



A Study of Secondary Career and Technical Education

Research Report No. 315

Legislative Research Commission

Frankfort, Kentucky
November 2003

Kentucky Legislative Research Commission

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A STUDY OF SECONDARY CAREER AND TECHNICAL EDUCATION

Research Report No. 315

Legislative Research Commission
Frankfort, Kentucky
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Report Adopted by the Subcommittee on Vocational Education and
Received by the Interim Joint Committee on Education
August 4, 2003

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FOREWORD

This report presents information compiled by the Subcommittee on Vocational Education of the Interim Joint Committee on Education, which was established to conduct a study of secondary career and technical education, as provided in HB 185 in the 2001 Regular Session. The report, which was prepared by staff of the Interim Joint Committee on Education, was presented to and accepted by the full committee on August 4, 2003.

Robert Sherman, Director
Legislative Research Commission

The Capitol
Frankfort, Kentucky
November 2003

SUMMARY

This report details a study of secondary career and technical education. Career and technical education is the contemporary name for those programs that have been historically referred to as vocational education, or occupational education—programs that were based on specific skill development in occupational areas of agriculture, home economics, and industrial education, and that eventually included business and office occupations, marketing and distribution, and health occupations. While these basic occupational areas still exist, they carry updated names which reflect the impact of technological advancements in the workplace that have required significant changes in instructional practices and career opportunities for students. For purposes of the study, the terms "career and technical education" and "vocational education" were used interchangeably.

The purpose of the study was to determine the following:

- Adequacy of the funding formula for locally operated area centers and vocational departments as established under provisions of KRS 157.069.
- Funding options to provide adequate and equitable funding for secondary career and technical education programs.
- Funding incentives to providers of career and technical education to encourage the development of new programs to address workforce needs.
- Current processes for assessing need, planning, funding, equipping, and operating new facilities to serve students in local school districts and communities and to ensure equity for school districts and communities in the funding and support of new facilities.
- Options for a system of accountability in state-operated facilities.

The study, which was required by HB 185 (2001 RS), was conducted by the Subcommittee on Vocational Education of the Interim Joint Committee on Education during 2001, 2002, and 2003 Interims. In addition to hearing testimony (a list of presenters appears in Appendix A), the subcommittee reviewed historical information relating to career and technical education programs and the various service providers; reviewed program, student, and personnel data from selected executive agencies; reviewed existing laws; reviewed previous studies and administrative regulations relating to programs, funding, accountability, and teacher certification requirements; reviewed funding information; and visited area technology centers.

BACKGROUND

Historically, state career and technical education policies have been shaped by federal legislation and federal funding, dating back to the Smith Hughes Act of 1917. However, while Kentucky continues to receive federal funding under provisions of the Carl D. Perkins Vocational and Technical Education Act of 1998 of approximately \$17 million, funding programs of vocational education is the primary responsibility of the state.

The purposes of career and technical education, which are specified in KRS 158.812, are to:

- (a) Provide students opportunities to increase academic skills in mathematics, science, English, and communications, and technical literacy in work-based settings;
- (b) Provide students a variety of opportunities to master the usage of technology;
- (c) Prepare individuals with specialized, transferable academic skills and technical skills for gainful employment in entry-level positions in broad-based career fields; and
- (d) Assist individuals in the process of preparing for successful transition from school to work, postsecondary education, or the military.

In this statute, the General Assembly also expressed its intent that rigorous, high-quality career and technical education offer students an opportunity to develop skills in mathematics, science, communication, and problem-solving that are essential to meet the goals for Kentucky education as described in KRS 158.6451 and to help students achieve the capacities required of all students.

Program Standards

The Kentucky Board of Education is required under KRS 151B.025 to establish program standards for all career and technical education secondary programs. These standards are specified in 705 KAR 4:231. All providers of secondary career and technical education shall operate programs in compliance with those standards. Schools that utilize federal funds under the Perkins Act must comply with all of its requirements. Federal standards and Kentucky standards are aligned. The Department for Technical Education acts as the sole state agency for administering the state's overall federal plan, but the Kentucky Department of Education is delegated the responsibility under the Kentucky plan to review plans for use of federal funds and to provide technical assistance to local educational agencies with secondary programs.

Kentucky's Program Delivery System

Kentucky offers secondary career and technical education in 118 middle schools, 234 comprehensive high schools, and 93 area technology centers or departments. Of the 93 area technology centers and departments, 40 are locally operated area technology centers and vocational departments. Fifty-three of the area technology centers are a part of a state-operated system, known as KY Tech, which is administered by the Department for Technical Education, Cabinet for Workforce Development. This type of state system is unique among the states.

Area Technology Centers

Area technology centers are small facilities that house at least five programs that are usually not located in comprehensive high schools. The programs are primarily high-cost industrial technical programs that prepare persons for work or advanced training, such as machine technology, electronics, welding, computer technology, auto technology, computer-aided drafting, wood technology, and other high-cost programs that are equipment intensive and

require significant investments in facilities. In recent years, business and health sciences programs have been added in several centers.

KY Tech

The KY Tech system, currently composed of 53 state-operated secondary centers, is operated by the Department for Technical Education in the Cabinet for Workforce Development. Prior to 1990, the Kentucky Department of Education, under regulations of the State Board of Education operated the system, which at that time included both area technology centers and the state vocational-technical schools. The KY Tech system was moved to the Cabinet for Workforce Development when it was formed in 1990 by HB 814, under regulations of the State Board for Adult and Technical Education. In 1998, the state vocational-technical schools were moved to the Kentucky Community and Technical College System (KCTCS), leaving the secondary schools to operate within the cabinet. A limited number of secondary students still participate in programs located in the state vocational-technical schools, now called technical colleges. The State Board for Adult and Technical Education was abolished by executive orders, with confirmation finally occurring in 2003.

Each KY Tech school buildings is owned by a local board of education, which receives some state funds to maintain the building.

The administrative staff, teachers, and other personnel housed in these buildings are state employees and governed under the state personnel systems. KRS Chapter 151B governs certified employees and KRS Chapter 18A governs classified employees. The majority of the KY Tech schools serve multiple school districts, whereas the locally operated area technology centers, with the exception of two, serve only students from the school district that owns the facility.

In contrast, the personnel in the locally operated centers are employees of the local board of education that owns and operates the facility and are governed by each district's board of education personnel rules and compensation package.

Qualifications of Instructional and Administrative Personnel

Certified personnel in secondary programs, regardless of the education provider, are required to meet certification standards established by the Education Professional Standards Board. Teachers in a subject for which there is no traditional college preparation program may enter teaching based on occupational work experience and demonstrated competencies on assessments that are required by the Education Professional Standards Board. These teachers are required to complete teacher internships and continuing education requirements and are placed on a single salary schedule that recognizes equivalent work experience and education for Education Rank III, Rank II, and Rank I. During the spring of 2003, the Education Professional Standards Board updated the Kentucky administrative regulations relating to assessment requirements for occupation-based teachers as required by HB 185 (2001).

Students Served

Approximately 229,000 students are served in secondary career and technical education programs, with approximately 29,200 students enrolled in middle school exploratory programs, 157,300 students in comprehensive high schools, 18,500 in locally operated centers, 23,200 in KY Tech, and 1,900 in KCTCS.

Funding

It is generally accepted in the education community that it is more costly to offer career and technical education programs than to offer other academic programs. These increased costs include smaller class sizes, high-cost equipment, consumable instructional materials, and high-cost laboratories and facilities.

In addition, the funding expended when calculated on a per pupil basis for students in KY Tech appears greater than in most locally operated programs because the KY Tech system costs include a longer work year for teachers and support of a central administrative structure and regional business offices to support the KY Tech system, which functions somewhat as a statewide school district. The longer work year is necessary to ensure that the instructional year spans the different school calendars from the feeder schools, time is available for professional development of teachers, and includes days to accommodate mandated state holidays and annual leave for staff. Additional costs are attributable to school staffing other than teachers. Each Ky Tech school has at least a full-time principal, an office assistant, and a maintenance employee. Locally operated facilities may have different staffing levels.

Prior to the 1990 Kentucky Education Reform Act, there was a comparable funding methodology to provide classroom units for vocational education in both state- and locally operated programs. Funds were also provided for extended contracts for teachers in locally operated programs as well as in state-operated facilities. Although by 1990, the value of vocational units in locally operated schools had diminished significantly.

Federal funds in both types of programs were used to augment and enhance opportunities for teachers' professional development, provide support services for student organizations, purchase instructional supplies and teaching materials, and purchase equipment. The impact of the state and federal funding was similar between the locally operated and state-operated programs.

During the late 1970s and early 1980s, some centers previously operated by the Kentucky Department of Education were transferred to local control. The general funds for school administrative purposes were transferred to the local district from the department, along with a portion of the state general funds appropriated for equipment purchases. Each local district also received vocational units.

As a result of the 1990 elementary and secondary education reform, foundation funding was changed from a unit mechanism that funded a classroom unit, based on a teacher and minimum class load, to a per pupil funding formula, under the Support Education Excellence

in Kentucky Program (SEEK). No weighted add-ons were provided in the SEEK formula for vocational programs in school districts, such as those funds provided for at-risk students. In 1992, a one-time supplement was provided in the biennial budget for locally operated programs to purchase equipment. This supplement provided approximately \$22 per student.

School districts that assumed the management and administrative responsibility of schools previously operated by state government continued to receive a general fund supplement although there was no increase in the level of funds. The KY Tech system did receive increases in state general funds. In 1994 the Cabinet for Workforce Development made a policy change, due to the lack of any specific directive to the contrary, to no longer distribute a share of the state equipment funds to the districts that had assumed operation of their centers.

Currently, funds are set aside from SEEK as well as a specified general fund appropriation to support the schools in KY Tech and the central administration—the Department for Technical Education. There is also a specified general fund appropriation for equipment purchase.

Following the funding changes in 1990, local superintendents expressed the dilemma of the increasing costs to operate their area technology and vocational education centers and the lack of state support as compared to that offered to KY Tech. They argued that they were lagging further and further behind and were depleting local resources to keep programs up-to-date and in many cases, could not provide what was really needed. Between 1990 and 1998, the supplemental funds were held constant. In 1998 and 2000 increased funds were provided for the supplements to the locally operated centers, but these funds have remained constant since 2000. In 2000 a formula for distributing the supplemental funds was required through the biennial budget, and in 2001 the required formula components were specified in statute. Local school districts receive no general fund appropriation to purchase equipment while KY Tech has historically received a biennial appropriation. In the current biennium, the appropriation is approximately \$1.7 million for KY Tech centers.

The required formula for distribution of supplemental funds requires that career and technical education programs be categorized as high-cost technical, technical, or exploratory although exploratory programs will be ineligible for supplemental funds. The formula provides that a school district receive a funding allocation equal to the total of the number of the full-time equivalent (FTE) students in technical skill programs multiplied by the value of the weight (1.0) for these programs, plus the total of the number of FTE students in high-cost technical skill programs, multiplied by the value of the weight (1.5) for these programs.

An analysis of actual expenditures by local school districts to operate centers or vocational departments conducted by the Kentucky Department of Education indicated that locally operated programs are funded at approximately 55 percent less than the funding provided for the state-operated centers.

There are currently no incentives to add new programs or to phase out poorly performing programs. All providers and agencies testified to the need for developing an incentive program

that would help in the initial stages of establishing high-demand programs, such as in the health sciences or new programs in underserved geographic areas. However, creating an incentive plan appeared inappropriate to the subcommittee without a determination of specific programs that are needed to serve Kentucky's economic and workplace needs as well as a determination of where student access to programming is insufficient. KRS 158.814 requires that the Kentucky Department of Education and the Department for Technical Education develop a comprehensive plan for career and technical education between July 1, 2001, and January 1, 2004, that would include an assessment process to help identify new programs needed. The comprehensive plan has not been completed at this time.

Accountability and Assessment

Kentucky has several mechanisms in place that relate to student assessment and to program accountability. KRS 158.816 requires that an annual statewide analysis and report of academic achievement of technical education students be completed. The Kentucky Department of Education provides a disaggregation of student results from the Commonwealth Accountability Testing System (CATS) by occupational areas so that schools can see how their students are performing in the specific programs. The Kentucky Department of Education and the Department for Technical Education are jointly charged with providing technical assistance to aid providers in improving their programs.

Kentucky also participates in the Southern Regional Education Board's High Schools that Work project, in which students take a national, criterion-reference test, modeled after the National Assessment for Education Progress, in the areas of mathematics, science, reading, and writing. Kentucky students have generally performed equal to or above students in the other states' High Schools that Work sites.

Kentucky career and technical education programs are charged with providing programs that are based on national and state standards, professional licensure requirements, or industry-based certification requirements. Kentucky career and technical education students who have a concentration of coursework within a specific occupation program may elect to be tested in order to receive a skills standards certificate or a certification in an industry program. The assessments for skill standards certifications were first administered in 2000, with a cumulative total of 37,338 students participating through 2003. The number of students making sufficient scores to earn skills standards has been relatively low, with slightly more than 8,950 students qualifying for skills certificates and less than 25 percent passing the assessments attempted. However, improvements are expected as the certification options become better known and teachers make sure program standards align with the skill standards.

Since 2001, the Department for Technical Education and the Kentucky Department of Education have jointly conducted a series of program assessments of technical education programs in selected schools. The assessment process is intended to measure the productivity and quality of programs against a set of measures. Programs will be provided technical assistance with improvement activities. It is too soon to gauge the value of this process.

School Facilities and Equipment

Almost all career and technical education facilities were constructed 30 or more years ago. The funding sources have varied over time. There was a dramatic growth in the number of facilities during the 1960s due in large part to the availability of federal funds for such purposes through the Federal Vocational Education Act of 1963 and the 1965 establishment of the Appalachian Regional Commission. At that time, there was a comprehensive statewide plan for the construction of vocational education facilities in Kentucky. All new construction required approval from the State Board of Education.

Currently, planning vocational facilities is a part of the required district facility planning process as required under 702 KAR 4:170. Under this process there are three sources of state revenue:

(1) Capital Outlay—Funds appropriated at the rate of \$100 per student within the SEEK funding program.

(2) Facilities Support Program of Kentucky—A program, established in 1990, which requires that school districts levy an equivalent tax rate of at least five cents per each \$100 of assessed valuation of property that is equalized at 150 percent of the average per pupil property wealth. If the district does not have enough debt service in place to need the five cents, it does not qualify for this assistance.

(3) School Facilities Construction Commission—The commission distributes funds that are appropriated to offset a portion of the debt service for construction and renovation to school districts based on a formula.

Vocational facilities are generally low in the facility priorities, but the Monroe County Board of Education is an example of a district that made vocational education a priority within its overall plan. It opened a new area center in 2002 to replace its existing center. The new facility is physically attached to the high school, but it is operated by KY Tech. It was a part of the district's comprehensive facility plan and was funded with a combination of funds from the three sources described above.

Not all construction of vocational facilities has followed the comprehensive planning process and utilized the fund sources as described above. Two school districts, Jackson County and Lincoln County recently constructed new vocational facilities that were not funded through the approved school facility planning process. In addition, Shelby County school district completed a renovation and expansion utilizing other sources of funds as well. The source of funds were line item appropriations in biennial budgets. These schools are all state-operated by KY Tech.

All service providers of career and technical education may utilize a portion of their federal funds to purchase equipment; however, these funds are insufficient to maintain up-to-date equipment. As noted earlier, the General Assembly provides a direct appropriation to KY Tech for equipment upgrade but does not provide an appropriation to the locally operated programs. While some would argue that local school districts receive basic funding through the SEEK formula to support all programs in their schools and districts may choose to make equipment purchases for career and technical education programs, these funds are viewed by

local superintendents as inadequate to provide large infusions of equipment dollars into career and technical education programs. They point out that there is no added weight for vocational education within the SEEK program that would make large purchases of equipment more viable.

