of the small group discussions. Subcommittee Three focused on technical center program offerings. The focus included current

course offerings and future trends in career and technical education. Recommendations were made in four major areas: (a) career clusters, (b) program review, (c) technical centers/career academies, and (d) public relations. Their mission was to develop a means to provide students with opportunities that enabled them to apply academic and technical skills to better prepare them for careers and lifelong learning (Task Force Minutes, Subcommittee Three, April 4, 1994).

Career Clusters

The purpose of career clusters was to allow students the opportunity to explore career options. The career clusters also offer students learning experiences relevant to the chosen cluster area.

Members of the Subcommittee investigated national and state trends. These were by site visits or career cluster program reviews conducted of the following school systems:

1. Arlington Career Center, Arlington, Virginia.
2. Center for Applied Technology, Severn, Maryland.
3. Edison Career Center, Montgomery County, Maryland.
4. Dallas Independent School District, Fort Worth, Texas.
5. New Horizons Technical Center, Hampton, Virginia.
6. Roanoke City Schools, Roanoke, Virginia.
7. St. Mary's County Public Schools, Leonardtown, Maryland (Task Force Minutes, Subcommittee Three, April 4, 1994).

Current practices in the county public schools were confined to the two existing vocational centers. They were in the process of defining recommended prerequisite courses for entrance into advanced level programs for 11th and 12th graders.

Subcommittee Three recommendations were that the school system should adopt and amend the career clusters as defined by the Virginia Department of Education Adolescent Restructuring Team (12-92). These clusters were:

1. Environmental and Natural Resources
2. Business and Marketing
3. Communications and the Arts
4. Engineering, Industrial, and Scientific Technology
5. Health, Human, and Public Services (Task Force Minutes, Subcommittee Three, April 4, 1994).

Program Review

One purpose of program review was to determine introductory courses in all comprehensive high schools. The Subcommittee also identified specialized and advanced level programs to be offered at the technical centers for 11th and 12th grade students. National and state trends were found through a review of national literature that indicated a national trend toward technical academies that provided students with skills and knowledge required of individuals in global and technologically advanced future workforce. The subcommittee reviewed the Guide to Occupations in Virginia (Spring 1993) for occupations with a growth rate of 30% or greater in Northern Virginia.

The Subcommittee investigated current practices in the county schools. They discovered that all current vocational center course offerings were reviewed to determine their fit into the recommended clusters and for the predicted growth in the career field. Recommendations of the subcommittee were to:

1. Rename vocational education.

2. Offer exploratory career cluster programs to eighth and ninth grade students.
3. Specify course prerequisites for advanced level technical programs.
4. Retain advanced level or specialty programs at the technical academy except for Cabinetmaking.
5. Expand academy offerings to include the following advanced level programs:
 - a) Computer Programming
 - b) Engineering, Electronics, Design and Technology
 - c) Biomedical Technology
 - d) Criminal Justice
 - e) Dental Assistant
 - f) Occupational/Physical Therapies
6. Offer introductory courses at the comprehensive high schools in all career clusters.

Technical Centers or Career Academies

The purpose was to define the organization and mechanics of the center technical/specialty programs currently in the school system. There was also a mandate to research and recommend the models of career academies or technical centers to replace existing vocational centers.

The Subcommittee reviewed national and state trends on career education in public schools. They reviewed the proposed School-To-Work Opportunities Act of 1994 and the Carl D. Perkins Act of 1990 that greatly influenced the vocational/technical programs at centers in Virginia and the United States. Centers and comprehensive high schools are implementing programs to link academic education with vocational education through programs such as Tech Prep. This is because the majority of high school graduates will not need or receive 4-year

college degrees but need technical training beyond high school. Vocational/technical schools are changing to meet the needs of our new technology-based economic system.

The Subcommittee offered the following examples:

1. New Horizons in Virginia Beach, Virginia is a technical center built with school, community, and business support to meet the needs of a new technical workforce.
2. Establishment of academies in Oakland, California based upon the school-within-a-school concept and career clusters.
3. St. Mary's County Technical Center's Tech Prep two plus two curriculum which articulates 2 years of technical classes with the community college system.
4. Roanoke City Schools, Roanoke, Virginia established middle and high magnet schools.
5. Center for Applied Technology in Severn, Maryland, was the first secondary school in the nation to receive the automotive industry's Automotive Service Excellence (ASE) certification in auto mechanics, auto body, and truck technology programs.

Current practices in the county public schools were limited to the two existing vocational centers that were part of their comprehensive high schools. Each center offers 13-16 course offerings and serves about 400-500 students from 20 different high schools in the county. There is an open enrollment with no prerequisite courses currently required. Students enrolled in a 2-year program with priority given to juniors and seniors, and sophomores accepted in under subscribed courses.

Transportation was provided for morning and afternoon 3-hour classes. Centers were currently being used as alternative learning sites for special needs students. According to the Vocational Education Management System (VEMS), 64% of the total populations enrolled at

one vocational center were special needs students, and 85% of the total population at the other vocational center was special needs students.

The current staffing at the vocational centers was:

1. One vocational center administrator who also assumes responsibilities as a comprehensive high school assistant principal.
2. One guidance counselor.
3. Out of ration teacher positions provided by the school board.
4. One special education vocational specialist.
5. One ESL (English as a Second Language) vocational education specialist.

The recommendations of the subcommittee were:

1. Make the two existing centers and any future centers independent from the comprehensive high schools.
2. Create a total of four centers, one for each administrative area.
3. Staff vocational centers as an independent school to meet specialized program needs.
4. Vocational center name may be changed not to incorporate the high school name.
5. Staff programs at 20:1 but add grace period of 3 to 5 years to promote program growth.
6. Establish prerequisite courses for admission.
7. Establish an admissions eligibility committee.
8. Incorporate three blocks of 2 hours each to allow for higher enrollment of academic students.
9. Change the instructional allocation process to support program needs.
10. Grant centers access to Local Student Information Service (LSIS).

11. Increase academic support staff based on numbers of special needs students (Task Force Minutes, Subcommittee Three, April 4, 1994).

Subcommittee Three also presented a proposal for two or four academies with each academy having a major and minor career focus areas. In the two-academy concept, the existing vocational centers would be converted into academies. One center's main focus would be Engineering, Industrial and Scientific Technologies, while the minor focus would be Business and Marketing. The other's main focus would be Health, Human and Public Services, while the minor would be Communication and the Arts. In the four-academy concept, two new academies would be added in each of the other two administrative areas. One academy would have a major focus of Communication and the Arts and a minor focus of International Baccalaureate Business and Marketing. The remaining academy would have a major focus of International Baccalaureate Business and Marketing with a minor focus of Health, Human and Public Services. Committee members also presented a proposed a new 2-hour block academy daily schedule (Task Force Minutes, Subcommittee Three, April 4, 1994).

Public Relations

The importance of public relations was to establish a system-wide approach to increase student and parent awareness of vocational/technical, specialty and off-site program offerings, requirements, and student expectations. Public relations dealt with changing the mindset of parents, administrators, guidance counselors, business leaders, and ultimately students. The current mindset was that these programs were the last resort for students not college-bound. It was essential to change the mindset to one, which includes technical programs in the comprehensive high schools and at the technical academy, as a logical part of career preparation and that career and technical education will be a desirable option for all students.

National and state trends were demonstrated by examples of brochures and news articles were gathered from the Virginia Department of Education (Career Pathways); Bethel School District, Washington; Fort Worth Independent School District (High School of Medical Professions) at Northside; Dallas Independent School District (High School for Health Professions); and St. Mary's County, Maryland (Tech Pep 2 + 2). Although some programs developed extensive brochures for students and parents, they did not address the fundamental American college-oriented mindset. Most news articles continue to treat vocational programs as outside of the norm (Task Force Minutes, Subcommittee Three, April 4, 1994).