FINDINGS

1. Career and technical education programs continue to be important program options within secondary education.
2. Funding inequities continue to exist between programs located in local school districts and the KY Tech system, although the supplemental funds provided to local school districts have been beneficial. For example the formula does not provide additional funding to those school districts that may offer a technical or high-cost technical program in comprehensive high schools.
3. The funding formula to distribute supplemental funds to local school districts has provided a fair distribution process, though the funding level is insufficient.
4. Career and technical education providers have made progress in addressing accountability of programs and student performance, but it is too soon to determine the overall impact of these efforts.
5. There has been a lack of consistent policy in the funding of vocational facilities.
6. While some believe there is inequitable access to programs, there is no statewide inventory of programs to identify underserved geographic areas or to identify new programs needed to serve high-demand employment areas.

RECOMMENDATIONS

Funding

Recommendation #1

The General Assembly should, at a minimum, maintain the current funding levels for all service providers of secondary career and technical education during the 2004-2006 biennium. As money becomes available, increases in funding for high-needs, high-demand technical programs should take priority.

Recommendation #2

The General Assembly should, at a minimum, maintain the current funding level for the 2004-2006 biennium of the supplemental funds provided in the biennial budget to support locally operated centers and should maintain the requirement that these funds be distributed through a formula as required under KRS 157.069

Recommendation #3

The General Assembly should, beginning with the 2006-2008 biennium, increase the funding level of the supplemental funds provided in the biennial budget to support locally operated programs to provide a higher percentage of the costs of these programs.

Recommendation #4

The General Assembly should request that the Interim Joint Committee on Appropriations and Revenue's Budget Review Subcommittee on Education study the appropriations for locally operated and the state-operated KY Tech system to determine the actual level of increased funds that would be necessary to bring funding parity between the two delivery systems and to project a methodology for providing those increases over the subsequent two biennia.

Facilities and Equipment

Recommendation #1

The General Assembly and the Kentucky Board of Education should retain vocational facilities development as a part of the overall elementary/secondary facility planning process, including planning for operations and maintenance.

Recommendation #2

The General Assembly should appropriate funds in the 2004-2006 biennium for equipment and maintenance at least equal to the current appropriation for the KY Tech system and should establish an equipment allocation to distribute to the locally operated schools, which would be a proportionately comparable allocation.

Use of the money should be restricted to those programs that require equipment upgrades to meet the standards for equipment as defined by the Kentucky Department of Education and the Department for Technical Education in the joint comprehensive plan required under KRS 158.814. If the standard equipment lists do not reflect today's industry standards, these lists should be revised before funds are distributed.

Program Access

Recommendation #1

The Kentucky Department of Education and the Department for Technical Education, as a part of their obligation under KRS 158.814 to develop a comprehensive plan for career and technical education by January 1, 2004, should immediately start a process to identify the geographic areas, including specific schools where students lack access to high-needs, high-demand occupational programs, and to prioritize where new programming should be considered when funds become available.

Recommendation #2

The Kentucky Department of Education and the Department for Technical Education should study how distance learning may be used to enhance student access to secondary career and technical education programs. One component of the study should be to determine how the Virtual High School could be used to provide career and technical education courses; another should investigate the practicality of teaching high-cost laboratory courses through technology

simulations. The study should include recommendations to be provided the Interim Joint Committee on Education by July 31, 2004.

Recommendation #3

Efforts should be continued to enable students to participate in dual credit and dual enrollment courses. The Council on Postsecondary Education, with cooperation of all the governing boards of Kentucky's public postsecondary education institutions, should investigate during the 2004 calendar year whether dual credit courses and transfer of courses are actually enabling students to have time-shortened programs before earning a postsecondary credential. Also, they should investigate whether current policies enable students to transfer credits easily among public institutions in Kentucky and to use them in meeting required degree components. The Council on Postsecondary Education should confer with the Department of Education and the Department for Technical Education during this study.

Recommendation #4

The Kentucky Board of Education and the Council on Postsecondary Education through the state P-16 Council should study current graduation requirements and develop guidelines to help local school districts provide opportunities for students to concentrate on a career and technical education program. The study should determine if requirements, such as foreign language, should be moved when possible to the elementary or middle school program to make time for career and technical education programs. The agencies should continue to consider the comparability and desirability of selected career and technical courses substituting for specific content requirements toward graduation and, when appropriate, the Kentucky Board of Education should extend approval. They should confer with the Department of Education and the Department for Technical Education during this study.

Assessment and Accountability

Recommendation #1

The Kentucky Department of Education and the Department for Technical Education should continue to conduct curriculum and program assessments of technical education programs and assist with the development of program improvement plans. These agencies should report to the Interim Joint Committee on Education by July 30, 2004, regarding whether or not the assessment process is providing any return on the investment of time and resources and if there is evidence of upgraded programming, improved instruction, and improved student performance.

Recommendation #2

The Department of Education and Department of Technical Education should continue to develop programs built around industry standards and skills certifications whenever appropriate. The departments should annually review the passage rates of students in attaining skills certificates or passage rates on licensure examinations that may be available to secondary students. Pass rates should be reviewed as one indicator of program quality.

Recommendation #3

Local boards of education, the Department of Technical Education, and the Kentucky Department of Education should review disaggregated CATS data, NAEP data, and any other

available test data to gauge the performance levels of career and technical education students. Deficiencies should be noted and teachers should be assisted to revise instructional strategies and practices to improve student performance.

Other

Recommendation # 1

The Subcommittee recommends that further study be conducted by the Interim Joint Committee on Education or a subcommittee relating to the delivery system of secondary career and technical education, including administration and structure, and that a report be presented to the Legislative Research Commission by August 31, 2004.

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CHAPTER I

A STUDY OF CAREER AND TECHNICAL EDUCATION IN KENTUCKY

INTRODUCTION

SECONDARY CAREER AND TECHNICAL EDUCATION

Career and technical education is the contemporary name for those programs that have been historically referred to as vocational education, or occupational education—programs that were based on specific skill development in occupational areas of agriculture, home economics, and industrial education, and that eventually included business and office occupations, marketing and distribution, and health occupations. In this report, the terms "career and technical education" and "vocational education" will be used interchangeably.

A simplified definition of career and technical education is educational content delivered and skills developed within the context of an occupation and incorporating academic content in work-based or laboratory settings (Testimony: Bird, 2002).

Career and technical education programs have long been shaped by federal legislation and federal funding, beginning with the Smith Hughes Act of 1917, which provided grants to states for programs in agriculture, home economics, and industrial education. While Kentucky currently receives about \$17 million from the federal government, funding programs of vocational education is the primary responsibility of the state. Kentucky's governing strategies, delivery system, and funding mechanisms are different from those in other states. Kentucky's system is complex to understand and its evolution unique among the states. A chronicle of important state and federal events is provided in Appendix B.

Initially, vocational education focused primarily on jobs skills for entry into the workforce, but these programs have evolved into a much broader educational enterprise. Today career and technical education programs are not viewed as only job preparation or as an alternative to college, but also as a basis for successful transition to postsecondary education or the military. Further, career and technical education is viewed as a conduit for helping students attain comprehensive academic skills in applied work settings (Bottoms and Korcheck, 1989).

While there may still be those who see career and technical education as a place for students who cannot achieve academic competencies in traditional secondary schools, Kentucky leaders have

long promoted the importance of vocational students developing essential academic skills for successful entry into work. This philosophy developed because of employers' concerns that much of the work force does not possess basic reading, writing, and computational skills—not just workers who had dropped out of high school, but workers who had graduated from vocational programs and high school (Commission on Vocational Technical Education, 1986, pp. 10-11; Bottoms and Presson, 1989, p. 3; Partnership for Kentucky Schools, 1998, pp. 1-8).

Kentucky has taken an active role in the many national, regional, and state policy initiatives including Tech Prep, High Schools-That-Work and School-to-Work. The purpose of these initiatives were intended to modernize and invigorate vocational education programs within the context of changing technologies, more sophisticated workplaces, and increasingly, more complex requirements for thinking and skills in reading, writing, and computing. These actions have occurred in the context of on-going education reforms, and most recently, the academic standards-based movement that occurred during the 1990s. A discussion of selected legislative and policy actions are illuminated in this report.

STUDY DIRECTED

In 2001, the Kentucky General Assembly specified in statute the purposes of career and technical education through its adoption of HB 185. It also mandated a study be conducted relating to funding adequacy and equity, accountability, and incentives for new programming.

Purposes of the Study

HB 185 required the Interim Joint Committee or a subcommittee of the Interim Committee to conduct a study relating to secondary career and technical education to determine the following:

- Adequacy of the funding formula for locally operated area centers and vocational departments as established under provisions of HB 185.
- Funding options to provide adequate and equitable funding for secondary career and technical education programs.
- Funding incentives to providers of career and technical education to encourage the development of new programs to address workforce needs.
- Current processes for assessing need, planning, funding, equipping, and operating new facilities to serve students in local school districts and communities, and to ensure equity for school districts and communities in the funding and support of new facilities.
- Options for a system of accountability in state-operated facilities relating to KRS 158.6455.

Study Procedures

The study of secondary career and technical education was assigned to the Subcommittee on Vocational Education of the Interim Joint Committee on Education, whose work spanned the 2001, 2002, and 2003 Interims.

The workplan adopted by the Subcommittee included:

- A review of the history of career and technical education programs and service delivery;
- A review of program, student, and personnel data from selected executive agencies;
- A review of previous legislative and executive branch studies;
- A review of existing laws and administrative regulations relating to programs, funding, accountability, and teacher certification requirements;
- Information gathering through testimony at subcommittee meetings;
- Data analyses; and
- Site visits to area technology centers during the 2002 Interim.

Executive agencies, consisting of the Kentucky Department of Education, the Department for Technical Education, the Education Professional Standards Board, the Kentucky School Facilities Construction Commission, and the Kentucky Community and Technical College System provided written information, data, and testimony with recommendations.

A draft report was provided to subcommittee members for discussion at its June 3, 2003, meeting. The subcommittee revised and adopted its findings and recommendations on August 4, 2003, and presented the report to the full Interim Joint Committee on Education that same day, which accepted the report as presented.

Organization of the Report

The remainder of this report is organized into the following additional chapters:

- Chapter 2 provides an overview of secondary career and technical education as it is today and how it has evolved, including a general discussion of federal and state laws, administrative regulations, programming, enrollments, governance, personnel, and facilities;
- Chapter 3 provides a summary of funding approaches in other states for career and technical education, a comparison of funding of Kentucky programs located in local school districts and those in state-operated schools, and a discussion of funding equity issues in Kentucky;
- Chapter 4 provides a description of accountability and oversight for programs and students;
- Chapter 5 addresses facilities and equipment issues; and
- Chapter 6 provides the findings and recommendations of the subcommittee.

CHAPTER II

AN OVERVIEW: CAREER AND TECHNICAL EDUCATION

Program Content

Career and technical education focuses on the following areas, each of which has several course options, specialty areas and fields of concentration:

- Agriculture Education
- Business Education
- Family and Consumer Sciences
- Health Sciences
- Industrial Technology Education
- Information Technology
- Marketing Education
- Technology Education
- Pathway to Careers

Recognized career and technical education student organizations are a required, integral component of each career and technical education program. These organizations are considered co-curricular rather than extra-curricular and are designed to give students an opportunity to expand their leadership skills as well as enhance their occupational skills learned in a specific program. The organizations are supervised by qualified career and technical education personnel.

Appendix C provides a listing of course options by suggested grade level as found in the 2001 Kentucky Vocational Program of Studies Implementation Manual. Schools may offer courses other than those listed in the guide.

Local programs are determined by the education system administrator or by the school-based decision making council, as appropriate. Schools seek input for program development from community leaders, business and industry leaders, parents, and students. Each career area has an advisory committee comprised of business and industry representatives, parents, education representatives, and if applicable, labor organization representatives to assist in planning, implementing, and evaluating programs.

Federal and Kentucky Laws and Kentucky Administrative Regulations

Selected State Laws

Career and technical education programs are governed by Kentucky statutes, adopted by the General Assembly and administrative regulations promulgated by the Kentucky Board of Education. A listing of selected statutes and administrative regulations affecting secondary programs, identified by number and topic with a brief commentary is provided below. Each statute and administrative regulation may be accessed at <http://www.lrc.state.ky.us>.

Statute	Description
KRS 158.810 <i>Definitions.</i>	Defines career and technical education, technical literacy, secondary area technology center, and vocational department. These terms are addressed later in this chapter.
KRS 158.812 <i>Purposes of Career and Technical Education</i>	States the purposes of career and technical education.
KRS 158.814 <i>Comprehensive planning.</i>	Requires the Kentucky Department of Education and the Department for Technical Education to implement a comprehensive plan between July 1, 2001 and January 1, 2004, to ensure that high-quality, relevant secondary career and technical education programs are available to students in all school districts to enable them to gain the academic and technical skills to meet high school graduation requirements and for successful transition to postsecondary education, work, or the military, and to support current and future needs of Kentucky employers.
KRS 158.816 <i>Statewide analysis of academic achievement of technical education students.</i>	Requires that an annual statewide analysis and report of academic achievement of technical education students be conducted and requires that the Kentucky Department of Education and the Department for Technical Education jointly complete the analysis.
KRS 151B.025 <i>Program standards.</i>	Specifies that secondary area vocational education and technology centers must be operated in compliance with program standards established by the Kentucky Board of Education. It also requires that principals, counselors, and teaching staff meet the qualifications and certification standards for all secondary vocational personnel as established by the Educational Professional Standards Board.
KRS 157.360 <i>State funding.</i>	Provides that there be no funding deduction against the base funding level for any pupil in average daily attendance who spends a portion of his or her school day in a program at a state-operated career and technical education or vocational facility.

Statute	Description
KRS 157.069 <i>Distribution of general funds for locally operated secondary area technology centers.</i>	Describes the requirements for distributing the funds to local districts and the process for classifying programs within the funding formula.
KRS 158.140 <i>Vocational certificate of completion.</i>	Requires that the Kentucky Department of Education establish the requirements for a vocational certificate of completion and that a student meeting the requirements receive a vocational certificate of completion specifying the areas of competence.
KRS 158.7603 <i>School-to-Careers</i>	Provides enabling legislation for a School-to-Careers Grant Program to provide matching funds to school districts or consortia of school districts for the development and implementation of comprehensive plans that include, but are not limited to, career awareness and exploration program in 14 career clusters; applied academic instructional models for all disciplines and integration of academics and vocational education curriculum; implementation of skill standards within all relevant academic and vocational education programs; and linkages with postsecondary education. The statute also provides that the Kentucky Board of Education promulgate administrative regulations for the grant approval process and provides that the Department of Education administer the grants. (Note: In 2000, this responsibility was transferred to the Workforce Development Cabinet through the budget bill, HB 502. This provision was not repeated in the 2003 budget bill HB 269; however, the Cabinet continues to administer the grants.)
Kentucky Administrative Regulations	Description
705 KAR 3:141 <i>Area center or public high school, standards for vocational department.</i>	Establishes minimum standards to establish a vocational department of a public high school or an area vocational education center owned by a local school district.
705 KAR 2:140 <i>Funding equalization.</i>	Establishes a formula for distributing state appropriations to supplement funding for local school districts that operate area vocational centers and vocational departments.
702 KAR 1:130 <i>SEEK funding.</i>	Provides a method for state funds to be transferred to the Department for Technical Education for funding state-operated programs.
705 KAR 4:240 <i>School-to-Careers.</i>	Provides the criteria for grant awards and for evaluating the success of the programs.

Carl D. Perkins Vocational and Technical Education Act of 1998

Federal funds are provided to states to carry out the provisions of the Carl D. Perkins Vocational and Technical Education Act of 1998; however, negotiations are currently underway in the United States Congress to amend this law, which could change significantly its intent and funding requirements. Currently, Kentucky receives approximately \$17 million that is distributed to career and technical education programs in public secondary and postsecondary education institutions.

The purpose of the Perkins Act of 1998 is to develop more fully the academic, vocational, and technical skills of secondary students and postsecondary students who elect to enroll in vocational and technical education programs by:

- (1) Building on the efforts of states and localities to develop challenging academic standards;
- (2) Promoting the development of services and activities that integrate academic, vocational, and technical instruction, and that link secondary and postsecondary education for participating vocational and technical education students;
- (3) Increasing state and local flexibility in providing services and activities designed to develop, implement, and improve vocational and technical education, including tech-prep education; and
- (4) Disseminating national research and providing professional development and technical assistance (American Vocational Assoc., 1998).

The Perkins Act requires that an eligible agency be placed in charge of developing and administering the state plan. In earlier legislation this was referred to as a state board to serve as the sole state agency. Kentucky, under provisions of KRS 151B.025, grants this authority to the Department for Technical Education.

The Department for Technical Education through the Kentucky State Plan delegates the authority to the Department of Education for assisting with the development of local plans and budgets as well as providing technical assistance to the secondary programs.

Perkins funds appropriated to Kentucky are distributed to eligible recipients including secondary and postsecondary education institutions for improved career and technical education programs and related costs, such as professional development for teachers and administrators. Funds may be used for instructional materials, equipment, and improvements to programs but may not be used for maintenance of programs. In the 2002-2003 school year, \$7,299,992 was granted to secondary programs in local school districts and \$869,431 to state-operated area technology centers.

Delivery Systems

Kentucky provides secondary courses through a multi-system approach. One hundred seventy one of Kentucky's 176 school districts offer secondary career and technical education programs in the middle grades, comprehensive high schools, or in area technology centers or vocational departments. Many school districts also send students to programs located in state-operated area technology centers, a system of 53 centers called KY Tech and operated by the Department for

Technical Education, Cabinet for Workforce Development. KY Tech has students from 127 school districts, although those school districts also offer programs on their own in other areas of career and technical education. Some districts send students to programs offered in technical colleges, operated by the Kentucky Community and Technical College System (KCTCS) through contract with the Department for Technical Education. Appendix D provides a listing of the secondary centers and districts served by these centers. Table 1. lists the student enrollments for school year 2002-2003 by educational type.

The state-operated centers were operated by the Kentucky Department of Education until 1990 when the Cabinet for Workforce Development was created. At that time the secondary area centers and postsecondary vocational-technical schools were transferred from the Department of Education to the Department for Technical Education, Cabinet for Workforce Development. As a result of the Postsecondary Education Improvement Act of 1997, the postsecondary vocational-technical schools were transferred from the Cabinet for Workforce Development to the Kentucky Community and Technical College System. The vocational-technical schools were converted to technical colleges. Fifteen of these (Central Kentucky Technical College at the Danville Campus, Madisonville Technical College, Mayo Technical College, West Kentucky Technical College, Owensboro Technical College, Somerset Technical College, Elizabethtown Technical College, Northern KY Technical College, Hazard Technical College, Harlan Technical College, Laurel Technical College, Bowling Green Technical College, Ashland Technical College, Jefferson Technical College, and Rowan Technical College) continue to offer program slots to secondary students from local school districts. There is an enrollment cap based on an agreement between the cabinet and the KCTCS.

Secondary Area Technology Centers

A secondary area technology center, also referred to as "secondary area center" or "area center" is a school facility dedicated to the primary purpose of offering five or more technical preparation programs that lead to skill development focused on specific occupational areas. A center is often referred to by other names, such as a "magnet technology center," "career center," or other similar title. A vocational department means a portion of a school facility that has five or more technical preparation programs that lead to skill development focused on specific occupational areas.

Historically, area centers have housed primarily industrial education programs such as machine shop, carpentry, auto body, auto mechanics, welding, drafting, and electricity. These programs are often referred to as Industrial Education Level III programs as they are intended as specific preparation for entry-level positions and are designed to provide the skills necessary for transfer into postsecondary education in specific skill areas. From the 1970s to the 1990s, a gradual shift occurred with centers expanding to include a limited number of business technology programs, child care, horticulture, health careers programs, and computer-related technology programs. In most all programs, computer-technologies have been incorporated into the laboratory and curricula designs.

A local board of education owns each of the KY Tech area technology centers. All but 13 of the KY Tech centers serve more than one school district. Some of those 13 centers serving only one district serve multiple high schools. A listing is provided in Appendix D. The state-operated

centers were operated by the Kentucky Department of Education and governed by the State Board for Elementary and Secondary Education until the 1990-91 school year when they were transferred to the Cabinet for Workforce Development, established in 1990 under provisions of HB 814. Initially, the Workforce Development Cabinet had the responsibility for adult education, vocational rehabilitation, and the state-operated KY Tech System that included both secondary and postsecondary institutions. As mentioned earlier, the postsecondary components were transferred to the new KCTCS in 1998. However, KCTCS has continued to provide access to secondary career and technical education courses within the postsecondary facilities. In other cases, state-operated area technology centers provide space for full-time postsecondary education programs. KCTCS receives Support Education Excellence in Kentucky (SEEK) funds to support the secondary programming.

Student Enrollments

Table 1. Student Enrollments in Secondary Career and Technical Education Programs by Education Provider for the 2002-2003 School Year

Education Provider	Number Institutions by Type	Number of Secondary Students Enrolled
Local School Districts		
Middle Schools	118	*29,153
Comprehensive High Schools	234	157,322
Locally Operated ATCs	40	18,455
KY Tech		
Area Technology Centers	53	23,215
Kentucky Community and Technical College System		
Technical Colleges	15	**1,881
		Total 228,784

* Students are all enrolled in exploratory classes

**201 students were enrolled in exploratory classes

Source: Prepared by LRC staff from data supplied by the Kentucky Department of Education

Program Standards and Governance

The roles and responsibilities of the Kentucky Board of Education and the Department of Education, the Department for Technical Education, Cabinet for Workforce Development, and the Education Professional Standards Board are described in Table 2.

Table 2. State Agency Responsibilities for Career and Technical Education (CTE)

Kentucky Department of Education (KDE) and Kentucky Board of Education (KBE)	Department for Technical Education (DTE) Cabinet for Work Force Development (CWFD)	Education Professional Standards Board (EPSB)
<p>In cooperation with the Department for Technical Education (DTE) provides review of local career and technical education plans, accountability standards, and technical assistance to comprehensive high schools and locally operated centers and departments to meet requirements for state and federal accountability.</p> <p>Sets minimum program standards for secondary career and technical education and the KBE promulgates administrative regulations.</p> <p>Provides support for selected student organizations.</p> <p>KBE establishes administrative regulations for distribution of funds to locally operated centers and departments.</p> <p>KDE collects secondary career and technical education student information.</p> <p>KDE provides technical assistance and leadership to High Schools That Work sites.</p> <p>In cooperation with the DTE, develops the plan for coordination of career and technical education; reviews annual accountability data.</p>	<p>Acts as sole state agency for administering the federal Carl D. Perkins Career and Technical Education Act, including Tech Prep and grants responsibility for secondary plans to the Kentucky Department of Education (KDE).</p> <p>Maintains and operates the KY Tech system of 53 area technology centers, including services to business and industry.</p> <p>Administers the New Teacher Institute.</p> <p>Operates its own personnel system under KRS Chapter 151B covering secondary teachers and administrators in its schools.</p> <p>Provides support and technical assistance for selected student organizations.</p> <p>Establishes standards for Industrial Education Level III programs and works cooperatively with the KDE to provide evaluation and technical assistance to programs and to develop skill standards for programs.</p> <p>Maintains statewide database system, called the Technical Education Data System for federal accountability data for both secondary and postsecondary CTE programs.</p> <p>Under provisions of HB 502 (2000), administers the School-to-Careers program.</p> <p>In cooperation with the KDE, develops plan for coordination of career and technical education and reviews annual accountability data.</p>	<p>Establishes the certification requirements for secondary career and technical education teachers and principals.</p> <p>Approves programs of teacher education.</p> <p>Grants renewals of certification and handles disciplinary actions relating to certification.</p>

Source: Prepared by LRC Staff with review by each executive agency listed in the chart.

Funding and Curriculum Choice

Locally operated programs

Local school districts use a combination of state, federal, and local funds to support secondary career and technical education programs. A school district receives basic funding through the SEEK program to support classroom instruction and other instructional costs and may use these moneys along with local dollars to fund career and technical education courses within their overall curriculum based on the local priorities.

Each middle or high school school-based decision making council, under the provisions of KRS 160.345, determines what classes are to be offered and funded within the school's staffing and budget allocations. A district that operates an area technology center or vocational department allots funds for its operation from the school district. If the school district operates the center as a district-wide and separate facility, the programming is not determined by a school-based decision making council. Local advisory committees provide programmatic recommendations.

Local school districts that operate area technology centers and vocational departments as defined in this chapter receive a portion of the state funds appropriated to the Department of Education to be distributed to these districts on a formula established under 705 KAR 2:140 to offset some of their costs.

KY Tech programs

KY Tech centers are primarily funded by a general fund appropriation in the state's biennial budget and SEEK appropriations from the Department of Education as specified in the biennial budget. The SEEK funds pay for approximately 50-60 percent of the total operating and instructional costs for the secondary students with the remainder of costs being the general fund appropriation and a limited amount of federal funds.

SEEK funds generated by students in a particular center are split between the Department for Technical Education and the school district that owns the building. The department receives 80 percent and the school district receives 20 percent of the SEEK funds per pupil. The SEEK funds returned to the local school district are for building maintenance and for retirement of debt service.

In addition, the Department for Technical Education usually receives a biennial appropriation for equipment in the KY Tech schools. It has also received periodic state funding for new programs.

Programming in the KY Tech schools is determined by the Department for Technical Education with input from business and industry, program advisory committees, and local school districts, which send students to the centers.

The KY Tech centers also are used by the Department for Technical Education for offering short-term adult classes to serve business and industry in upgrade training for employees. The programs are primarily offered in the evening when secondary students are not in class. These

are offered on a cost-recovery basis through tuition charged to individual students or cost-reimbursement from business and industry, or private and public entities, or a combination of these.

Kentucky Community and Technical College System programs

KCTCS sites receive funds to offset costs for programs to serve secondary students. State SEEK funds are transferred from the Department for Technical Education for this purpose. KCTCS also receives some federal funds from the Perkins Act.

A detailed discussion of funding is presented in Chapter 3.

Career and Technical Education Interdisciplinary Courses

Interdisciplinary courses provide schools with an alternative method of delivering required core content curriculum through an applied approach. With this option any high school, locally operated center, or state-operated center may offer technical courses for academic credit that have the same academic rigor as traditional courses.

According to staff from the Kentucky Department of Education, there are eight career and technical education interdisciplinary courses that may be used for academic credit toward high school graduation.

The eight courses, which currently count for academic credit, include the following:

- Construction Technology/Geometry for Geometry requirement
- Agribiology for the Life Science component within the Science requirement
- Business Economics for Economics within the Social Sciences requirement
- Nutritional and Food Science for the Life Science component within the Science requirement
- Medical Science for the Life Science component within the Science requirement
- Health and Wellness for the one-half credit requirement in Health
- Consumer Economics for Economics within the Social Studies requirement
- Principles of Technology for the Physical Science component within the Science requirement

In addition, five other courses are being developed and can be offered during the 2003-2004 school year, which include:

- Agriscience in combination with an Advanced Plant or Animal Science course for the Life Science component of the Science requirement
- Math for Business and Industry for the Math elective
- Two courses in Computer Aided Drafting for the Geometry requirement
- Life Skills for the one-half credit required in Health
- Design for Engineering for the Physical Science component of the Science requirement

Personnel

Qualifications

Teachers in all secondary career and technical education programs, regardless of whether they teach in a state-operated or a locally operated school or center, must be certified. As mentioned earlier, the Education Professional Standards Board is the certifying agency. The entry level for teachers in agriculture, business and office technologies, marketing, family and consumer sciences, information technology, technology education, and most health sciences requires a bachelor's degree, whereas entry level for teachers in the traditional fields of industrial education permit a high school diploma or General Education Developmental certificate plus a minimum of four years' quantifiable work experience in the specialty area as eligibility for teaching. In all cases, new teachers are required to complete certain assessments, an internship, and continuing education requirements. While these entry requirements vary, new teachers with bachelor's degrees and those entering on the basis of work experience are placed on a single salary schedule beginning at Rank III as defined in KRS 161.1211. Subsequently, requirements are specified for moving to Rank II and Rank I on the salary schedule. A teacher initially certified on the basis of work experience moves to Rank II with the attainment of 64 credit hours and to Rank I with the attainment of a bachelor's degree as compared to those entering on the basis of college preparation, which requires a master's degree or equivalent program for a Rank II and requires 30 hours above the master's or its equivalent for a Rank I.

Salaries and Compensation

Salaries, benefits, and personnel rules for those employed by a local school district are determined by each local board of education. The salary schedules and benefits vary from district to district. Teachers in the locally operated programs are employed on 185-day contracts with a few districts providing opportunity for some extended employment for specific purposes. This option varies from district to district. Staff, including teachers, do earn sick leave but do not earn compensatory time or annual leave.

Teachers' salaries, benefits, and personnel rules for those employed by KY Tech are determined by the Department for Technical Education under provisions of KRS Chapter 151B and for support, noncertified staff under provisions of KRS Chapter 18A. All staff are eligible to earn sick leave, annual leave, and comp time. The department also sets a statewide salary schedule. Teachers in the KY Tech schools are employed a minimum of 10 1/2 months with all teachers having opportunity for extended employment, during which times they may use accumulated leave or carry out specific educational activities. The longer year accommodates the varying schedules of school districts that send students to the KY Tech schools.

The state-operated centers employ at least a principal, a secretary, and a maintenance person. Locally operated area technology centers may have a similar staffing pattern or they may be supervised by existing staff within the high school and share support services.

Teachers' salaries, benefits, and personnel rules for those employed by KCTCS are determined by the Board of Regents for KCTCS.

Differences in compensation and work years are contributing factors to the variances in per pupil costs in career and technical education by the various providers.

Retirement

Teachers and administrators employed by local boards of education, KY Tech, and KCTCS are enrolled in the Kentucky Teachers' Retirement System.

Participation in State and National Initiatives

High Schools that Work

High Schools That Work is a comprehensive, results-based school improvement initiative of the Southern Regional Education Board in cooperation with state departments of education. This initiative provides a framework of goals, key practices, and key conditions, which is designed to blend the essential content of traditional college preparatory studies with quality career/technical studies to raise student achievement. The goals include raising the reading, mathematics, science, and technical achievement of more students to the national average and above (Retrieved from <<http://www.kde.state.ky.us>> on April 30, 2003). In 2002-2003, Kentucky had 100 school districts participating.