Current practices in the county public schools indicated that career and technical programs are offered under "Vocational Education." Programs in Business Education, Health Occupations Education, Industrial Technology Education, Trade and Industrial Education, and Work and Family Studies are currently publicized through the county *Handbook for Counselors*. Curriculum specialists, administrators, and / or teachers responsible for these programs or during curriculum development develop brochures and handouts. This information was disseminated to the local high school guidance department or career center for distribution to students.

In the months of January and February, program representatives and teachers visited each comprehensive high school to recruit new students for their programs. Presentations were made to guidance departments and teachers plan elaborate displays for schools that hold "elective fairs" for students and parents during and after school. These fairs usually corresponded with Vocational Education Week. Since many vocational programs are only offered to juniors and seniors, few schools cover career and technical programs available at the high school level during freshman orientation. Many parents, administrators, guidance counselors, teachers, and

business leaders were unaware of the current career and technical education offerings throughout the county.

Recommendations of the Subcommittee were to:

1. Produce videos targeting the various “markets” to highlight the career clusters.
Include information on career cluster selection, course availability, technical academies, enrollment standards, and logistics. These videos would be available in the career centers and school libraries for circulation free of charge to students and parents and through video outlets.
2. Stage periodic presentations for the media to gain public awareness of what the school system is doing in regard to career training.
3. Select advertising and publicity media to include newspapers, television, radio, and cable broadcasts.
4. Design and distribute brochures targeted to parents of rising 7th and 8th grade students.
5. Utilize the career education “Choices” software, which includes course prerequisites and features of the programs offered at the comprehensive high schools and the academies.
6. Publicize academy graduations and those students eligible for licensing, certification, and /or post-secondary education.
7. Increase parent involvement through community seminars on the academy offerings.
A forward by Dr. Daggett or his video should be part of the community seminar program.
8. Offer staff development to administrators, guidance counselors, and teachers for recertification credit (Task Force Minutes, Subcommittee Three, April 4, 1994).

Ninth Meeting

Subcommittee Five

Subcommittee Five presented its preliminary report on April 25, 1994 to members of the Task Force. The committee members reviewed Articulation Agreements, Tech Prep Career Clusters, and Academic Preparation for Tech Prep. Their mission statement was as follows:

We believe that the citizenry of today should have lifelong learning skills, which prepare them for success from their first job land to their last. Life should be viewed as a continuum of educational work experiences (Task Force Minutes, Subcommittee Five, April 25, 1994).

The Subcommittee also defined Tech Prep as “a concept for preparing high school students for lifelong learning: including apprenticeship, advanced study at colleges/universities, community colleges, technical schools, or any combination of the above. It is a challenging program of studies designed to guide students into higher-level academic and vocational courses, which will give them the strong technical background on which to build their future (Task Force Minutes, Subcommittee Five, April 25, 1994).

Articulation Agreements

Articulation agreements coordinated the linkage of two or more educational systems within a community to help students make a smooth transition from one level to another without experiencing delays, duplication of courses, or loss of credit. The purpose of articulation agreements was to have a seamless transition from high school to the community college that included earned college credit or advanced placement. There should also be a seamless transition from the community college to a 4-year institute.

National and state trends found that articulation varies from state to state. The majority of these programs involve course-to-course articulation. North Carolina is one of the few states that articulated the academics developed for Tech Prep to the community college and the 4-year institutes. Baltimore City Schools had recently developed articulation agreements between high schools, the community college, and the University of Maryland at Baltimore. Secondary schools in Virginia were developing articulation agreements with the community colleges. Each community college program is a separate entity in the state. Current practices in the county public schools indicated that there were 10 articulation agreements developed and signed with the local community college. These agreements were in Child Care, Welding, Automotive, Hotel Management, Tourism, Drafting, and Nursing. Articulation with Business was currently being developed.

The community college agreed that once an articulation was reached, it would be honored at all five campuses. Articulation agreements varied from program to program. For example, in Drafting, credit is given only after successful completion of a challenging exam, while in Hotel Management, a “C” average is needed to receive credit at the college level.

There were obstacles to articulation such as a lack of identified competencies in community college courses, lack of confidence in high school course equivalence, and lack of students’ awareness of agreements with the community college. Since the community college had not identified course competencies, current articulation agreements compared high school courses to the community college courses without regard to competencies met at each level. There had been no discussions between the high school and the community college personnel to agree on course content and establish evidence of equivalence. Guidance counselors at both the high school and community college were not familiar with articulation agreements and have not

been able to guide students into the Tech Prep programs. An additional concern was that many community college courses did not articulate (transfer) to the local university. Courses in Associate in Science (A.S.) and Associate in Applied Science (A. A. S.) degree programs articulated, but students were still required to repeat classes that were not articulated as they moved from the community college to the 4-year institution. There were two plus two agreements, working between the 11th and 14th grades, in which Associate in Applied Science (A.A.S.) courses were articulated; but most A.A.S. courses did not articulate with the baccalaureate programs (Task Force Minutes, Subcommittee Five, April 24, 1994).

Recommendations of the Subcommittee were that:

1. Articulation agreements should be based on course competencies agreed upon by both the high school and community college and eliminating prerequisite exams.
2. The community college system should be urged to articulate all existing and future programs with the local university.
3. High school and community college counselors, teachers, administrators, students, and parents should be educated on existing articulation programs (Task Force Minutes, Subcommittee Five, April 24, 1994).

Tech Prep Clusters

Tech Prep consisted of the 2 years of secondary school preceding graduation and 2 years of higher education, or an apprenticeship program of at least 2 years following secondary instruction. It contains a common core of required proficiency in mathematics, science, communications, and technologies designed to lead to an associate degree in a specific career field. Career Clusters were a logical arrangement of careers based on academic preparation.

The purpose of the Subcommittee Five was to examine the Tech Prep clusters that were currently in existence in the United States. They were to identify the Tech Prep programs that existed in the state of Virginia, and to develop a comprehensive plan for this school system's students to participate in Tech Prep programs. The appropriate clusters were also identified based on job availability found in national and state statistics. National and state trends showed that the Carl D. Perkins Vocational and Applied Technology Education Act Amendments of 1990 funded the Tech Prep movement. Virtually all states were now developing Tech Prep programs and many states have created academic academies to prepare students for technical careers. Tech Prep programs were unique to local areas and depend upon potential careers and educational opportunities of the high schools, community colleges, and 4-year colleges. Academic programs related to Tech Prep preparation were reviewed from Virginia Peninsula Consortium, St. Mary's County, Maryland, Henrico County, Virginia, and Roanoke County, Virginia.

There were currently 44 Tech Prep projects funded by Virginia's community college system. In the local community colleges there were six Tech Prep projects covering four career clusters. The career clusters were:

1. Business/Marketing
2. Engineering
3. Health/Human Services
4. Art/Media

The School-To-Work Transition program recommended that the presentation of subject matter should integrate a particular academic discipline (such as mathematics, science, or English) with workforce applications (Task Force Minutes, Subcommittee Five, April 25, 1994).

Current practices in the county public schools indicated that a resource teacher was hired in 1993-94 to coordinate and help facilitate Tech Prep with the community colleges and the high schools. Members of the school system currently served on three Tech Prep steering committees at the community colleges at three local campuses. Business professionals were brought together for each cluster program at the community college to do a DACUM (Develop a Curriculum) group task analysis activity.