Tech Prep

Tech Prep is a federally sponsored educational program consisting of a program of study and requirements that identify both academic and technical courses that lead to a specific associate degree or degrees in a vocational-technical field or a two-year diploma or certificate program at the postsecondary level. Tech Prep may be described as a:

- Program designed to integrate and articulate academic and technical subjects at the secondary and postsecondary level that lead to an associate degree program;
- Combined secondary and postsecondary program of study that will provide competencies in math, science, and communication technology through applied academic subjects;
- Program that academically prepares students to enter a technical program at the college level;
- Program that encourages students to explore a number of career options;
- Program that helps prepare tomorrow's technicians; and a
- Program of study that consists of a minimum of two years of secondary school and at least two years of higher education or postsecondary technical education.

The focus of Tech Prep is better understanding and applications of technology and career awareness, planning and skills needed for a highly educated workforce thereby resulting in a more focused high school vocational-technical curriculum that is designed around an advanced, rigorous academic and technical skills continuum (Retrieved from <<http://www.kde.state.ky.us>> on April 30, 2003).

According to information provided by the Department for Technical Education, \$1.77 million federal funds and \$360,000 state Tech Prep funds were divided among 67 consortia, which include 101 high schools, 35 area technology centers, 25 Kentucky Community and Technical

Colleges, and 6 universities during 2002-2003. Administrative costs were funded with \$93,183 federal funds.

School-to-Careers

The School-to-Careers program authorized under KRS 158.7603 builds on the seven-year-old federal School-to-Work effort that successfully initiated the integration of the workplace context into the learning environment in every county within the Commonwealth. This state-funded program was authorized when it appeared that the federal School-to-Work program was being phased out. Some School-to-Work funds have been continued. Funds are used to enhance school-based and work-based activities.

School-to-Careers funds are granted to support areas that are demonstrating measurable progress in moving to integrate features of School-to-Work with Tech Prep and High Schools That Work programs. State administrators see these maturing programs as models for other areas. School-to-Careers grants focus on increasing student achievement, creating more successful transitions to postsecondary education or the work place, and decreasing dropout rates. The Commonwealth grants \$700,000 to educational agencies annually through the School-to-Careers program (Retrieved from <<http://www.kytech.ky.gov>> on April 30, 2003).

Dual Credit and Dual Enrollment Programs

A limited number of statewide agreements have been developed to permit secondary students to enroll for dual credit (credit for high school graduation and college credit) in technical courses. These statewide agreements are exercised through local agreements between state-operated or locally operated secondary programs and KCTCS. According to state officials from the Cabinet for Workforce Development, 9,000 students are participating in dual credit courses. Students complete high school with competencies that enable them to skip introductory courses during the first year of college and pursue advanced work. In some cases, the students may finish their degrees sooner due to dual credit options.

In other cases, students may be enrolled concurrently in a high school program as well as in college pursuing requirements for each. Discover College, offered at the Owensboro Community and Technical College, is one example. The chancellor of the KCTCS reported that Discover College is based on a concept called early or middle college. It provides new opportunities for high school students by allowing high school juniors and seniors to earn as many as 30 credits toward a college education by the end of high school. These credits would be transferable to a baccalaureate degree or an associate degree. In 2002, there were 853 students enrolled in Discover College. The system is pursuing grants from foundations in order to establish a broader use of this model in the state.

Student Credentials

The number of students receiving credentials in specific career and technical areas, based on demonstrated competencies, is another measure of program quality.

Career major certificate or a vocational completion certificate

High school students may earn a career major certificate or a vocational completion certificate. In order to qualify for a vocational completion certificate, a student must complete a minimum of three credits in a career major or an O'Net certificate. These credentials are in addition to a high school diploma and students may receive these credentials, even though they may not complete all high school requirements. (*Note: O'Net certificates are based on a set of competencies for a given job description as defined by the U.S. Department of Labor as a part of the Occupational Information Classification System, formerly known as the Dictionary of Occupational Titles. The Department for Technical Education grants these certificates to its students as they finish the competencies within a given certificate area, even if the students do not finish a complete program.)

A career major certificate is granted with the completion of successful completion of high school graduation requirements to include four career-related credits relevant to a career cluster, participation in a structured work-based learning experience related to the career cluster or a culminating project related to the career cluster.

State-wide data were not available indicating the number of credentials awarded.

Skills Standards certificates

Students may earn Skills Standards certificates within specific areas by successfully completing an assessment process. The assessments are voluntary and consist of multiple choice and open response written scenarios.

Currently there are assessments in the following 18 areas:

horticulture	allied health
production livestock	communications
production crops	construction
child development	manufacturing
consumer services	transportation
culinary arts	administrative support services
family services	financial services
hospitality services	retail services
housing and interiors	marketing

Technology Education/Pre-engineering assessments were pilot tested in 2003 and will be implemented in 2004.

The assessments were developed by educators and employers based on occupational standards. The assessments consist of two components: multiple-choice questions and a writing assignment based on an occupational scenario. The student responses are scored by a team of educators and employers. Students must achieve a minimum score of 70 on each component of the assessment in order to receive certification. Students may retake assessments the following year if they do

not succeed initially. The assessments for skill standards certifications were first administered in 2000, with a cumulative total of 37,338 students participating through 2003. The number of students, making sufficient scores to earn skills standards has been relatively low, with slightly over 8,950 students qualifying for skills certificates, less than 25 percent passing the assessments attempted. However, improvements are expected as the certification options become better known and teachers make sure program standards align with the skill standards.

Students in some programs may earn industry certifications based on national certification programs or state licensure. These include certificates based on standards by the American Welding Society, American General Contractors, American Building Contractors, National Center for Construction Education and Research, and National Institute for Metalworking Skills, or based on national certification programs such as Microsoft Officer User Specialist, Cisco Certified Network Associate, and Medicaid Nurse Aide.

CHAPTER III

FUNDING CAREER AND TECHNICAL EDUCATION PROGRAMS

States use a variety of complex funding models for career and technical education and have considerable funding differences. There is however, general acceptance among educators that career and technical education is more expensive to provide than other forms of education. Equipment and facilities are expensive because of the need for specialization, and class sizes are necessarily smaller to control for potentially higher risks associated with equipment use.

In 2001, Steven Klein, Corey Zimmerman, and Gary Hoachlander of MPR Associates Inc. investigated state approaches to funding career and technical education programs in the 26-state High Schools That Work network sponsored by the Southern Regional Education Board. They found great variations in approaches and overall state support for career and technical education programs. They noted that comparisons of state spending for career and technical education are confounded by the organization of state education systems and the way state funding formulas allocate resources. In addition, because teachers' salaries comprise an estimated 80-85 percent of instructional costs, those states with higher teacher salaries expend greater per pupil funds for career and technical education (Klein, Zimmerman, and Hoachlander, 2001).

State Funding Approaches

Klein and colleagues classified the different types of funding mechanisms into categories, although there is overlap among the funding mechanisms and variations within each state's approach. These are described briefly as:

Foundation Grants

Kentucky, like Arkansas, New Jersey, and New York, relies primarily on foundation grants or a basic funding formula to support career and technical education in middle schools and comprehensive high schools. Arkansas and New Jersey set aside small amounts of money for grants that can be given to local districts to supplement their foundation funding.

All four states provide additional funding for the operation of stand-alone centers that provide shared, centralized services to participating school districts. Although the purpose of this funding varies among states, it is generally intended to focus on labor and capital costs for providing this type of instruction.

Kentucky's system of area technology centers, both locally and state-operated, receive funds from the basic state funding formula, but they also receive additional state general funds which for locally operated centers, are distributed using a weighted formula to be discussed later.

Unit Cost Funding

Hawaii, Maryland, North Carolina, and West Virginia use state categorical grants based on the number of students participating in career and technical education, adjusted to reflect full-time equivalent (FTE) membership or Average Daily Membership (ADM).

Alabama, Delaware, Mississippi, Missouri, Oklahoma, Tennessee, and Virginia base career and technical funding on instructional units. However, these units are calculated in different ways among the states. In some cases these units are calculated by dividing the total number of students participating in career and technical education (sometimes based on an FTE or ADM) by an average class size specified by the state. In other cases, resources are provided for each FTE career and technical education instructor identified by the district. Because the average class sizes are often smaller for career and technical education, the number of students needed to generate a career and technical education funding unit is generally lower than what is required for other types of units. For example:

- Virginia specifies unique student-to-teacher ratios for various career and technical programs and uses a cost reimbursement element to compensate districts for equipment, regional program staffing, and other indirect costs.
- Alabama, Delaware, and Mississippi calculate the instructional unit with an added weight for career and technical education; meaning a given number of career and technical education students will generate a greater number of instructional units than a similar number of academic students.

At least one state, Tennessee, provides funding supplements for purchase of equipment and supplies in addition to the unit calculation.

Oklahoma and Missouri have developed funding strategies that allocate resources to area centers, technical schools, and comprehensive high schools based on the number of instructors and costs of supplies. This methodology also takes into account the lower average class size normally associated with career and technical education. This results in different allocations for different kinds of career and technical programs.

Cost Reimbursement

Idaho and Pennsylvania reimburse districts for all or a percentage of the costs associated with providing selected career and technical education programs. Districts are required to annually record their actual costs for career and technical education programs and services, such as salaries and equipment. The intent is to provide reimbursement for the added costs of providing career and technical programs rather than the cost of normal classroom instruction. Reimbursements are made based on prior year data. These states use different methodologies for calculating the reimbursements.

These states believe that the cost reimbursement methods insulate local districts from fluctuations in student enrollment. On the other hand, local agencies may find it difficult to cover

fixed costs if state funding varies over time, and these states may require greater oversight over local spending to ensure that career and technical costs are classified appropriately.

Weighted Funding

Several states use weighted cost factors in state funding formulas to concentrate funding on career and technical education. Weights mathematically increase the number of FTE students in the funding formula. States that use a weighted methodology include Florida, Georgia, Indiana, Kansas, Louisiana, Massachusetts, Ohio, South Carolina, and Texas.

States using this approach either use an add-on weight or career and technical student weights. A state that uses an add-on weight would multiply its base level of funding allocated for all students by a fractional number for each student participating in career and technical education programs. A state using a career and technical education student weight would specify different weights for students participating in career and technical education programs and in other programs. These two methods result in the same effect. Students in approved career and technical programs qualify for more funding than students in other instructional areas.

There appears to be no preferred method for funding career and technical education nor a defined level of state expenditures that will guarantee all students access to quality career and technical education.

Kentucky's Approach to Funding Career and Technical Education

As indicated earlier, Kentucky relies primarily on the basic funding formula to support career and technical education in middle schools and comprehensive high schools plus additional funding for the operation of stand-alone area technology centers that provide shared, centralized services to participating school districts. The additional funding to KY Tech is calculated differently than the additional funding provided to local school districts that operate stand-alone area centers or vocational departments, which will be discussed in more detail in this chapter.

The basic funding formula for Kentucky schools is the Support Education Excellence in Kentucky (SEEK) program. It is a combination of state and local funds that are distributed to local school districts using a variety of factors. Funds are received on the basis of a per pupil allocation adjusted for average daily attendance and adjusted with add-on values for specific purposes. The 2002-2003 per pupil SEEK base was \$3,081 and the 2003-2004 base is \$3,191. There are add-ons for transportation, at-risk students, exceptional children, and home and hospital students, but there are no additional adjustments for career and technical education students. There is no recognition in the formula that career and technical education programs cost more to operate than do academic programs, nor are there any other supplemental state funding mechanisms to help offset the costs of operating career and technical education programs in comprehensive high schools. A review of programs provided in Appendix E seems to indicate that there are a greater number of lower-cost career and technical education programs in comprehensive high schools than the high cost technical programs that require the most specialized facilities and equipment found in area centers. This raises the question as to whether

this arrangement deprives students in some school districts from having access to advanced and up-to-date programming.

As noted earlier, some states have provided specific incentive programs for schools to change programs to meet new workplace opportunities and demands. Kentucky's comprehensive high schools and school districts have arguably no ongoing financial incentives to change existing programs to new and more relevant programs. Local school districts have said it is very difficult to accumulate the resources necessary to initiate new programs, even those with high employment opportunities or a high-demand postsecondary career opportunity, because these programs generally require physical modification of laboratories, capital expansions with the addition of updated equipment, additional supplies, and recruitment of highly specialized instructors (Testimony: 2001 and 2002).

The KY Tech system has on occasion been provided limited incentives for new programming. For example in 2000-01, \$800,000 in general funds was provided to support new computer technology systems programs in the area technology centers, including 25 permanent full-time positions and 20 permanent full-time support positions.

Over time, the KY Tech system was provided significant funds for equipment, which the Department for Technical Education could have designated to be used in only new or advanced programming. For example, in 1998-99, \$6 million was provided for equipment.

Kentucky Foundation Funding 1954-1990

To understand the present funding mechanisms for state-operated and locally operated area technology centers, it is appropriate to review how the current funding procedures evolved, resulting in what is perceived by many to be current funding inequities. From 1954 to 1990, the state's system of funding was a foundation program, commonly referred to as the state's minimum foundation program. Each school district received an annual allotment of foundation program funds, based on the average daily attendance of the previous year. A district received one basic unit for each 27 students in average daily attendance. Each unit included an amount for teacher's salary, current expenses, and capital outlay. The amount of state support within the unit for the teacher's salary varied within an established range, based on rank and experience. Current expenses and the capital outlay per unit were established within the biennial budget.

The foundation program provided special units that were in addition to basic classroom units. These units included units for vocational education, exceptional children, and kindergarten and additional units for instructional supervisors and directors of pupil personnel. There were also additional growth units.

The vocational units were calculated on the basis of students who were already counted in the district's average daily attendance figure used for the basic unit calculations. Essentially, the students in vocational education, along with exceptional education students, were calculated again, and in plain terms, this procedure resulted in "bonus" units. These bonus units could be considered incentives to establish new programs or incentives to maintain vocational education programs.

Legislative Research Report, No. 174 (1980) indicated that this practice was changed in 1974, when the General Assembly determined that the bonus funds generated by exceptional and vocational units were not being applied to those two programs and were in large part, being used for additional support staff and lower pupil/teacher ratios.

Between 1974 and 1978, the General Assembly permitted those vocational units awarded before 1974 to continue as bonus, but those awarded after 1974 had a deduction in average daily attendance for purposes of calculating basic units. During the 1978 Regular Session, the General Assembly authorized a deduction for all vocational and exceptional child units, with the intent of gradually increasing the deduction until the bonus effect was entirely eliminated. By 1990, the vocational education unit deduct was 9.6 students in average daily attendance. Superintendents have asserted that the establishment of vocational deducts had negative consequences for vocational education. Decreasing funding support also decreased interest in establishing these programs that were seen as high-cost programs to operate (Testimony: Holland, 2001). There is a more detailed discussion as to how the additional units were administered in Appendix F.

Within the foundation program was a set-aside for reimbursing school districts to transport students to the state-operated facilities. This set-aside was continued with the implementation of the SEEK program.

Even though there was some disparity between the funding for locally operated programs and the state-operated programs under the foundation program, the funding mechanisms were based on the same concepts. Foundation monies were generated for each vocational teacher based on a minimum number of students as specified in administrative regulation.

Funding Changes Resulting from the 1990 Kentucky Education Reform Act

With the advent of a new funding system under the 1990 Kentucky Education Reform Act, funds were no longer distributed to districts on a foundation unit basis, but under a basic per pupil in average daily attendance allotment, plus the adjustments for particular purposes through the SEEK funding program. There was no add-on or additional weight to the basic funding for students enrolled in career and technical education. In 2001, the superintendent of Union County Schools, speaking on behalf of superintendents, described this as the second pivotal point at which funding inequities between state and local funding of area technology centers became exacerbated, although some persons would suggest that the infusion of new dollars into the basic funding to school districts through SEEK would permit more money to be used for vocational education programs. The change from the foundation program to SEEK affected both locally operated vocational education programs and the state-operated vocational education programs.

Locally Operated Programs

With the implementation of SEEK, districts no longer had a guaranteed funding mechanism for additional funding to support programs in area centers or in comprehensive high schools, as was provided by the vocational units under the foundation program; although by 1990, these so-

called bonus units were greatly reduced in monetary value. Districts were required to fund what they perceive as higher-cost programs within the basic SEEK formula.

Since 1990, there have been additional policy decisions affecting funding:

- During the 1990-92 biennium, \$4 million was specifically appropriated for equipment and supplies to distribute on a per pupil basis for career and technical education students in local school districts. This figured to about \$22 per career and technical education pupil. This was a one-time only appropriation and has not been repeated.
- In 1994, the Department for Technical Education made a policy change, due to lack of any specific directive to the contrary, to discontinue the distribution of a share of the state equipment funds to the districts that had taken over operation of their centers. These funds had averaged around \$7,500-\$10,000 per year between the year of initial transfer from state to local control until the 1993-94 school year. According to a memorandum supplied by the Department for Technical Education to the Legislative Research Commission on April 27, 1997, this policy change paralleled a year of significant state budget reductions for the department.
- The general fund supplement for school districts that operated locally-operated centers was continued but held at a continuation level between 1990 and 1998 when there was an increase. In 2000 a significant increase was provided and a formula in the budget bill mandated how funds were to be distributed. In 2001, the formula components were given statutory permanence.

State-operated Programs

In 1990 with the implementation of SEEK, a line item appropriation, which mirrored the available funds under the Minimum Foundation Program in 1989-90, was established within the SEEK program to support secondary students in state-operated area centers and institutions to be transferred from the Kentucky Department of Education to the Department for Technical Education.

The SEEK funding for the state-operated programs was \$16.1 million in both FY 2001 and FY 2002. For FY 2003 and FY 2004 it is approximately \$16.3 million. The procedure for distributing the funds is provided by Kentucky Board of Education Administrative Regulation, 705 KAR 2:140:

Funds appropriated to serve secondary vocational education students in state-operated vocational technical schools and area vocational centers shall be allocated on the basis of the number of full-time equivalent (FTE) three hour students enrolled as October 1. The amount calculated per FTE shall be determined by dividing available funds by the total number of secondary students served in the Kentucky Tech system.

If the facility is a state-owned facility, 100 percent of the funds generated per FTE secondary career and technical education student in the facility would be retained by the state agency, but if the facility is owned by a local board of education, as all area centers are, the Department for Technical Education receives 80 percent of the funds and the district of ownership receives 20 percent of funds generated per FTE secondary career and technical education student. Since the 1997-98 school year, SEEK funds are transferred to the Kentucky Community and Technical College System for those secondary students served in programs in technical colleges.

The per pupil funding may increase or decrease without actually decreasing funds available to the state system, because the administrative regulation provides that 100 percent of the money appropriated for the state-operated programs be used regardless of the number of students enrolled. This was unlike the requirement under the foundation program, in which the state system only received that portion of the appropriation that would be earned based on the student enrollment by teacher.

Regardless, the Department for Technical Education estimates that the SEEK funds provide only 50-60 percent of the costs. The remainder of the required expenditures are funded from direct general fund appropriations. In FY 2002 the general fund appropriation, minus the executive budget reduction, was \$21.8 million and was \$21.5 million in FY 2003 not including the new schools of Lincoln and Jackson area technology centers. One-time equipment money, \$1.6 million, was added in the general fund appropriations for the new schools. Each biennium, the department requests direct appropriations based on the prior biennium. A limited amount of federal funds also provides for some support services and personnel.

As noted earlier, the Department for Technical Education also receives a general fund appropriation for equipment upgrades and maintenance. During the biennium for fiscal years 2003 and 2004, the equipment appropriation was approximately \$1.7 million.

In 1990, no deduct was applied against a school district's SEEK base for students who attended a state-operated school for part of a day. However, in 1992, a 30 percent deduct in average daily attendance was prescribed within the biennial budget for the time a student was in attendance at a state-operated school. The rationale was that without the deduct, the state was providing double funding support for the student and without a deduct, an inequity was created between those districts that funded and operated programs and those that sent their students some place else for the service at no cost. The deduct was eliminated in the 2000 budget bill at the urging of the executive branch, which argued that the deduct was a disincentive for districts to send students to state-operated centers. Removal of the deduct may have made a significant difference in enrollment. Enrollment data reflects an increase of more than 2,000 additional students in state-operated schools in 2001-2002 and an increase of more than 4,000 students in 2002-2003. Some of this could be attributed to the availability of new programs.

Sending students to state-operated career and technical education programs lowers the teacher/pupil ratio at the home high school. This factor may cause some local school districts to reduce their own program offerings, thereby limiting course availability to some students. Reduction of programs saves moneys but raises the question of student access to programming and fairness issues.

State Policies

Over time, a variety of state policies have impacted the funding of state-operated and locally operated centers. As enrollments of secondary students declined during the mid- to late-1970s, area center principals in state-operated schools were encouraged to enroll adults into programs previously limited to secondary students. Adults could not legally be included in the calculation of minimum foundation program contract units, so regional administrators used a combination of agency receipts from tuition and direct state appropriated general funds to the state-operated vocational system to offset decreases in minimum foundation funds being generated through dwindling secondary enrollments in the state-operated area centers. Tuition accounted for little of the funding as full-time postsecondary education programs charged \$16 per month, and adult short-term classes cost 25 cents per hour of instruction. Regardless, this policy change helped keep secondary programs operating that may have otherwise closed due to low enrollment.

Another policy effort of the State Superintendents of Public Instruction and the State Board of Education between 1980 and 1988 was to encourage the transfer of state-operated area centers to local control. The underlying reasons given for this policy were that there was too little integration of academic and vocational education and that it was difficult for local school districts to exercise responsibility when a state agency operated the program and bureaucratic policies interfered with curriculum innovation. The Commission on Vocational and Technical Education, created by the Kentucky General Assembly by a joint resolution in special session in July 1985, supported this policy with the adoption of the following statement:

The Commission endorses the position of the State Board of Education that an adequate funding mechanism be developed to provide for local operation of area centers. The local boards of education should be encouraged to voluntarily assume administrative control of these schools. The State Board of Education should make provisions for input into the operation of area centers serving multiple school districts from all the respective districts.

As a result of this policy, 11 area centers were transferred to local operation between 1980 and 1988. All of these, except Fayette County, served only one district. Each district received vocational units for these programs under the foundation program plus state general funds transferred from the Department of Education to offset costs of administration. The local districts also received a share of the equipment appropriation for the state-operated system, which would have been allocated to the schools if they had continued under state management.

In 1986, the General Assembly established a line item supplement for local districts in the Kentucky Department of Education's appropriation of general funds to be distributed to the districts that took over the operation of their area centers during the 1980s, and for other districts that operated centers and departments and had not been receiving any supplements for equipment and operations. This funding was distributed based on the number of teachers in specific areas under provisions of 705 KAR 2:120. However, the amount of supplemental funds was limited and subsequent biennial budgets did not provide significant additional funds over the long term.

In 1998, the budget bill addressed the issue of transfer of state-operated area technology centers by stating:

... a local board of education may petition the State Board for Adult and Technical Education. The application by a local board to assume authority for the management and control of a state-operated secondary vocational education and technology center shall address, at a minimum, the following areas of concern: the local board's plan for continuing those programs and services to students from other school districts who are using the center at the time of the transfer, and a plan of collaboration with the districts being served to meet local vocational curriculum needs, including the intention to involve those districts in future needs assessments, program, and curriculum changes.

The State Board may, at its option, enter into an agreement to transfer all equipment, supplies, and any General fund moneys appropriated to the Department for Technical Education relating to the operations of the center to the local board of education, provided that the local board shall guarantee all employee rights and benefits accumulated under the State Board of Adult and Technical Education. In addition, all funds generated pursuant to students being enrolled in the center in accordance with the Support Education Excellence in Kentucky (SEEK) program, as provided by KRS 157.360, 157.370, or any other statute, shall be transferred to the local board of education for distribution to the secondary school operating center. All funds, equipment, and supplies transferred to the local board of education pursuant to assuming the management and control of a state-operated secondary vocational education and technology center shall be provided to the secondary school operating the center and may only be utilized for the operation of the center.

The Governor reiterated the procedure in Executive Order 98-837. Under these provisions, Henderson County and Christian County petitioned the State Board for Adult and Technical Education and were granted the transfer for the 1999-2000 school year. With these transfers, both school districts initially received 100 percent of the cost of operating the centers.

The Governor, through Executive Order 99-1597, amended Executive Order 98-837 to rescind and repeal the provision relating to potential transfers of state-operated schools to local boards of education. Neither executive order was confirmed.

There is currently no statutory or administrative language relating to policies or procedures to follow if a school district wishes to take over operation of its own center, nor is there statutory or administrative language relating to the reverse. The General Assembly did approve general funds for the Cabinet for Workforce Development to begin operating two new facilities owned by local boards of education, Jackson County and Lincoln County during the 2001-2002 and 2002-2003 school years respectively, which increased the number of KY Tech facilities overall.

The subcommittee did not delve into the impact of the complex delivery system, administration, and governance and their impact on future policy directions and funding policies, because these were not initially identified as within the scope of the directed study. However, the Subcommittee on Vocational Education determined that this should be an area for further study by the Interim Joint Committee on Education.

Adequacy of the General Fund Supplement for Locally Operated Centers

Recent increases in the amount of money appropriated as supplements for locally operated centers has aided those districts significantly but the appropriation falls short of the support provided to the state-operated system, KY Tech. Table 3 provides a history of the appropriations. A significant increase was provided by the 2000 General Assembly to help equalize the funding between the locally operated and the state-operated facilities; however, funding levels have not increased since that time.

Table 3. Supplemental Funds to Support Locally Operated Area Centers and Vocational Departments

Fiscal Year	General Funds (\$ million)
1990-91	\$5.1
1991-92	\$5.1
1992-93	\$5.2
1993-94	\$5.4
1994-95	\$5.4
1995-96	\$5.4
1996-97	\$5.4
1997-98	\$5.4
1998-99	\$5.6
1999-00	\$5.8
2000-01	\$10.3
2001-02	\$10.3
2002-03	\$10.3
2003-04	\$10.3

*The supplement was the same for each year of the biennium.

Source: LRC Budget Staff and the Kentucky Department of Education.

Appendix H provides a comparison between what the each local district identified as its actual costs in 2001-2002 and the final allocation of funds by district from the general fund supplement.

As noted earlier, KRS 157.069 requires that all general funds designated for locally operated centers and vocational departments be distributed by a weighted formula that distinguishes among career and technical education programs that are considered high cost technical programs and technical skills programs. High-cost technical programs are those that require high-cost technical equipment, materials, and facilities. Technical skill programs are ones that require technical equipment but do not require high-cost equipment, facilities, and materials. Some programs are designated as orientation and career exploration programs that are not high cost to offer and these are not eligible for additional funds under the formula. The complete formula is specified in administrative regulation, 705 KAR 2:140, which provides that a school district receive a funding allocation equal to the total of the number of the FTE students in technical skill programs multiplied by the value of the weight (1.0) for these programs, plus the total of the number of FTE students in high-cost technical skill programs, multiplied by the value of the weight (1.5) for these programs.

One issue is whether the size of the appropriation is adequate as opposed to whether the formula is equitable. The formula does provide a fair, consistent distribution process for those schools that operate technical programs in locally operated area centers and departments, based on enrollment and associated increased program costs. While the weight recognizes differences in the costs of programs, the size of the overall appropriation for this purpose is the determinant as to whether there are adequate dollars to distribute among the participating districts. The local school districts contend that the total appropriation, while it has been dramatically improved, is inadequate to meet their funding needs for programs, equipment, and facility maintenance. Information in Appendix H supports their contention (Testimony: 2001, 2002). Further, because the formula only applies to locally operated area centers and departments, the formula does not address the other issue of equitable funding for secondary career and technical education programs in the broad sense. For example, if a school district decided to offer a machine tool technology program in a comprehensive high school, the district would receive no additional funds, but if the machine tool technology program was located in a locally operated center, the district would receive weight in the formula for it.

In FY 2002-2003, the Kentucky Department of Education compared similar programs in state- and locally operated centers and the state funds available to each. Based on the total number of students served by type of center, the department estimated the per pupil value for a FTE student enrolled in a locally operated area center or vocational department in a technical program as \$1798.00 and \$2698.00 for a FTE student enrolled in a high-cost technical program. They estimated the FTE value for locally operated area centers to be 55 percent below the value for a student enrolled in the same program in a state-operated center. Note that the department did not adjust for funds provided for administrative purposes or adjust for the length of the teacher's employment year within these estimates. These factors contribute to the size of the difference in funding. A list of programs designated as technical and those designated as high-cost technical programs is found in Appendix G.

The weighting process does provide an incentive for school districts to maintain enrollments to the maximum in these programs, but it could also encourage school districts to retain high-cost technical programs that are no longer as viable as others might be. For example, a school might retain a welding program in lieu of replacing the program with a health sciences program.

The Commissioner of Education testified that while this formula and the appropriation do partially address the funding inequities faced by local school districts operating their own centers and departments, it does not address funding inequities among the providers. He presented three policy options for consideration.

Option 1 - Move to a system where the funding follows the student. This method could be implemented through the SEEK funding formula by including an added weight for career and technical education. All school districts with students enrolled in career and technical education would receive an added weight based on the following factors:

- Full-time equivalent enrollment in career and technical education;
- Length of the course; and

- Weighted value by categories of programs in which students are enrolled. The formula would generate the funds, and the dollars would follow the student to the school where the student is being served, either in high schools, locally operated centers, state-operated centers, or Kentucky community and technical colleges. This option would ensure equity across the educational system for career and technical education funding in all schools.

The value of the weight could be determined through the current study of the adequacy and equity in the SEEK funding formula and presented to the legislature for action.

Option 2 - Use the same formula in Option 1 but make it only applicable to provide funding for career and technical education in local school districts, and not as a method of funding the state-operated area technology centers. Students enrolled in state-operated centers would not generate funds for local school districts. This option would provide equitable funding among local school districts.

Option 3 - Have all funding be allocated to locally operated and state-operated centers on a full-time equivalent student basis using a weighted funding formula as prescribed in HB 185 from the 2001 Regular Session. This funding formula takes into account the difference in cost of operating specific programs based on assigning all career and technical education programs to one of two categories: high-cost technical program or technical skill program. Currently, this formula is used to distribute funds appropriated by the General Assembly to locally operated centers and departments.

Under this option, each school would receive an equitable share of the funds based on full-time equivalent enrollment and the type of program offered. The Commissioner believes this would represent a more equitable formula for distribution of the funds to local school districts and state-operated centers.

The amount of funding would be based on the current funding provided to the Department for Technical Education and Department of Education with initial adjustments to fully fund the locally operated centers. The proportionate share of the total funds appropriated would then be distributed to each agency based on the funding formula. Once the initial funding is established, annual increases would be based on increased cost of operation of the centers. In order to offset the initial impact of the funding equity for the locally operated centers, the legislature could phase in the funding over two biennia by providing 75 percent equity during the first biennium and 100 percent equity during the second biennium, as indicated in Table 4.