Businesses were currently identifying tasks (job activities) and skills needed for the current job market in the area. Once these tasks were identified, course competencies were developed. School system teachers and community college faculty members began to develop these competencies in the cluster areas of Health/Human Services, Engineering, and Business.

Department of Instructional Services personnel from Science, English, and Vocational Education attended a national Tech Prep conference to see examples the “integration” of curriculum that would enable the classes to have a more practical approach. A group of school system English teachers attended a workshop on “Applied Communications” sponsored by the local community college. Workshops were set up to show science teachers “Principles of Technology” (an applied Physics course). Several teachers and principals visited model Tech Prep sites in Roanoke, Virginia, and St. Mary’s County, Maryland.

Currently academics and vocational courses were not integrated in the school system. Vocational classes stood alone with no cross over to math, science, and English curricula unless the vocational teacher as part of the middle school program taught it (Task Force Minutes, Subcommittee Five, April 25, 1994).

Recommendations of the Subcommittee were to:

1. Begin career exploration in the middle school. At the end of middle school, students and parents will develop a draft career plan. Students should evaluate the career plan each year to make sure the career path continues to meet their goals.
2. Design 4-year curriculum models at the high school level. These models should be built around career clusters and include an appropriate blend of academic and technical courses to provide each student the foundation needed for postsecondary education and immediate employment. These models will demonstrate career paths starting with immediate careers to technical careers and ending with professional careers. The four clusters are Business/Marketing, Communication and the Arts, Health, Human and Public Services, and Engineering, Industrial, and Scientific.
3. Network with business to provide work experience opportunities for students, to serve in an advisory capacity for updating course competencies and developing new programs, and to participate in staff development for teachers.
4. Create a partnership between the high school and the community college guidance services to better counsel students in opportunities and preparation for various career paths.

Academic Preparation for Tech Prep

The subcommittee found that academic courses needed to be fully integrated with the vocational/technical courses. In order to strengthen the academic components, which supported the Tech Prep program, the committee made the following recommendations:

1. Require four credits in English with an emphasis on technical writing and oral communication skills. Reading choices should be expanded to include technical works as well as classical and contemporary literature.

2. Require a minimum of three credits in secondary math with two credits from college preparatory math. Problem solving, using relevant real-world applications of math, should be integral to all courses.
3. Require a minimum of three credits in secondary science with two credits from college preparatory science. Experimental design, methods of inquiry, and problem solving using relevant real-world applications should be integral to all courses.
4. Pilot Principles of Technology as physics credit in the academy/cluster high schools with Trade and Industrial programs. Provide funding for equipment, supplies, and other staff development.
5. Expand to all academy/cluster high schools with applied health programs of *Human Anatomy and Physiology: An Introduction to the Medical Sciences*. Provide funding for equipment, supplies, and staff development.
6. Develop an articulation agreement and identify qualified personnel to pilot a course equivalent to Health Science K and II (NOVA, NAS 161-1 & 2). Provide funding for the equipping of Biotechnology lab in which the course can be taught.
7. Develop a new interdisciplinary block for all 9th grade students consisting of English Nine, Science, and Introduction to the Technologies. The new course, Introduction to the Technologies, would provide students with experiences in oral communication, research, and keyboarding applications. Teachers who taught this course would be endorsed in speech, English, or business. The teachers would receive extensive training in the use of online electronic databases, presentation utilities, video taping techniques, and the use of the Internet (Task Force Minutes, Subcommittee Five, April 25, 1994).

The meeting was adjourned and a full task force meeting scheduled on May 23, 1994 where each subcommittee would give their final report and recommendations. Subcommittee members were to review all reports and recommendations for any discussions.

Tenth Meeting

The task force met on May 23, 1994 and each of the subcommittees gave their final report combining all their recommendations into one list. Recommendations from each subcommittee were totaled and placed on a list to be voted on by members of the task force at the next meeting on June 6.

Tenth Meeting

On June 6 the task force met to vote on the total of 47 subcommittee recommendations. Thirty-one members of the original 48 attended the meeting. Members voted “Yes” or “No” on the recommendations. The attending task force members unanimously endorsed all of the recommendations except for two. Six members voted “no” on the recommendation requiring a career exploratory course at the middle school level and one dissenting vote on differentiated staffing for high school work experience programs. Each recommendation and the vote tally were then discussed to ensure agreement and understanding. Because it was close to the end of the school year, members were informed that the next meeting of the task force would be scheduled before the start of the coming school year. During the summer, several committee members volunteered to write a draft of the task force report, which would be available for discussion at the next meeting of the entire task force. Recommendations would be condensed and consolidated according to similar topic areas. Department of Instruction staff would also be designing a scope and sequence of programs and courses for career clusters. These would also be

given to task force members at the meeting scheduled for August 31, 1994 (Task Force Minutes, May 23, 1994).

Eleventh Meeting

Task Force Report and Recommendations

At the August 31 meeting, the Assistant Superintendent for Instruction presented an overview of the career cluster course sequences developed by Department of Instructional Services staff. She suggested that each career cluster be linked to an academy with specialized programs for students wanting to pursue additional studies in a particular career field. She also stated that Division Superintendent wanted an International School and a School for the Performing Arts. The International School would be linked to the Business and Marketing Cluster, and the Fine and Performing Arts School to the Communication and the Arts cluster. The remaining two clusters would be established at two locations and provide advanced-level courses in their respective fields.

She then reviewed the draft of the task force report written during the summer. The original 47 recommendations were condensed into seven broad recommendations. These recommendations were:

1. To integrate academic and career education so that all students receive academic, technical, and workplace knowledge and skills.
2. Organize all courses around four career clusters representing workplace fields of the 21st century.
3. Require students to be more organized in their search for prospective career pathways.

4. Require a structured work experience for all high school students before they graduate.
5. Transform vocational education into a discipline called Professional Technical Studies that has established sequences of courses around career clusters on a par with math, English, science, and the other disciplines.
6. Create four professional technical academies, representing career clusters, which will offer advanced, technical, and specialized courses for high school students.
7. Develop programs with secondary institutions, including Tech Prep, articulation agreements, and apprenticeships so students' continuing education can proceed seamlessly after high school (Task Force report, pp. 2-3).

Task force members were asked to review the report and be ready to discuss or give suggestions at the next meeting. Two further meetings of the entire task force were scheduled for October 3, 1994 and October 17, 1994 to finalize the task force report. The timeline for the completion for the report was distributed with the deadline of December 8, 1994. On December 8, 1994 the Career and Technical Preparation Task Force report was presented to the School Board's Instruction Committee and action by the Board was scheduled at their meeting on December 15, 1994. The next task force meeting was held on October 3, 1994. Copies of the proposed task force report were given to various interested community and business groups for input and recommendations. Topics discussed during the meeting were the task force recommendations, course sequencing, and high school academies.

Twelfth Meeting

On October 3, 1994, the Assistant Superintendent reviewed the task force report and the recommendations. Discussions were held on task force recommendations. Task force members

asked how the 47 recommendations were condensed into seven recommendations. The Assistant Superintendent explained the initial 47 recommendations had been combined and grouped according to similarities and reduced to seven general recommendations. She also explained that the school board would accept general recommendations more easily and that specific recommendations could be later worked out by an implementation task force. After reviewing the report, various groups such as the Vocational Education General Advisory Committee (VEGAC) were also given opportunities for input. One main recommendation dealt with the name change. Since the initial draft of the task force report did not address the name change for vocational education, it was recommended and agreed upon that the name be changed to “Professional Technical Studies” (Task Force Minutes, October 3, 2004).

Task force members were given copies of proposed career clusters and course-sequencing. Curriculum specialists were reviewing and revising course sequencing within each cluster area to provide direction for guidance counselors and students in the selection of courses matched to careers. The task force subcommittee on technical academies would meet before the October 17 meeting to propose a structure for academies. This structure was to include a primary and secondary focus for courses in each academy to include co-enrollment and concurrent enrollment. Professional Technical Studies’ staff from the Department of Instructional Services would develop plans to include courses recommended for all high schools, high school academies, and specialty courses having budgetary implications such as staffing, equipment, and facilities. These courses would not necessarily exist or be implemented at every comprehensive high school.

Thirteenth Meeting

The next task force met on October 17, 1994. The agenda covered the composition of academies, final changes to the draft task force report, a review of course selections by career clusters, and an overview of technical courses.

Subcommittee Three presented their proposal of the structure of academies. They recommended that each academy have a primary and secondary focus. The proposal for the existing vocational center at one of the high schools would have Engineering, Industrial, and Scientific, as the primary focus and secondary focus of Business and Marketing. The existing vocational center at the other high school would have Health, Human, and Public Services at the primary focus and Communication and the Arts as the secondary focus. The proposal to add two additional academies would have one with Communication and the Arts as primary focus and Business and Marketing as the secondary focus. The second academy would have a primary focus of Business and Marketing and a secondary focus of Health, Human, and Public Services. The rationale was to locate each academy in one of the four administrative areas and offer a different major and minor focus for each, thus making it easier for students in high schools to have equal access to similar programs throughout the county (Task Force Minutes, Subcommittee Three, October 17, 2004).

The subcommittee also recommended that 2-hour block technical courses at academies be offered on demand only. Comprehensive high schools should consider offering technical courses if there was enough student demand. Another recommendation was for academies to start earlier and end later to give students greater access to courses. This brought up issues related to transportation, staffing, and funding. The next task force meeting was scheduled for November 30, 1994.

Fourteenth Meeting

At the November 30, 1994 meeting, the task force members reviewed the final draft of the task force report before it was sent to the School Board's Instruction Committee. The report was titled "Securing Our Students' Future in a High-Tech Global Economy." The table of contents listed the members of the task force, an executive summary, and an introduction stating a case for change, mission statement, seven recommendations, next steps, a glossary, and references. The report also contained graphs and charts for a total of 48 pages. The recommended program changes included academic and career integration, career clusters, career pathways, work experiences, Professional Technical Studies, Professional Technical Academies, and post secondary programs. After the report was read and discussed, the members voted to accept the final draft.

There was a discussion of how many recertification points were to be awarded to task force members for their participation. The Assistant Superintendent explained that the next steps would be the Division Superintendent's formal presentation of the Task Force and the final report to the School Board on January 12, 1995. She also mentioned that there would be an Implementation Task Force formed if the School Board adopted the task force report and recommendations. She invited all members to be present at the meeting and thanked everyone for their time and hard work (Assistant Superintendent, personal communication, November 30, 1994).

Fifteenth Meeting

The Division Superintendent presented the Task Force report to the School Board on evening of January 12, 1995. He reviewed the background of the Task Force and presented a Power Point presentation of the Task Force report and recommendations. Since the school board

members had already reviewed the report during their previous work session, each member spoke regarding the new direction of vocational education and their support of the expanding opportunities for students in the county. The school board requested an implementation report by May of 1996 on the budgetary implications, implementation timelines, and staffing requirements to implement the recommendations of the task force. A motion was made by one of the school board members and seconded that the name of vocational education be change immediately to “Professional Technical Studies.” The vote was unanimous to change the name of vocational education to “Professional Technical Studies” and accept the report and its recommendations. The school board members then thanked the members of the Task Force for their efforts on behalf of the students in the county public schools (School Board Minutes, January 12, 1995).

Implementation Task Force

From February through March of 1995, Department of Instructional Services' staff established the four committees that would form the Task Force to develop a timeline and strategies to implement the recommendations of the Career and Technical Preparation Task Force. These committees were the Career Experience, Career Pathways, Course Review, and Academy. The staff then discussed whom to contact to serve on the committees including members of the original task force. Each committee consisted of approximately 40 members including school personnel at all levels, business and community members, and parent representatives. The Division Superintendent sent special invitations to elementary, middle, and high school principals, and high school guidance directors. These people were especially invited because their support was needed for the career pathways component of the recommendations to be successful (Director of Office of Professional Technical Studies, personal communication, January 19, 1996).

In April 1995, the Assistant Superintendent for Instruction gave an overview of the task force report and its general recommendations to approximately 160 members of the new task force. She asked for a 1-year commitment to develop implementation plans. She then showed the Division Superintendent's video, "Securing Our Students' Future in a High Tech Global Economy", and recognized members of the original task force. Next, the co-chairs of original four Career and Technical Education Task Force committees were introduced and reviewed the original recommendations from the Academy, Career Experience, Career Pathways, and Course Review committees' reports. Steering Committee members would meet to coordinate the implementation initiatives of the subcommittees. Task force members next divided into four focus groups to discuss the recommendations and devise timelines and strategies for

implementation. Committee members were advised to schedule meeting on their own to continue their work.

The Assistant Superintendent also emphasized that the May 1996 report to the school board's instructional committee should justify the needs for implementation. The report should include the background, principles and concepts, recommendations, costs and timelines.

The school system's Director of Guidance Services stated that funding for summer curriculum development also needed to be included in the report. Appropriate materials, software, curriculum, and staff development would be needed to make career pathways successful across the county.

One of the co-chairs of the Academies' Subcommittee reported that the academies should be integrated into the total high school program so that all students could take advantage of the educational opportunities offered in the academies. It was suggested that an associate principal's position be created to be the instructional leader of the academy and to supervise the integration of academics, career education, post-secondary, and business connections. He also recommended the sites for the first two high school academies: one would have a major focus of Engineering and Scientific Technology and a minor focus of Health, Human and Public Services; the other academy would have a major focus of Business and Marketing and a minor focus of Communication and the Arts.

It was suggested by the Marketing Education coordinator that the career experience component be piloted only at the academy sites. Business input and support was needed at sites before recommending career experiences as a graduation requirement for all high school students.

The Director of the Office of Professional Studies and the Director of Guidance Services reported that a meeting was scheduled on April 12 with representatives of local state and private 2- and 4-year post-secondary institutions to discuss admissions requirements for county public schools students.

The next meeting of the entire Implementation Task Force was held on April 25, 1995 at the National Wildlife Federation offices. The Assistant Superintendent again reviewed the purpose of the Implementation Task Force. The video “Securing Our Students’ Future in a High Tech Global Economy” was shown to the task force members as a review of the original task force report to the School Board. Subcommittee members then adjourned to separate rooms to discuss the progress of their subcommittee reports and discuss recommendations for implementation.

Since it was nearing the end of the school year, it was recommended that there be few meetings but that curriculum development opportunities were available over the summer for research and planning development. Funding for at least 8 hours during the summer for teachers and guidance counselors would be provided to work on any aspect of committee reports. Members were also informed that one recertification point would be awarded for every hour spent on task force and subcommittee meetings. During the summer, DIS staff would develop costs for the FY97 budget to implement the task force recommendations (Task Force Minutes, April 25, 1995).

DIS staff developed costs for the FY 96 budget to start implementation of the recommendations. DIS staff received initial funding from grants from Tech Prep to get substitutes for teachers to attend meeting and do research. Grant money was also used to allow committee members to visit sites in different localities (Task Force Minutes, April 25, 1995).