Table 4. Budget Scenario Presented by the Kentucky Department of Education for Option 3

(Based on 2001-02 budgets):	<u>75% Funding</u>	<u>100% Funding</u>
State-Operated Centers		
General fund	\$20,610,500	\$20,610,500
SEEK Fund	\$20,468,500	\$20,468,500
Equipment Budget	\$ 2,000,000	\$ 2,000,000
Locally Operated Centers		
General fund	\$10,347,700	\$10,347,700
Additional Equity Increase	\$ 6,500,000	\$13,000,000
Equipment Budget	<u>\$ 1,000,000</u>	<u>\$ 1,000,000</u>
SUBTOTAL	\$60,926,700	\$67,426,700
One-time Equipment Upgrade for Locally Operated Centers	3,000,000	3,000,000
GRAND TOTAL	\$63,926,700	\$70,426,700

The Commissioner's proposed scenario for Option 3 does not adjust for the difference in length of contracts for teachers in state-operated centers that are at a minimum of 10 1/2 months plus opportunity for extended employment with unlimited use of annual leave or compensatory time during the extended period. Further, it does not account for the difference in staffing patterns that are necessitated for those state-operated centers that serve multiple districts. Further study of the policies governing the structure and administration under Kentucky's delivery system should address whether Kentucky should continue the system as is. If so, the difference in staffing and employment factors may justify the higher funding level for the state system and therefore, the increased equalization dollars may be less than the figures projected by the Department of Education to obtain parity in funding between the state-operated and the locally operated centers.

Vocational Transportation

As noted earlier, funds are set aside in the SEEK appropriation for funding the transportation of students to KY Tech centers and to KCTCS programs. Vocational transportation is allocated \$2.4 million in SEEK for both years of the 2002-2004 biennium.

Incentives to Change Programs

There are currently no financial incentives to start new, high-needs programs or to phase out poorly performing programs. The Commissioner of Education and the Commissioner for the Department for Technical Education recommended that a matching grant program be established by the General Assembly to serve as an incentive to local school districts and the KY Tech system to start new programs. The proposal included a recommendation to review all existing programs in the state for relevance and identification of the types of programs that should be discontinued and the types of programs in need of expansion or programs to be created to fill the future career paths and opportunities and then the establishment of a competitive grant programs whereby all program providers could compete for grants from \$50,000 to \$100,000 to start a new program.

The Commissioner for the Department for Technical Education suggested the following criteria for a competitive grant program for the development of new programs:

- (1) There is data to indicate employment potential for the program area;

- (2) There is documentation that there are commitments from industry to provide one or more: equipment donations, paid co-op positions, or intern positions;
- (3) There is documented support from the community through training consortia, chambers of commerce, town forums, or other groups; and
- (4) There is the potential of funding from other outside sources, which may include business and industry foundations, education foundations, private donors, local government, or other grants.

Federal Funding

While Kentucky receives about \$17 million from the federal government, which is allocated to both postsecondary and secondary career and technical education programs and related services, federal funds cannot replace lack of state funds to support basic programming. Federal funds under provisions of the Perkins Act must be expended in compliance with the Kentucky State Plan for Vocational and Technical Education. Perkins funds are appropriated to Kentucky to improve career and technical education programs and related costs, such as professional development for teachers and supports services. Funds may be used for instructional materials, equipment, and improvements to programs but may not be used for maintenance of programs. Table 5 lists the distribution of the federal funds by institutional categories.

Table 5. Perkins Federal Funds Distribution for the 2002-2003 School Year

Institution	Secondary Career and Technical Education Purpose	Postsecondary Career and Technical Education Purpose
Local School Districts	\$7, 299,992	
Kentucky Community and Technical College System (KCTCS)	\$52,393	\$8,557,401
Kentucky Tech	\$869,431	

Source: Department for Technical Education, Cabinet for Workforce Development

The sole state agency for the preparation of the state plan and administration of these funds is the Department for Technical Education. Historically, the sole state agency was an appointed governing board; however, this responsibility was changed by executive orders, and most recently by the adoption of SB 193 in the 2003 Regular Session. The Department for Technical Education serves as the designated state agency for administering the federal Perkins Act as it applies to Kentucky.

The chancellor for KCTCS said the sole state agency responsibility needs to be revisited to see if the current arrangement is the most appropriate (Testimony: 2002). The reauthorization of the Perkins Act may change the distribution process for funds and may change the allowable uses of the funds. Major changes in the Act could have a serious impact on providers, especially local school districts and KCTCS that are the major recipients of funds. The potential impact is unknown at this time.

CHAPTER IV

PROGRAM OVERSIGHT AND ACCOUNTABILITY

Program Standards

The Kentucky Board of Education is required under KRS 151B.025 to establish program standards. These standards are specified in 705 KAR 4:231. KY Tech and local school districts must operate programs in compliance with those standards.

Further, schools that use federal funds under the Perkins Act must comply with the standards and requirements of that Act. Each career and technical education program is to provide an annual plan and if program requirements and provisions of the Kentucky State Plan for Vocational and Technical Education are not met, federal funds are disallowed.

The Kentucky Department of Education is delegated the responsibility under the Kentucky State Plan for Vocational Technical Education to review plans for receipt of federal funds and to provide technical assistance to local educational agencies with secondary programs.

Audits of the use of federal and state funds may be conducted by the Kentucky Department of Education or the Department of Technical Education.

Governing Boards and School-based Decision Making Councils

Locally operated programs in comprehensive high schools, area centers, and departments

Each school district is governed by an elected board of education that approves a salary schedule and benefits, personnel policies, and the overall budget for the district and sets district-wide policies and ensures that the district is in compliance with state and federal laws.

Comprehensive high schools, except under certain circumstances, have school-based decision making councils, which determine the programs to be offered and the number of teachers to be employed within the school's resource allocation.

Area centers and vocational departments, while they may be stand-alone facilities, do not have separate school-based decision making councils. These schools are sometimes integrated under the administration of the adjacent high school and function as an integral part of the school. In other cases, they may have more autonomy. Programs are determined by the central administration and funded by the local board with input from the staff and community.

KY Tech

There is currently no governing board to provide direction and oversight to the KY Tech system. The programs are operated solely by the Department for Technical Education.

Certified employees are state employees under the provisions of KRS Chapter 151B and non-certified employees are governed by KRS Chapter 18A. The commissioner is appointed by the Secretary for the Cabinet for Workforce Development with approval of the Governor's office. Administrative regulations are promulgated by the Department for Technical Education.

From the beginning of the state-operated system until 2000, the Governor appointed a citizen-based state board with governing functions that included oversight for the system and the authority to promulgate administrative regulations related to the vocational education and the state-operated schools. The composition and the location of the board have varied over time.

The state system of vocational technical schools was governed by the State Board of Education until 1977, when the Governor established by executive order an additional board, called the State Board for Occupational Education. Duties and functions relating to adult education, vocational-technical education, and vocational rehabilitation, including the operation of the vocational-technical schools and area technology centers were transferred to this new board from the State Board of Education. This action followed recommendations from the Postsecondary 1202 Commission that urged more attention and visibility and linkages with postsecondary education. The executive order was confirmed by the 1978 General Assembly. Under this arrangement, employees continued to be employed and the property was maintained by the Kentucky Department of Education. The State Superintendent of Public Instruction was the chief executive officer to both the State Board of Education and the State Board for Occupational Education.

In 1981, the next Governor abolished the State Board for Occupational Education by executive order, which was confirmed by the General Assembly in 1982. All duties and responsibilities were returned to the State Board of Education.

In 1988, following additional studies relating to vocational education and the state-operated schools and with concurrence from the State Superintendent of Public Instruction and the State Board of Education, the General Assembly established the State Board for Adult, Vocational Education, and Vocational Rehabilitation. With the establishment of the new board, the State Board of Education was renamed the State Board for Elementary and Secondary Education. The board members were appointed by the Governor, and composed largely of business and industry leaders. The State Superintendent of Public Education served as the chief executive officer to both boards.

In 1990, concurrent with the Kentucky Education Reform Act, the General Assembly created a Cabinet for Workforce Development and attached the State Board for Adult, Vocational Education, and Vocational Rehabilitation to it, renaming it the State Board for Adult and Technical Education and changing its duties appropriately. The state-operated schools were moved to the cabinet along with several other agencies in state government that dealt with education and training for adults. This move also included moving the sole state agency responsibility for administering the Perkins Act and establishing a new personnel system under KRS Chapter 151B, as well as hiring commissioners for these areas under the authority

of the state board. The new personnel system was intended to eliminate many of the executive personnel and bureaucratic barriers that made running responsive programs and schools difficult.

Executive Order 98-837 changed the authority of the State Board for Adult and Technical Education and made it more advisory in nature and moved most of its decision making authority to the Cabinet for Workforce Development administrators, although the duties of the State Advisory Council for Adult Education and Literacy were granted to the State Board for Adult and Technical Education. It moved the hiring of the Commissioner for Adult Education and the Commissioner for Technical Education to the Secretary of the Cabinet for Workforce Development with approval of the Governor and moved the positions back to the unclassified personnel system under KRS Chapter 18A. Prior to the change, the commissioners were appointed by the Secretary of the Cabinet with recommendations from the board. The board's authority to promulgate administrative regulations was moved to the commissioners.

In actual practice, there has been no functioning state board since 2000. A series of executive orders were issued to abolish the State Board for Adult and Technical Education, but were not confirmed by the General Assembly: Executive Order 98-837; Executive Order 2000-990; and Executive Order 2001-796. In 2003, Executive Order 2002-903 was confirmed by SB 193, which abolished the State Board for Adult and Technical Education and assigned its duties to an internal employees group of the Cabinet for Workforce Development, which make up the Kentucky Technical Personnel Board.

Postsecondary state-vocational technical schools

In 1997, the postsecondary state-vocational technical schools, including those that operated secondary vocational programs, were moved to the newly created Kentucky Community and Technical College System under a board of regents, where they remain today.

Teacher and Program Accountability

Teachers and schools in local school districts may experience rewards or sanctions under the state's assessment and accountability system as described in KRS 158.6455. This system does not apply in state-operated schools.

Student achievement

The Commonwealth Accountability and Testing System (CATS) is used as part of the state performance measure for secondary vocational education accountability to meet compliance requirements of the Perkins Act. Table 6 summarizes CATS data for career and technical education students by program areas.

All students who are following a sequence of vocational/technical courses and who have completed or plan to complete at least three credits in a career area, as identified on an

Individual Graduation Plan, are included in the CATS totals in Table 6 whether they are enrolled in a state-operated or locally operated program. The student scores are reported by career cluster area of agriculture, business and marketing, human services, health services, transportation, construction, communication, and manufacturing. The scores are also disaggregated for groups who are economically disadvantaged, have disabilities, are in nontraditional employment training, are single parents, are single pregnant women, or have limited English proficiency. On the chart, the levels of student performance are reported by distinguished and proficient (P/D), apprentice (A), novice (N). The number of students by occupational area are listed under the column marked with a "#" under each assessment area. The school year 1999-2000 was used to establish the baseline score, with a long-term goal for schools to be obtained by the school year 2013-14. An accountability index is listed for the non-concentrators, students who have taken less than four credits in a particular occupational area and for concentrators, students who have taken four credits or more in a particular occupational area. These indexes may be compared on the chart the state academic index.

Skill standards and assessments

The Department of Education and the Department for Technical Education with assistance from business and industry piloted skills assessments during the 1999-2000 school year and began implementation of skills standards and assessment in 2000-2001. A level of performance for each set of skill standards has been established that students must meet or exceed in order to receive a skill certificate. Participation in the skills examination is voluntary. Each school is accountable for making continuous improvement in the number of students receiving the skill standard. Table 7 indicates the number of students who have participated in skills assessments and who have earned credentials.

Table 6. Career and Technical Education Commonwealth Accountability Testing Results 2000-2001 and 2001-2002
 Source: Kentucky Department of Education

	Reading		Science		Writing On-D		Writing Port		Mathematics		Social Studies		Arts & Humanities		PL/VS	
	#	N A P/D	#	N A P/D	#	N A P/D	#	N A P/D	#	N A P/D	#	N A P/D	#	N A P/D	#	N A P/D
<i>Agriculture</i>	2001	2110 25 61 15	2075 32 47 21	2213 31 61 8	2218 31 54 14	2305 32 53 14	2075 47 35 18	2075 30 56 15	2075 47 39 14	2110 26 36 37						
	2002	2132 24 58 18	2232 31 44 25	2300 34 55 10	2305 32 53 14	2305 32 53 14	2232 48 33 19	2232 27 53 20	2232 42 39 18	2132 26 33 41						
<i>Business & Market</i>	2001	3726 10 56 34	4339 24 48 28	5320 16 70 14	5317 17 57 25	5317 17 57 25	4339 31 38 31	4339 15 58 27	4339 29 45 27	3726 14 30 56						
	2002	3825 10 53 37	4787 22 47 32	5823 18 64 18	5852 17 57 26	5852 17 57 26	4787 29 36 35	4787 13 52 35	4787 22 44 34	3825 13 29 58						
<i>Communication</i>	2001	1252 13 54 34	1055 20 44 36	1044 18 66 16	1045 18 54 28	1045 18 54 28	1055 30 34 36	1055 15 53 32	1055 25 42 33	1252 16 29 54						
	2002	956 15 52 33	838 21 42 36	752 18 59 23	755 19 52 30	755 19 52 30	838 31 32 37	838 15 45 40	838 23 39 38	956 19 29 52						
<i>Construction</i>	2001	1439 36 56 8	1287 45 41 15	1273 44 52 4	1268 47 46 7	1268 47 46 7	1287 58 29 13	1287 44 48 8	1287 61 32 7	1439 36 40 25						
	2002	1220 38 53 8	1147 43 42 15	968 50 45 5	951 48 47 5	951 48 47 5	1147 59 31 10	1147 42 49 9	1147 57 36 7	1220 39 35 26						
<i>Health Science</i>	2001	1972 9 55 35	1800 26 46 27	1503 13 71 16	1501 19 54 27	1501 19 54 27	1800 35 37 28	1800 19 55 26	1800 27 44 29	1972 12 32 56						
	2002	1871 10 56 34	1716 27 46 27	1315 19 61 21	1306 17 57 26	1306 17 57 26	1716 35 38 27	1716 17 53 30	1716 25 43 32	1871 15 28 57						
<i>Human Services</i>	2001	2160 17 59 24	1911 36 45 18	1982 19 71 10	1993 25 58 18	1993 25 58 18	1911 47 35 18	1911 27 54 19	1911 37 42 21	2160 21 35 44						
	2002	2370 17 57 26	2482 36 46 18	2059 25 63 13	2089 25 58 17	2089 25 58 17	2482 46 37 17	2482 26 53 21	2482 31 44 25	2370 22 32 47						
<i>Manufacturing</i>	2001	776 30 58 11	823 32 44 23	823 38 57 5	822 42 47 10	822 42 47 10	823 46 34 20	823 33 54 13	823 51 37 12	776 30 37 34						
	2002	699 38 53 9	775 32 49 19	699 46 47 7	701 41 50 8	701 41 50 8	775 53 33 15	775 36 54 11	775 51 37 13	699 37 33 30						
<i>Transportation</i>	2001	678 43 49 8	589 42 43 15	679 43 53 3	680 48 45 6	680 48 45 6	589 57 32 10	589 46 47 7	589 64 30 6	678 41 35 24						
	2002	713 40 52 7	744 43 42 14	609 52 44 4	598 44 48 7	598 44 48 7	744 59 32 9	744 42 51 7	744 58 34 8	713 38 37 25						
<i>Technology</i>	2001	1460 16 60 24	1459 21 42 37	1185 30 57 13	1182 21 55 24	1182 21 55 24	1459 32 34 34	1459 17 56 27	1459 29 46 25	1460 18 34 48						
	2002	11686 17 55 28	7960 30 43 27	7502 22 66 13	7466 25 51 24	7466 25 51 24	7960 39 33 27	7960 24 53 24	7960 36 40 24	11686 19 32 49						
<i>Non Concentrators</i>	2001	68.2373	60.6398	58.0162			59.1605	63.3608	54.6091	73.8739						
<i>Acad. Index 62.3</i>	2001															
<i>Non Concentrators</i>	2002	11321 20 54 26	7719 28 42 30	7547 24 59 18	7526 22 52 26	7526 22 52 26	7719 39 33 28	7719 22 50 28	7719 31 40 29	11321 22 31 47						
<i>Acad. Index 63.5</i>	2002	66.1564	63.2612	59.7135			59.915	66.0632	60.4717	71.5739						
<i>Total Concentrators</i>	2001	14305 19 57 25	14110 30 46 24	15078 23 65 11	15084 26 54 20	15084 26 54 20	14110 41 35 24	14110 25 55 21	14110 38 41 21	14305 21 34 45						
<i>Acad. Index 59.8</i>	2001	65.6457	59.0144	55.4735			56.0128	60.9622	52.1904	70.9336						
<i>Total Concentrators</i>	2002	15246 19 55 26	16180 29 45 26	15710 27 59 14	15739 25 55 20	15739 25 55 20	16180 40 35 25	16180 22 52 26	16180 33 42 25	15246 22 31 47						
<i>Acad. Index 61.8</i>	2002	65.7948	61.5538	56.1501			58.1655	64.6883	57.7308	71.5872						
<i>State</i>	2001	45220 18 53 29	39054 29 43 29	37376 21 65 14	37376 24 51 25	37376 24 51 25	39054 38 33 29	39054 23 51 26	39054 35 39 26	45220 20 31 49						
<i>Acad. Index 63.4</i>	2001	68.8212	62.0475	59.0008			60.6339	64.7761	56.8113	73.5679						
<i>State</i>	2002	44919 19 53 29	40197 27 42 31	36968 24 58 19	36968 23 51 27	36968 23 51 27	40197 37 33 30	40197 21 49 30	40197 30 40 31	727189						
<i>Acad. Index 65.1</i>	2002	67.7488	64.4941	60.1175			62.2934	68.1213	62.5453	72.7189						