Members of the four committees met periodically on their own from April 1995 through April 1996 to develop timelines for implementation plans for FY 96 through FY 2000. The following timelines were developed as a guide for committees and were presented to the entire task force on April 26, 1995. The Academy committee proposed the following timeline:

<u>Year</u>		<u>Activity</u>
FY 96	Summer	Develop proposals for career clusters at existing and proposed academies.
		Determine academy student ratios and funding.
		Determine academy transportation and impacts of alternative scheduling.
		Determine academy costs for equipment and facility modification.
FY 97	Summer	Determine new fiscal resources for existing academies (staffing, equipment, facilities).
	Fall	Submit plans and fiscal requirements for establishing two new academies to School Board.
FY 98	Summer	Implement proposed student ratio and fund differentiated staffing at two existing academies.
	Fall	Implement administrative staffing at two existing academies.
	Summer	Develop and revise curriculum at academies.
	Fall	Implement new courses at existing academies.

FY 99	Fall	Open one new academy. Implement new courses at academies.
FY 00	Fall	Open second new academy. Implement new courses.

The Career Experience Committee presented its proposed implementation timeline as follows:

<u>Year</u>		<u>Activity</u>
FY 95	Summer	Work with business and industry to establish work experiences and additional apprenticeships.
FY 96	Summer	Develop methods for implementing the high school work experience. Continue to work with business and industry to establish work experiences and additional apprenticeships.
	Fall	Submit for School Board approval proposed implementation of work experience to be piloted at selected high schools.
	Spring	Provide staff development training for teachers and guidance counselors on implementing work experiences.
FY 98	Summer	Continue work experience staff development training. Continue to work with business and industry to establish additional work experiences.

	Fall	Pilot student work experiences at selected high schools.
FY 99	Summer	Continue work experience staff development training.
	Fall	Implement student work experience at all high schools.

The Career Experience committee considered the following as they developed their proposed timeline: (a) the number of hours required for students; (b) a centralized job bank and placement center; (c) a coordinator position for each school; (d) liability, insurance, and transportation issues; (e) assessment, grades, credits for work experience; (f) placement for English as a Second Language (ESL), special education, and alternative education students; (g) development of a business/industry advisory group; and (h) staff development.

Next the Course Review committee presented its proposed timeline:

<u>Year</u>		<u>Activity</u>
FY 95	Spring	Establish a committee to revise necessary high school academic and technical courses.
FY 95		Collect student enrollments in technical and specialty courses.
FY 96	Summer	Propose FY 97 funding for staffing for technical programs at proposed academy sites in each administrative area.
		Recommend specific technical programs requiring special facilities or staff for Fall 96 implementation.

		Determine course sequencing.
	Fall	Submit new course proposals to School Board for approval.
FY 97	Fall	Obtain School Board approval to modify course offerings.
		Implement consolidation of technical programs to be available at proposed academy sites per administrative area.
	Winter	Develop curriculum for new academies.
FY 98	Summer	Develop and revise curriculum for technical and specialty programs.
	Fall	Submit new proposed courses to School Board for approval.

The Course Review committee considered the following factors as they developed their implementation timeline: (a) Local, state, and national occupational outlooks; (b) existing course offerings and sites offering courses; (c) academic prerequisites and co-requisites for technical courses; (d) future specialized courses; and (e) Tech Prep, articulation agreements, and transition opportunities.

The Career Pathway Committee presented its proposed implementation timeline:

<u>Year</u>		<u>Activity</u>
FY 95	Spring	Research and review local and national career exploratory programs at the elementary, middle, and high schools.

FY 96	Spring	Establish guidelines for implementing career awareness, career exploration, and career pathway planning at elementary, middle, and high schools. Determine teacher training.
FY 97	Summer	Provide staff development training for teachers and guidance counselors. Develop 2-week summer career exploratory courses for rising 8 th and 9 th graders.
	Fall	Implement career awareness at elementary schools Implement career exploratory and career planning at middle and high schools.
	Winter	Add 2-week career exploratory courses to 1997 summer school program.
FY 98	Summer	Implement 2-week summer career exploratory courses.

The Career Pathway committee considered the following as they developed their implementation timeline: (a) other state and local models; (b) current school system practices; (c) developed guidelines for staff development; (d) plan for curriculum development at elementary, middle, and high schools; (e) methods of assessment of students' interests and attitudes; (f) student benchmarks; (g) student portfolios and record keeping procedures; and (h) development of career maps and career majors.

Steering Committee members continuously monitored, guided and focused subcommittees on designated goals and tasks. The co-chairs of the committees reported progress

in monthly meetings with the Assistant Superintendent for Instruction and the Vocational Director (Steering Committee Notes, March 28, 1996).

On May 2, 1996 the task force presented its report on implementation entitled “Career and Technical Implementation Committee” to the School Board for consideration. In the table of contents, the report contained the following: (a) an executive summary that explaining the history and recommendations of the Career and Technical Preparation Task Force; (b) a summary which detailed the recommendations and the formation and workings of the four subcommittees; (c) a review of the subcommittee reports; and (d) appendices listing career pathway competencies, student’s planning card, timelines and estimated costs, and implementation committee members. The timelines for implementation by the different subcommittees are listed below:

Career Pathways

1996-97

1. Communicate with parents at field test schools regarding portfolios.
2. Provide interest/aptitude tests at selected schools.
3. Develop student follow-up mechanism (Career and Technical Implementation

Committee (1996). Appendix C. p. 35).

1997-98

1. Pilot career pathway program by grade level at nine elementary, middle, and high school sites.
2. Revise and develop career curriculum materials for different grade levels.
3. Field test grade level materials.
4. Install hardware and software to use in career activities in eight middle schools.
5. Provide two additional computers at career centers at eight high schools.

6. Pilot student follow-up study at one career academy (Career and Technical Implementation Committee (1996). Appendix C. p. 39).

1998-99

1. Expand career pathway program to nine additional elementary, middle, and high school sites.
2. Continue to revise curriculum materials and develop additional curriculum for remaining grade levels.
3. Continue staff development activities for counselors and teachers at elementary, middle, and high schools.
4. Implement follow-up studies at two career academies.
5. Install hardware and software for career academies at eight more middle schools.
6. Provide two additional computers for career centers at eight more high schools (Career and Technical Implementation Committee (1996). Appendix C. p. 40).

1999-2000

1. Expand follow-up study to include all graduating seniors.
2. Install hardware and software for career academies at seven more middle schools.
3. Provide two additional computers for career centers at seven more high schools.
4. Expand career pathway model by grade level at all schools (Career and Technical Implementation Committee (1996). Appendix C. pp. 39-41).

Career Experience

1998-99

1. Provide two site-based teachers at the two career academies to supervise career experience and develop local school career experience plans.

2. Provide staff development for integrating the academics and technical curriculum at the career academies.
3. Provide one site-based teacher at the third career academy to supervise career experience and develop the local career experience school plan (Appendix C. p. 39).

1999-2000

1. Provide one site-based teacher at the fourth career academy to supervise career experience and develop the local career experience school plan (Career and Technical Implementation Committee (1996). Appendix C. pp. 40-41).

Course Review

1997-98

1. Eliminate courses recommended for deletion from the county's standard/optional course offerings.

1998-2000

1. Review high school courses for addition, revision, and/or elimination (Career and Technical Implementation Committee (1996). Appendix C. pp. 39-41).

Career Academy

1997-98

Establish a Health and Human Services and Engineering and Scientific Technology academy to replace the existing vocational center at the high school in the western end of the county. To accomplish this, the following new resources would be required:

1. Staffing:
 - a) Upgrade one assistant principal position.
 - b) Upgrade two secretarial positions to 12 months.
 - c) Upgrade two resource positions at two new academies.

- d) Create two instructional aide positions.
- e) Create a .5 finance position.

2. Labs:

- a) Equip academy with a new lab for Occupational Physical Therapy.
- b) Build a multi-purpose lab for Health, Human and Public Services.
- c) Create one general-purpose writing lab.

Establish second academy with focus on Business and Marketing and Communication and the Arts. In order to accomplish this, the following new resources would be required:

1. Staffing:

- a) Create one new assistant principal position.
- b) Create one new counselor position.
- c) Create one new secretarial position.
- d) Create one new .5 finance position.
- e) Add ten new teaching positions.
- f) Add two new LD/ESL teaching positions.
- g) Add two new instructional aide positions.
- h) Build two new Business and Marketing labs.
- i) Build one new lab for Communication and the Arts.
- j) Build one new digital and editing lab.
- k) Equip five new classrooms with furniture, books, and supplies.
- l) Build one new video and sound studio.
- m) Equip one new fashion design lab.
- n) Equip one general-purpose writing lab.

- o) Equip new dance studio.
- p) Renovate for small theater with studios and rehearsal halls for dance, music, and theater classes.
- q) Provide transportation to second new academy.
- r) Develop and refine curriculum for new courses.
- s) Develop curriculum for academic and career integration
- t) Provide professional development days for academy teachers.
- u) Develop academy evaluation process (Career and Technical Implementation Committee (1996). Appendix C. p. 38).

1998-99

Establish a third academy focused on Engineering and Scientific Technology and Health, Human, and Public Services. To accomplish this, the following new resources would be required:

1. Staffing:
 - a) Create one new assistant principal position.
 - b) Add one new counselor position.
 - c) Add one new secretarial position.
 - d) Create one new .5 finance position.
 - e) Add eleven new teaching positions.
 - f) Upgrade one resource assistant.
 - g) Add two new LD/ESL teaching positions.
 - h) Add two new instructional aide positions.
2. Labs:

- a) Create two new labs for architectural, civil, electrical, and mechanical engineering.
- b) Equip one dental assisting lab.
- c) Equip one Emergency Medical Technician lab.
- d) Equip one Medical Technology lab.
- e) Build one new Auto Technology lab.
- f) Equip one Child Care lab.
- g) Equip one new writing lab.
- h) Equip one new multi purpose lab for Health, Human, and Public Services.
- i) Equip classrooms with furniture, supplies, and textbooks.
- j) Provide transportation for third academy (Career and Technical Implementation Committee (1996). Appendix C. p. 39).

1999-2000

Establish a fourth academy with primary focus on Communication and the Arts and Business and Marketing. In order to accomplish this, the following new resources are required:

1. Staffing:

- a) Create one new assistant principal position.
- b) Create one new counselor position.
- c) Create one new secretarial position.
- d) Create one new .5 finance position.
- e) Add ten new teaching positions.
- f) Upgrade one existing career resource position.
- g) Add two new LD/ESL teaching positions.

- h) Add two new instructional aide positions.
2. Labs:
- a) Equip two marketing and business computer labs.
 - b) Build two new Business and Marketing labs.
 - c) Build one new lab for Communication and the Arts.
 - d) Build one new digital and editing lab.
 - e) Equip five new classrooms with furniture, books, and supplies.
 - f) Build one new video and sound studio (Career and Technical Implementation Committee (1996). Appendix C. p 41).
 - g) Renovate and equip small theater with studios and rehearsal halls for dance, music and theater classes.
 - h) Develop and refine curriculum for new courses.
 - i) Provide professional development for 70 academy teachers.
 - j) Provide student transportation.
 - k) Continue the academy evaluation process (Career and Technical Implementation Committee (1996). Appendix C. p. 42).

The total costs of approximately 2 million dollars for the academy implementations from 1997-2000 were to be incurred out of existing Professional Technical funding and presented to the School Board. The School Board approved the implementation recommendations after funding questions were discussed and questions answered by the Assistant Superintendent for Instruction (Former Director of Professional Technical Studies, personal communication, March, 2003).

In 1997, the first high school academy replaced the high school vocational center in the western part of the county. Its major focus was Engineering and Scientific Technology, and Health and Human Services. A new academy was created at another high school with a Business and Marketing, and Engineering and Scientific Technology focus. In 1998, a third academy with an Engineering and Scientific Technology and Business and Marketing focus replaced the second existing vocational center. An academy for Communications and the Arts was added in 1998 that was not part of the original implementation but approved by the School Board for political reasons. Various arts groups and community members had advocated a separate fine and performing arts high school and this academy was to replace a planned school for the performing arts (School Board member, personal communication, March, 2003). In 1999, the fifth and final academy was established in the southeastern part of the county in a high school scheduled for renovations. Its focus was Health and Human Services, and Communications and the Arts. By 2000 the five academies enrolled between 3,000 and 4,000 high school juniors and seniors, whereas in 1993 there were approximately 700 students enrolled in the two existing vocational centers (Director of Professional Technical Studies, personal communication, March, 2004).

The increased enrollment was partly attributed to the new emphasis on higher expectations, career exploration, and the emphasis on continuing higher education. New courses such as Medical Health Technologies, Engineering Systems, and Criminal Justice attracted a variety of students which helped increase enrollment (Director of Professional Technical Studies, personal communication, March, 2003).

CHAPTER V - THE FUTURE OF HIGH SCHOOL ACADEMIES

By 2004 the growth in popularity of the county's five high academies had increased student enrollment to over 3,000 juniors and seniors. High school academies attracted all types of students, the college-bound students as well as students who were not certain of their plans after high school. According to the Director of Professional Technical Studies, there was continued strong support for high school academies from the school board as well as parents, mainly due to the increased opportunities for students to explore careers options. This popularity, however, had dramatic effects on the school system that had not been anticipated. The change of the academies' class schedules to three 2-hour blocks to match most of the high schools' block schedules meant that bus transportation needed to be provided six times per day. This put a tremendous strain on the ability of the school systems' transportation system with extra buses needed to accommodate the increase in students enrolled at the five high school academies. There had been no provision made to increase the bus fleet to meet this increased demand (Director of Professional Technical Studies, personal communications, March, 2003).

Another issue arose concerning high schools changing class schedules to meet remediation and testing initiatives. Because high schools' class times did not match the academies' class times, some students could not take academy classes, or were coming late to their academy class, or having to leave early not to be tardy to their regular high school classes. Academy classroom teachers were forced to make time adjustments and therefore lost valuable instructional time.

A third issue arose about equity of course offerings at different academies. The tight school budgets in the early years of 2000 did not include funding for new staffing and courses at high school academies. However, with the increased demand and popularity of programs such as

Criminal Justice, the school system expanded programs to other high school academies. This extra staffing and funding needed for these programs were absorbed in the existing budget of the Office of Professional Technical Studies.

According to the Assistant Superintendent for Instructional Services, there were discussions regarding the future of high school academies. Because of transportation, scheduling, funding, and the increasing demand of courses, new options were being explored for the existing high school academies (Assistant Superintendent for Instructional Services, personal communication, March 2004).

Support for academies came from the former high school principal where the first high school academy was located. "I think it is great.... I think the people were supportive and will continue to be supportive" (Former high school principal, personal communication, March 2004).

The Director of the Office of Professional Studies summarized her vision of the future of the high school academies:

I don't think we'll have the academies the way they are now. Possibilities include the five academies administratively may oversee satellite programs as well. It may be a hub and spoke concept. The concern is that we're not able to deliver the courses due to the distances to the academies. In order to do that I think we may have delivery on line. I don't see the academies larger than they are because of the physical constraints of the buildings that are hosting them. So in order for us to extend the offerings to more students, we will have to think outside the box. That will help us to solve some of the issues of schedules, you know, the differences in the block schedules, as well as traffic and transportation constraints.