Table 7. Kentucky Occupational Skill Standards Assessment
Growth and Results, 2000-2003

Assessment Area	2003		2002		2001		2000	
	Number Assessed	Percentage Passing	Number Assessed	Percentage Passing	Number Assessed	Percentage Passing	Number Assessed	Percentage Passing
Administrative Support	1777	32%	1764	30%	1699	18%	2077	5%
Retail Services	534	15%	597	4%	740	19%	702	19%
Hospitality Services	97	18%	80	14%	139	3%	83	11%
Culinary Arts	505	35%	448	27%	535	22%	362	12%
Child Development	1034	38%	1084	27%	1133	24%	1204	26%
Housing and Interiors	109	7%	89	4%	80	5%	79	15%
Manufacturing	906	38%	1049	38%	1024	10%	1138	15%
Horticulture	858	20%	799	14%	849	2%		
Family Services	762	35%	583	36%	537	15%		
Consumer Services	111	23%	145	24%	129	14%		
Production Livestock	851	45%	814	15%				
Production Crop	273	12%	345	8%				
Financial Services	953	65%	1017	46%				
Marketing	664	29%	558	10%				
Allied Health	849	49%	836	14%				
Communications	809	39%	691	31%				
Construction	812	17%	828	2%				
Transportation	559	6%	638	11%				
Technology Education/Pre-Engineering Pilot	(488)	(15%)						
Totals	12,463	34%	12,365	23%	6,865	16%	5,645	14%

Technology Education/Pre-Engineering pilot assessment was based on the National Standards for Technological Literacy. This assessment will be implemented on a statewide basis in 2003 – 2004. The 2003 totals do not include the numbers for the pilot assessment.

Source: Kentucky Department of Education, June 2003.

Several student output measures are used to determine if providers of career and technical education are giving quality instruction. These include the following.

Graduation rate

Both state-operated and locally operated schools account for the percentage of students participating in vocational education who graduate high school or who earn an equivalency diploma as compared to all other students. It is expected that the performance level for students enrolled in vocational education will equal that of all other students in the school.

Placement in, retention in, and completion of postsecondary education or advanced training, placement in military service, or placement and retention in employment

Data is collected to indicate the percent of students who make successful transition to postsecondary education, work, or the military. This data includes initial enrollment and a comparison to those that complete the programs. Placement and follow-up data is compared to see if students are working in fields related to their training and to see if they continue employment in the field.

Completion of a career major certificate or a vocational completion certificate

The data system collects the number of students who complete vocational technical programs and receive a career major certificate or a vocational completion certificate. In order to qualify for a vocational completion certificate, a student must complete a minimum of four credits in a career major. Students may complete a career major or a vocational completion certificate even though they may not graduate high school.

Program assessments and technical assistance are provided to help programs reach higher levels of quality.

Agency Assessment of Industrial Education Level III Programs

During the 2001-2002 fiscal year, the Department for Technical Education, in collaboration with the Kentucky Department of Education, conducted a pilot assessment of Industrial Education Level III programs (programs considered preparation for a specific occupational area) in state- and locally operated technical centers and departments. A program assessment document was developed and cross references with the Kentucky Department of Education Standards for School Improvement. Twelve secondary Industrial Education Level III programs (six state and six local) in the state were visited and assessed. Data were collected and information gathered from the self-studies.

Improvement Plans

Locally operated and state-operated programs are evaluated by their results in meeting levels of performance. If the Department for Technical Education, in cooperation with the Department of Education, determines that an eligible recipient is not making substantial

progress in achieving the levels of performance, the departments conduct an assessment of the educational needs that the eligible recipient must address, enter into an improvement plan, and conduct regular evaluations of the progress being made toward reaching the levels of performance. Failure to meet the levels of performance for two or more consecutive years could result in the loss of all or part of the federal funds for which they are otherwise eligible.

CHAPTER V

FACILITIES AND EQUIPMENT

Background

Vocational facilities have been built and renovated with funds from a variety of sources, including local, state, and federal funds. Prior to the 1960s, all Kentucky vocational education facilities were constructed with state and local funds. State funds were used to construct vocational-technical schools owned and operated by the state. Local school district funds were used to construct area vocational education centers and vocational facilities in the public high schools that primarily housed the secondary vocational education programs offered during the regular school day (Kentucky Department of Education, 1976).

During the 1960s, there was a dramatic growth in the number of facilities due in large part to the availability of federal funds for such purposes through the Federal Vocational Act of 1963 and the 1965 establishment of the Appalachian Regional Commission, which provided funds that could be used to construct or expand facilities.

In May 1965, the State Plan for the Construction of Vocational Education Facilities, a long-range statewide plan, was developed by the State Board of Education and outlined facility needs of the state. The plan included provisions for the construction of state vocational technical facilities as well as facilities primarily designed to serve secondary students. (Kentucky Department of Education, 1976).

After passage of the Appalachian Redevelopment Act of 1965, the 49 Eastern Kentucky counties that were covered by the Act at that time were given special attention in the facilities plan. As facilities developed, regional vocational education offices evolved and regional administrative offices were also constructed to house staffs in 14 regions. The comprehensive plan with periodic modifications provided the long-range plan for developing facilities through the 1970s. By 1976, a variety of vocational education facilities were constructed including:

- (1) facilities constructed as an integral part of a public high school;
- (2) vocational education departments constructed as a separate wing attached to a comprehensive high school;
- (3) state vocational-technical schools;
- (4) area vocational education centers;
- (5) technical institutes; and
- (6) vocational correctional facilities.

If a facility contained less than five programs, it had to be built with local funds (Department of Education, 1976).

In 1984, the reauthorization of the federal vocational act removed the availability of federal funds for construction of vocational facilities, although some funds were still available

through the Appalachian Regional Commission. Since that time there has been limited construction of secondary vocational education facilities. There are no federal funds designated for building vocational facilities or federal regulations governing vocational facilities.

The recent construction of Jackson County and Lincoln County area centers, a new area center to replace the existing area technology center for Monroe County, and the renovation of Shelby County's existing facility were the first building projects of that type in almost 20 years.

Appendix D provides a summary of secondary vocational facilities.

Kentucky Sources of State Revenue for Construction Purposes in Local School Districts

There are three main sources of state revenue available to local school districts for construction purposes, including the construction of vocational facilities:

- Capital Outlay—Funds appropriated at the rate of \$100 per student within the SEEK funding program.
- Facilities Support Program of Kentucky (FSPK)— Established in 1990, which requires that school districts levy an equivalent tax rate of at least five cents per each \$100 of assessed valuation of property which is equalized at 150 percent of the average per pupil property wealth. If the district does not have enough debt service in place to need the five cents, it does not qualify for this assistance.
- School Facilities Construction Commission (SFCC)—The successor agency to the School Building Authority, began in 1986 to assist in the financing of construction and renovation and awards funds to qualifying school districts based on a formula established in statute and available funds.

Participation in the SFCC program requires that school districts:

- Levy five cents per each \$100 of assessed valuation of property for facilities support on its local tax base;
- Allocate, at the end of odd number fiscal years, all excess funds in the building fund account, capital outlay account, and any excess in general fund above 10 percent of the general fund budget to an escrow account devoted to construction of the next priority on the facility plan of the local district.

Each participating district's share of the new money allocated to the SFCC each year is a ratio of that district's total facilities need to the total state facilities need as compiled by the Department of Education on June 30 of odd number years. The funding formula is outlined in Appendix I.

- A district, after accepting the offer of assistance from the SFCC, has four years in which to use it.
- The offer is an annual amount of debt service which the state commits to pay for 20 years on behalf of the district (within constitutional boundaries).

Current Facility Planning Processes

In 1986, the General Assembly requested a needs assessment of all school facilities in the state, which continues to be updated each biennium. The sum total of all district facility plans establishes the statewide facilities need and that, minus the local available revenue, defines the unmet need for Kentucky public school facilities. Kentucky continues to have significant unmet needs for primary-grade 12 facilities. A representative from the Kentucky Department of Education reported to the subcommittee that 75 percent of 234 high school facilities as of 2001 are in average to new condition and within a 25 to 30 year life span before they will need major renovation. Twenty-five percent of facilities of existing high schools are in need of renovation or replacement. Most of the vocational facilities in the state were built more than 30 to 40 years ago. The facility program in Kentucky is a partnership between local and state governments with shared funding, responsibility, and authority.

Planning for vocational education facilities is a part of the district facility plans that are required by Kentucky Board of Education specifications promulgated in KAR 702 KAR 4:170. This process, established in 1992, was developed to engage the community in a more comprehensive process with more local decision making. The process requires a study of the cost of delivery of services, transportation, curriculum, condition of facilities, and demographics. The process is an open process whereby a local planning committee is established, which includes parents, teachers, school administrators, a board of education member, and business leaders. The local planning committee and the local board of education develop a district facility plan that describes what facilities should be maintained, and ultimately defines the district capital construction priorities, including potential vocational schools or departments. Public hearings provided additional opportunity for public input. The final district facility plan is sent to the Department of Education for review and then to the Kentucky Board of Education for final approval.

The required long-range facility plan is the mechanism for utilizing restrictive capital funds provided by the General Assembly. Funds from the capital outlay portion of the Support Education Excellence in Kentucky program, the Facilities Support Program of Kentucky, or the School Facilities Construction Commission can only be accessed for priorities listed on the long- range facility plan. All 176 school districts have gone through the planning process at least once since it was established in 1992.

While vocational schools are a part of the overall planning process, the Executive Director of the School Facilities Construction Commission told the Subcommittee on Vocational Education that he did not believe that those districts that send students off campus to state-operated centers think about vocational education as part of their standard facility plans.

Monroe County, a state-operated facility, serving only Monroe County students, opened a new area center in 2002 to replace the old center. It is attached to the high school. This facility was part of the comprehensive planning process described above, and the facility was built with a combination of the state fund sources described above, including FSPK, SFCC funds, and accumulated capital outlay funds. The project cost was \$2.9 million.

Specifications for New Facilities

Kentucky Board of Education administrative regulation 705 KAR 3:141 provides minimum standards for managing and establishing area centers or public high school departments. A copy of this regulation is in Appendix J.

Recent Construction of Vocational School Facilities

Two school districts, Jackson County and Lincoln County, recently constructed new vocational facilities that were not funded through the approved School Facility Planning Process. In addition, the Shelby County school district completed a renovation and expansion utilizing other sources of funds as well.

The superintendents of Jackson County and Lincoln County testified at a subcommittee meeting and described the processes they used to construct their facilities. The superintendent of Shelby County addressed the renovation at the Shelby County Area Technology Center during the subcommittee's site visit.

The superintendent of Lincoln County told the subcommittee that there were several factors leading to the need for additional facilities in Lincoln County, which is a poor county with limited business development. Through a series of local strategic planning sessions, it was determined that Lincoln County was not doing a good job preparing students for the workplace after high school.

Since 1960, Lincoln County vocational students were transported to Garrard County, but it was increasingly difficult to engage students to travel for vocational programs. The district determined it needed increased opportunity for programs near to the students. The district amended its facilities plan to make the creation of the new technical center its number one priority. The district originally felt that a center owned and operated by it would be best because local leaders knew what their needs were. However, leaders decided to pursue funding through contacts with the Cabinet for Workforce Development, which had agreed to operate the school if funded. Bond funds were secured through a line item appropriation of \$2.5 million in the 2000-2002 biennial budget for construction, and \$2.4 million was placed in the Cabinet for Workforce Development's budget for operating the center for FYs 2002-2004. The Lincoln County district continues to send some students to Garrard County to programs that are not duplicated in the new center. The Lincoln County district also retained its existing programs at the high school.

Jackson County's superintendent reported that his district had a similar situation to Lincoln County and noted that the district had a decline in the number of students participating in technical programs because of the travel time required (40-45 minutes one way) to the Clay County Area Technology Center. A survey indicated that students wanted to participate, but travel was prohibiting them from taking part in the programs.

The total funding for the center was slightly more than \$7 million dollars, including the purchase of acreage on which to build the center. Funding was provided as follows: \$2.5 million from the Governor's Surplus Fund in 1998-1999; \$500,000 in coal severance money; and \$583,000 from the Empowerment Zone to fund a theater component within the facility. The local school district provided \$1 million and bonded \$2.5 million. The center houses welding, automotive technology, health services, construction, and wood manufacturing technology. In 2001-2002, \$500,000 was provided to the Cabinet for Workforce Development for operating the new center.

Shelby County, which serves students from Shelby County High, Henry County High, Spencer County High, and Eminence High School, completed a major renovation of the existing facility through a direct appropriation of \$1 million bond funds as well as a contribution of approximately \$200,000 from the Shelby County Board of Education. In renovating this facility, the principal indicated that the square footage was increased by 5,000 square feet, and a new air conditioning system was installed. Major renovations were completed in classrooms in part of the building, which provided opportunity to significantly upgrade the health sciences program. The district was able to access funds from the state appropriation of \$9 million that had been provided to the Department for Technical Education for new programs and equipment.

While no agency or individual testified that these facilities were not needed, the Commissioner of Education testified about the need to address equitable student access to career and technical education programs. He noted that student enrollment in the district where a center is located is much higher in career and technical education than the enrollment of students who must be transported. For example, the Shelby Area Technology Center enrolls 85 percent of its students from Shelby County and 15 percent from the other three participating districts. Therefore, students in outlying districts do not have the same opportunity as students enrolled in districts where a center is located.