We have strong school boards support of what the academies are accomplishing. We presented the transportation challenges and every one of the school board members applauded individually what the academies do and recognizes the need for us to do something about this. So I think that while we have school board and community support, I don't see system support weakening and our new Assistant Superintendent for Instruction is very committed to the academies (Director of the Office of Professional Technical Studies, personal communication, March 2004).

The Assistant Superintendent also voiced his support.

I think the academies offer two wonderful opportunities. One is simply exposing students to the kinds of options they have in terms of professional and technical careers. And also giving students a perspective on what their choices are in terms of lifestyle and experience...I think the great thing about the academies is that they offer the opportunities for students to explore in courses that seemed to be extremely well taught, very well equipped, they're exciting in terms of their presentation" (Assistant Superintendent, Personal communication, March 2004).

There has been continued growth in high school academies nationally, especially in urban school systems. The high school reform movement, high stakes testing and the No Child Left Behind legislation have put pressures on school systems to increase student academic achievement. School systems such as those in Greensboro and Greenville, North Carolina and Chattanooga, Tennessee are instituting the high school academy model as part of the high school reform movement to increase student academic achievement, increase graduation rates and decrease the student drop out rate. Studies by Maxwell and Rubin (2001) and MDRC (1996) cited in this paper have concluded that high school academies may have a positive impact in

increasing student achievement, reducing drop out rates, and preparing students for higher education and the world of work. Further studies could be beneficial in determining whether high school academies are continuing to be effective as a model of high school reform.

CHAPTER VI – REFLECTIONS

As I began this research, I had to separate my roles of being a participant in the task force process and being a researcher to document as accurately as possible. I remember my initial excitement when I was asked to be part of the process to change vocational education in the county. I felt it an honor that I would be assisting in changing the way students were educated. As a member of the Academy subcommittee, I spent many hours after a long school day for 13 months in meetings, researching, and on visitations to model sites. Our purpose was to recommend changes to the old vocational center system that would meet the changing needs of the county's business community and preparing students to take their place in a new technological society. I also remember being disappointed when the final report was read and the recommendations of the subcommittees were generalized into seven broad recommendations. The Assistant Superintendent explained that the original recommendations would be used in the implementation of the recommendations. I remember being proud of our work when it was presented to the school board by the superintendent and anxious to begin the implementation stage.

As a researcher, my first task was to find the primary and secondary sources needed to accurately document the task force process from beginning to end. From the original task force, I found detailed information from notes, agendas, the task force report and letters sent to participants. Except for the implementation report, I did not, however, find much detailed information on the implementation task force. There were some notes from several co-chair meetings with the Assistant Superintendent.

Next I contacted members of the original task force to interview. Unfortunately the Assistant Superintendent had unexpectedly passed away before I could get an interview. One co-chair of the Academy subcommittee refused to be interviewed, stating that she could not remember enough to be of assistance and directed me to the Office of Professional Technical Studies. I was able to get a list of persons to interview and began contacting them to try to schedule interviews. Most of the interviewees were glad to be interviewed but some could not remember much in detail regarding the task force and their participations. There were others who were able to remember very detailed information that contributed to my research.

In retrospect, all interviewees thought the academies were very successful in changing the negative image of vocational education. The growth to five academies and the popularity of academy courses presented more opportunities for more students to achieve success in school. The Course Review subcommittee was able to recommend new courses while eliminating courses that were not relevant or had consistently low enrollments.

Only four of the seven recommendations were instituted. They were: (a) Vocational education in the county was changed to Professional Technical Studies. (b) five high school academies replaced the two existing vocational centers. (c) Professional Technical Studies courses were clustered around the four career areas of Engineering and Scientific Technologies, Health and Human Services, Communication and the Arts, and International Studies. and (d) programs were developed with secondary institutions to articulate courses so that graduating students had a seamless way for continuing their education after high school.

The three recommendations not instituted were: (a) the integration of academic and career education for all students. (b) the requirement that all students be more organized in their search for a career pathway. and (c) the structured work experience for all students as a

graduation requirement for all students. These recommendations met with considerable resistance from the some segments of the community. The recommendation to integrate academic and career education met with resistance from two School Board members, some parents, and academic teachers. They expressed concern that the academic courses would be “watered down” and that their students’ education and chances of getting into institutions of higher education would be threatened.

Some interviewees expressed disappointment that the recommendations of the Career Pathways subcommittee were never implemented. This was due to political pressures on the school board during the latter part of the 1990s. All students were not required to participate in a work experience in high school. One obstacle was the logistics of documentation of work experiences in such a large school system and funding of personnel. Parents and students expressed concerns that a required work experience would harm extra curricular activities such as athletics, band and drama. This would limit or eliminate students’ chances for college scholarships or their ability to take more academic courses. However, a voluntary work experience was instituted for seniors enrolled in courses at the academies.

Career awareness and exploration at the elementary and middle schools was not fully implemented as recommended, even though career software was provided. Two School Board members voiced concerns from some parents that students were too young in middle and high schools to make informed and rational decisions regarding career choices. Another concern was that spending time on career exploration took valuable time away from academic learning. One School Board member expressed his view that career exploration courses led to the tracking of students and should not be in public schools, but part of post-secondary education only.

Staff development for counselors and teachers in career awareness were not implemented due to time constraints and the lack of funding. There was also resistance by high school counselors who felt they were already overwhelmed with counseling, college applications and writing student recommendations. There was no mandate from the School Board, Superintendent or other school system personnel to institute the career awareness staff development recommendation.

I believe that there was a real lack of understanding by the public of the benefits for all students of the task force recommendations. Perhaps more specific information could have been given to the public at the beginning of the task force process. More representation on the task force from the community may have helped to dispel any misinformation or misperceptions about the task force and its recommendations. There also was no student representation on the task force. Student representatives could have contributed valuable information regarding students' perceptions and ideas about vocational education.

Of the 48 members of the original task force though, only about 31 were committed to see the process through. Generally these were central office personnel, those working in or dealing with vocational education, some parents, and business representatives. Some elementary, middle school teachers and administrators and high school academic teachers seem to lose interest and quit attending the meetings. Though attendance was taken at each meeting, I could find no records of attendance in any of the notes or minutes of the task force. Possibly the time span of 13 months was too long to keep some members interested. It seemed that membership was lost when the task force was not able to meet over summer months. A possible time limit from September through May might have been more successful in keeping task force members interested and attending meetings.

In reviewing the total task force process, I concluded that it was a process that worked. Though not all recommendations were implemented, there was unanimous agreement among the interviewees that the task force process was a success. Task force members representing various stakeholders were asked to participate and were able to give recommendations on changing vocational education in the county.

Finally, the requirement by the county school system for anonymity created a dilemma for this researcher. Not being able to personalize this study by naming persons involved, made this report very difficult to write and removed positive aspects that contributed to the overall success of the task force process. By requiring anonymity, the school system lost an opportunity to highlight a successful process that could be viewed as a model for other school systems.

REFERENCES

- Academic Innovations. (2003). *The Federal Carl D. Perkins Act of 1998*. Retrieved October 6, 2003, from <http://www.academicinnovations.com/cpvatea.html>
- American Historical Association. (January, 1998). Statement on standards of professional conduct. *Statement on interviewing for historical documentation*. Retrieved October 20, 2003, from <http://www.theaha.org/PUBS/STANDARD.htm#Statement%20on%20Interviewing>
- Burnett, G. (1992, December). Career academies: Educating students for career success. *ERIC/CUE Digest*, 84.
- California State Department of Education. (2000). *California partnership academies*. Sacramento: California State Department of Education, High School Initiatives Office.
- Carl D. Perkins Vocational and Applied Technology Education Act Amendments of 1990. Public Law 101-392. Washington, DC: U.S. Congress, 1990.
- Carl D. Perkins Vocational and Applied Technology Education Act Amendments of 1998. Public Law 101-332. Washington, DC: U.S. Congress, 1998.
- CenterWork. (1993). *The changing role of vocational-technical education in the United States*. (ERIC Document Reproduction Service No. ED361527)
- Clark, G. K. (1967). *The critical historian*. Portsmouth, NH: Heinemann Educational Books.
- Crain, Allen, Thaler, Sullivan, Zellman, Little, and Quigley (1999). *The effects career education on high schools and their graduates*. Berkeley: National Center for Research in Vocational Education. University of California, Berkeley.
- Creswell, J. W. (1998). *Quality inquiry and research design*. Thousand Oaks, CA: Sage.

- Gordon, H. (2003). *History and growth of vocational education in America*. Prospect Heights, IL: Waveland Press, Inc.
- Gray, K. (1991). Vocational education in high school: A modern phoenix? *Phi Delta Kappa*, 71, pp. 437-445.
- Gray, W. (1991). *Historian's handbook*. Prospect Heights, IL: Waveland Press, Inc.
- Hayward, G., & Benson, C. (1993). *Vocational-technical education: Major reforms and debates 1917-present*. Washington, DC: Office of Vocational and Adult Education, U.S. Department of Education. (ERIC Document Reproduction Service No. ED369959).
- Hinkle, L. (1978). *A history of public secondary education in Fairfax County, Virginia*. Ann Arbor, MI: University Microfilms.
- Howell, M., & Prevenier, W. (2003) *An introduction to historical methods*. Ithaca, NY: Cornell University Press.
- Kemple, J., & Snipes, J. (2000, February). *Career academies: Impacts on students' engagement and performance in high school*. New York: Manpower Demonstration Research Corporation. Retrieved February 28, 2001, from: <http://www.mdrc.org/PublicationsFull.htm>.
- Kemple, J., & Rock, J. (1996). *Career academies: Early implementation lessons from a ten-site evaluation*. New York: Manpower Demonstration Research Corporation. Retrieved February 28, 2001, from <http://www.mdrc.org/PublicationsFull.htm>.
- Lynch, R. L. (2000). *New directions for high school career and technical education for the first decade of the 21st century*. Columbus, OH: ERIC Clearinghouse on Adult Career and

- Technical Education. Retrieved January 13, 2003, from www.ericacve.org/majorpubs2.asp?ID=25
- Maxwell, N. L., & Rubin, V. (2001). *High school career academies: A pathway to educational reform in urban schools*: Kalamazoo, MI: W. E. Upjohn Institute for Employment Research.
- McDowell, W. H. (2002). *Historical research: A guide*. London: Pearson Education Limited.
- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass.
- Merriam, S. B. (1988). *Case study research in education*. San Francisco: Jossey-Bass
- Philadelphia Academies Incorporated. (2000). *Summary report 1999-2000*. Philadelphia: Philadelphia Academies Inc.
- Ritchie, D. (2003). *Doing oral history: A practical guide*. Oxford: Oxford University Press.
- School-To-Work Opportunities Act of 1994. Public Law 103-239. Washington, DC: U.S. Congress, 1994.
- Stern, D., Raby, M., & Dayton, C. (1992). *Career academies: Partnerships for reconstructing American high schools*. San Francisco: Jossey-Bass
- Stern, D., Dayton, C., & Raby, M. (1998). *Career academies and high school reform*. University of California at Berkeley, Career Academy Support Network. Retrieved August 21, 2002 from, <http://casn.berkeley.edu/buildingblocks.html>
- Stern, D., Dayton, C., & Raby, M. (2000). *Career academies: Building blocks for reconstructing American high schools*. University of California at Berkley, Career Academy Support Network. Retrieved August 21, 2002 from <http://casn.berkeley.edu/Career.html>

- Urquiola, M., Stern, D., Horn, I., Dornsife, C., Chi, B., Williams, L., Merritt, D., Hughes, K., & Bailey, T. (1997). *School-to-work, college and career: A review of policy, practice, and results 1993-97*. Berkeley, CA: National Center for Research in Vocational Education, University of California (MDS-1144). <http://ncrve.Berkeley.edu>
- U.S. Department of Education. (1999, December). *Career academy programs*. Washington, DC: Office of Vocational and Adult Education. Retrieved August 25, 2000 from, <http://ed.gov/offices/OVAE/academy.html>
- Yin, R. (2003). *Case study research: Design and methods*. Thousand Oaks, CA: Sage.

APPENDIX A

LIST OF INTERVIEWEES

1. Former Superintendent
2. Former Superintendent
3. Former Assistant Superintendent for Vocational, Adult and Community Education
4. Parent, “Making the Grade” Representative, School Board Member
5. Former Director of Office of Vocational Education, former Director of Office of Professional Technical Studies
6. Former Director of Secondary Programs, Area III
7. Director of Office of Professional Technical Studies
8. Curriculum Specialist, Office of Professional Technical Studies, former Technology Education teacher
9. Curriculum Specialist, Office of Professional Technical Studies
10. Former high school principal
11. Vocational Center counselor
12. Vocational Specialist, Coordinator of Career and Transition Services
13. Assistant Superintendent for Instructional Services

APPENDIX B
INTERVIEW QUESTIONS

Please state your name and position.

What was your position when the Career and Technical Task Force was formed?

How did you get to serve on the Task Force?

What was your understanding of the purpose of the Task Force?

How were the subcommittees formed? On what subcommittee did you serve?

Did you feel there was adequate representation of all stakeholders on your subcommittee?

Please explain purpose of your subcommittee, and the process?

What were the major recommendations of your subcommittee?

Were these recommendations implemented and how?

Were you a member of the Implementation Task Force?

Are there any questions I should have asked or any thing you wish to add?

Steering Committee Questions

How did members of the steering committee get selected? Notified? By whom?

What was the purpose of the steering committee?

How many times did it meet?

Explain how the committee operated.

Were there any issues, concerns, disagreements, disputes? How were they resolved?

Were members also automatically on the Implementation task force

Implementation Task Force

Purpose?

Members? How selected?

Meetings?

Discussions?

Outcomes?

Did the outcomes represent accurately the Task Force recommendations approved by the school board?

Are those recommendations still valid today and how is this evaluated?

How were the academies successful?

Anything that was disappointing or not successful?

What are your thoughts on the Task Force process and its results?

Are there any questions I should have asked or any thing you wish to add?

VITAE

John Wittmann, Jr.
2773 Einstein Drive
Virginia, Beach, Virginia 23456
jwitt07@msn.com

EDUCATION

Virginia Polytechnic Institute and State University
Doctoral Student 2000-05

George Mason University
Master of Science Degree-Secondary Education
Education Administration

Millersville State University
Bachelor of Science Degree-Secondary Education
Social Sciences

PROFESSIONAL EXPERIENCE

PRINCIPAL, Andrews High School-May, 2004-March 2004

ADMINISTRATOR, Chantilly High School Academy-1997-2004

ADMINISTRATOR, Chantilly Professional Technical Center-1995-1997

ADMINISTRATOR, Chantilly Vocational Center-1993-1995

ASSISTANT PRINCIPAL, Poe Middle School, 1989-92

TEACHER, Herndon Intermediate School, 1972-1986

CRISIS RESOURCE COORDINATOR, Herndon Intermediate School, 1986-89

GUIDANCE COUNSELOR, Herndon Intermediate School, 1987

SCHOOL PROBATION OFFICER, Herndon Intermediate School, 1974-78

PROFESSIONAL AWARDS

Robert S. Spillane Leadership Award-2000