He noted that the Lincoln County and Jackson County centers, two of the three new centers to have been constructed in the last 20 years, were initiated by the local boards of education and community leaders working together to secure line item funding through the biennial budget, both of which by-passed the process established through the School Facilities Construction Commission. During this same period of time, multiple comprehensive high schools have been constructed that have included career and technical education programs, but due to construction costs the programs were limited primarily to business education, agrisciences education, family and consumer sciences, and exploratory technology education. Only a few included higher cost Industrial Education Level III or health sciences programs.

He recommended that in order to create a more equitable system of planning, funding, equipping, and operating career and technical education facilities, a career and technical

education program and facilities advisory council review all proposals for new facilities for which line item appropriations are being requested and present its recommendations to the commissioners for the departments of education and technical education to be included in the biennial budget for consideration by the General Assembly. This advisory council would be jointly appointed by the commissioners of education and technical education and would include local and state representation.

Acquisition of Up-to-date Equipment and Technology

Federal Funds

Secondary career and technical education programs may use federal funds for acquiring equipment and instructional materials to keep their programs up-to-date. However, federal funds fall short because these funds are used for a variety of purposes including teacher training, supporting student activities, enrichment, and support services. With the current federal administration pushing for \$200 million in cuts for vocational education, many educators have expressed concern about the impact on current programs.

State Funds

The KY Tech system, the state-operated system, has historically received general fund appropriations for equipment upgrades each biennium, but local school districts have not. In 1990, there was an allocation of \$22 per student enrolled in career and technical education courses that was provided to locally and state-operated programs. The centers that were operated by the state and then transferred to local boards did receive some equipment money for several years but that practice was discontinued in 1994.

Kentucky Education Technology Program

In 1990, state-operated area centers were not included in the Kentucky Education Technology System plans and were not entitled to any funds for upgrading technology in state-operated facilities. Due to the efforts of some local school superintendents and a pilot project completed at the state-operated Shelby County Area Technology Center, schools were allowed to participate on a limited basis. Language has been placed in biennial budgets since 1998-2000 as follows:

Participation in the Education Technology Program by Area Vocational Education Centers: Area Vocational Education Centers shall be fully eligible to participate in the Kentucky Educational Technology System. Notwithstanding KRS 157.650, KRS 157.655, 157.660, and 157.665, the School Facilities Construction Commission, in consultation with the Kentucky Board of Education and the Kentucky Department of Education, shall develop administrative regulations which identify a methodology by which the average daily attendance for Area Vocational Education Centers are equated to the average daily attendance of other local school districts in order that they may receive their respective distributions of these funds. The School Facilities

Construction Commission shall include Area Vocational Education Centers in any offers of assistance to local school districts for technology assistance during the ...fiscal biennium.

New Center Operations and Equipment for KY Tech

In the 2002-2004 biennial budget, general funds of \$2.2 million in FY 2002-2003 and \$1 million in FY 2003-2004 were provided to support the opening of state-operated vocational centers in Jackson County and Lincoln County. This money was for equipment and operations. In addition, there was also \$1.7 million to be used for equipment in KY Tech facilities. There was no equipment appropriation for the locally operated programs.

The superintendents of Franklin County and Union County testified to the Subcommittee on Vocational Education as to the difficulty of keeping programs equipped with up-to-date technologies when there are no funds appropriated for this purpose. Subcommittee members noted that they saw obvious differences in the quality of equipment and instructional materials between programs located in the state-operated center and the locally operated center they visited on the site tours. A representative from the Kentucky Department of Education noted that this would be typical across the state with a few exceptions. He felt this situation was directly tied to the lack of available funds rather than lack of interest and support from local district administrations (Site visit: 2002).

Distance Learning Programs

Distance learning through the use of a variety of technologies, including use of Web-based courses, have not gained widespread use in career and technical education. While the military and some postsecondary education institutions have demonstrated the ability to create viable courses that utilize visual simulations and electronic media to replicate laboratory experiences in electronic fields, engineering, and medical fields, these programs have been slow to develop in career and technical centers.

One career and technical course is currently provided through the Kentucky Virtual High School in business information processing. However, a KY Tech official suggested greater use of the Virtual High School may be a way to increase student access to career and technical programs at the secondary level in geographic areas where building facilities and equipping new programs would be overly costly and inefficient. Another official from the Department of Education concurred but suggested a study be conducted relating to scholarships for students in geographically isolated areas to gain access to courses on the Virtual High School or other funding mechanisms to make it more appealing to local school districts (Interview: Nunn and Kelly, 2003).

CHAPTER VI

FINDINGS AND RECOMMENDATIONS

Subcommittee members were united in their view of the continuing importance of career and technical education. Many students enter the work force directly from high school and need job skills, occupational skills, and academic skills to find and maintain employment. While manufacturing and "blue collar" occupations have changed significantly and technology has eliminated many entry-level positions, manufacturers and craft fields report a shortage of skilled workers in the new technologies (Brannock, 2000). Members noted that career and technical education can provide an appropriate, alternative path within secondary education, though it should be a no less rigorous path, to teach core content to those students who learn best in a laboratory setting.

FINDINGS

1. Career and technical education programs continue to be important program options within secondary education.
2. Funding inequities continue to exist between programs located in local school districts and the KY Tech system, although the supplemental funds provided to local school districts have been beneficial. For example the formula does not provide additional funding to those school districts that may offer a technical or high-cost technical program in comprehensive high schools.
3. The funding formula to distribute supplemental funds to local school districts has provided a fair distribution process, though the funding level is insufficient.
4. Career and technical education providers have made progress in addressing accountability of programs and student performance, but it is too soon to determine the overall impact of these efforts.
5. There has been a lack of consistent policy in the funding of vocational facilities.
6. While some believe there is inequitable access to programs, there is no statewide inventory of programs to identify underserved geographic areas, or to identify new programs needed to serve high-demand employment areas.

RECOMMENDATIONS RELATING TO CAREER AND TECHNICAL EDUCATION

The Subcommittee acknowledges both short-term and long-term recommendations with the understanding that the current revenue projections limit opportunity to increase funds for career and technical education immediately. However, the committee strongly believes that quality, accessible secondary career and technical education is vital to a responsive overall educational system.

Funding

Recommendation #1

The General Assembly should, at a minimum, maintain the current funding levels for all service providers of secondary career and technical education during the 2004-2006 biennium. As money becomes available, increases in funding for high-needs, high-demand technical programs should take priority.

Recommendation #2

The General Assembly should, at a minimum, maintain the current funding level for the 2004-2006 biennium of the supplemental funds provided in the biennial budget to support locally operated centers and should maintain the requirement that these funds be distributed through a formula as required under KRS 157.069

Recommendation #3

The General Assembly should, beginning with the 2006-2008 biennium, increase the funding level of the supplemental funds provided in the biennial budget to support locally operated programs to provide a higher percentage of the costs of these programs.

Recommendation #4

The General Assembly should request that the Interim Joint Committee on Appropriations and Revenue's Budget Review Subcommittee on Education study the appropriations for locally operated and the state-operated KY Tech system to determine the actual level of increased funds that would be necessary to bring funding parity between the two delivery systems and to project a methodology for providing those increases over the subsequent two biennia.

Facilities and Equipment

Recommendation #1

The General Assembly and the Kentucky Board of Education should retain vocational facilities development as a part of the overall elementary/secondary facility planning process, including planning for operations and maintenance.

Recommendation #2

The General Assembly should appropriate funds in the 2004-2006 biennium for equipment and maintenance at least equal to the current appropriation for the KY Tech system and should

establish an equipment allocation to distribute to the locally operated schools, which would be a proportionately comparable allocation.

Use of the money should be restricted to those programs that require equipment upgrades to meet the standards for equipment as defined by the Kentucky Department of Education and the Department for Technical Education in the joint comprehensive plan required under KRS 158.814. If the standard equipment lists do not reflect today's industry standards, these lists should be revised before funds are distributed.

Program Access

Recommendation #1

The Kentucky Department of Education and the Department for Technical Education, as a part of their obligation under KRS 158.814 to develop a comprehensive plan for career and technical education by January 1, 2004, should immediately start a process to identify the geographic areas, including specific schools where students lack access to high-needs, high-demand occupational programs, and to prioritize where new programming should be considered when funds become available.

Recommendation #2

The Kentucky Department of Education and the Department for Technical Education should study how distance learning may be used to enhance student access to secondary career and technical education programs. One component of the study should be to determine how the Virtual High School could be used to provide career and technical education courses; another should investigate the practicality of teaching high-cost laboratory courses through technology simulations. The study should include recommendations to be provided the Interim Joint Committee on Education by July 31, 2004.

Recommendation #3

Efforts should be continued to enable students to participate in dual credit and dual enrollment courses. The Council on Postsecondary Education, with cooperation of all the governing boards of Kentucky's public postsecondary education institutions, should investigate during the 2004 calendar year whether dual credit courses and transfer of courses are actually enabling students to have time-shortened programs before earning a postsecondary credential. Also, they should investigate whether current policies enable students to transfer credits easily among public institutions in Kentucky and to use them in meeting required degree components. The Council on Postsecondary Education should confer with the Department of Education and the Department for Technical Education during this study.

Recommendation #4

The Kentucky Board of Education and the Council on Postsecondary Education through the state P-16 Council should study current graduation requirements and develop guidelines to help local school districts provide opportunities for students to concentrate on a career and technical education program. The study should determine if requirements, such as foreign language, should be moved when possible to the elementary or middle school program to make time for career and technical education programs. The agencies should continue to consider the comparability and

desirability of selected career and technical courses substituting for specific content requirements toward graduation and, when appropriate, the Kentucky Board of Education should extend approval. They should confer with the Department of Education and the Department for Technical Education during this study.

Assessment and Accountability

Recommendation #1

The Kentucky Department of Education and the Department for Technical Education should continue to conduct curriculum and program assessments of technical education programs and assist with the development of program improvement plans. These agencies should report to the Interim Joint Committee on Education by July 30, 2004, regarding whether or not the assessment process is providing any return on the investment of time and resources and if there is evidence of upgraded programming, improved instruction, and improved student performance.

Recommendation #2

The Department of Education and Department of Technical Education should continue to develop programs built around industry standards and skills certifications whenever appropriate. The departments should annually review the passage rates of students in attaining skills certificates or passage rates on licensure examinations that may be available to secondary students. Pass rates should be reviewed as one indicator of program quality.

Recommendation #3

Local boards of education, the Department of Technical Education, and the Kentucky Department of Education should review disaggregated CATS data, NAEP data, and any other available test data to gauge the performance levels of career and technical education students. Deficiencies should be noted and teachers should be assisted to revise instructional strategies and practices to improve student performance.

Other

Recommendation # 1

The Subcommittee recommends that further study be conducted by the Interim Joint Committee on Education or a subcommittee relating to the delivery system of secondary career and technical education, including administration and structure, and that a report be presented to the Legislative Research Commission by August 31, 2004.

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APPENDIX A

PERSONS PROVIDING TESTIMONY TO THE SUBCOMMITTEE ON VOCATIONAL EDUCATION 2001 through 2003

STATE AGENCIES

Education Professional Standards Board

Mr. Wendell Cave, Staff Assistant

Ms. Mary Ellen Wiederwohl, Director

Legislative and Public Relations

Kentucky Department of Education

Dr. Johnnie Grissom, Associate Commissioner

Office of Special Instructional Services

Mr. Rodney Kelly, Division Director

Secondary Career and Technical Education

Ms. Pam Moore, Education Consultant

Skills Standards Implementation

Mr. Mark Ryles, Director

Division of Facilities Management

Ms. Pat Vencill, Education Consultant

Perkins Implementation

Mr. Gene Wilhoit, Commissioner

Department for Technical Education

Ms. Emily Horton

Branch Manager for Budget

Mr. Emil Jezik, Commissioner

Mr. Tony Nunn, Division Director

Administrative Services

Ms. Mary Stratton, Deputy Commissioner

Ms. Myra Wilson, Assessment Branch Supervisor

Mr. Roye Wilson, Division Director

Administration and Finance

School Facilities Construction Commission

Dr. Robert Tarvin, Executive Director

SCHOOL DISTRICTS

Franklin County Schools

Mr. Monte Chance, Superintendent

Ms. Karen Schneider, Principal

Franklin County Career and Technical Education

Center

Jackson County Schools

Mr. Ralph Hoskins, Superintendent

Mr. Lonzo Moore, Principal

Jackson County Technology Center

Lee County Schools

Mr. Frank Kincaid, Superintendent

Lincoln County Schools

Mr. Danny Godbey, Superintendent

Russell County Schools

Mr. Scott Pierce, Superintendent

Shelby County Schools

Ms. Debbie Anderson, Principal

Shelby County Area Technology Center

Dr. Leon Mooneyhan, Superintendent

Ms. Laura Young, Student

Shelby ATC

Union County Schools

Mr. David Holland, Superintendent

POSTSECONDARY EDUCATION INSTITUTIONS

Kentucky Community and Technical College System

Dr. Keith Bird, Chancellor

Murray State University

Dr. Paul McNeary, Retired Professor

APPENDIX B

SELECTED HISTORICAL EVENTS IMPACTING KENTUCKY VOCATIONAL EDUCATION

- 1917 Smith-Hughes Act: Provided grants to states for support for vocational education. This provided the formal beginning of vocational education in Kentucky including agriculture, home economics, and industrial education in local high schools.
- 1938 The Kentucky General Assembly established two schools:
- Mayo State Vo-Tech School, Paintsville
- West Kentucky Vocational Training School for Negroes, Paducah
- 1940's Other schools were started by local districts to take advantage of the Veteran's Training Act programs.
- 1944 The General Assembly created the Northern Kentucky State Vocational School.
- 1946 George-Barden Act: Expanded federal support for vocational education.
- 1954 The General Assembly created the Foundation Program, which provided "bonus" classroom units for funding vocational education classes.
- 1958 National Defense Education Act: Provided assistance to state and local school systems for strengthening instruction in science, mathematics, foreign languages, and other critical subjects; improvement of state statistical services; guidance, counseling, and testing services and training institutes; higher education student loans and fellowships experimentation and dissemination of information on more effective use of television, motion picture, and related media for education purposes; and vocational education for technical occupations, such as data processing, necessary to the national defense.
- 1962 Seven local districts requested legislative action to move the following schools to be operated by the State Board of Education:
- Ashland Area Vocational School, Ashland
- Harlan Area Vocational School, Harlan
- Hazard Area Vocational School, Hazard
- Jeffersontown Area Vocational School, Jeffersontown
- Madisonville Area Vocational School, Madisonville
- Somerset Area Vocational School, Somerset
- West Area Vocational School, Bowling Green
- 1962-1964 Several area vocational education centers were constructed with 100 percent local funds but began operations as extension centers of the state-operated schools. They were:
- Union County AVEC, Morganfield (Completed 1964)
- Morgan County AVEC, West Liberty (Completed 1960)
- Garth AVEC, West Liberty (Completed 1960)
- Millard AVEC, Pike County (Completed 1965)
- Knox County AVEC, Barbourville (Completed 1962)
- 1963 Manpower Development and Training Act: Provided training in new and improved skills for the unemployed and underemployed.
- 1963 Vocational Education Act of 1963: Increased federal support of vocational education, including support of residential vocational schools, vocational work study programs and research, training, and demonstrations in vocational education. This Act was inspired by Kentucky's model of

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vocational education centers and was sponsored by Congressman Carl D. Perkins, U.S. House Education Chairman.

Higher Education Facilities Act: Authorized grants and loans for classrooms and laboratories in public community colleges and technical institutes as well as for undergraduate and graduate facilities in other institutions of higher education.

- 1964 Economic Opportunity Act: Authorized grants for college work-study programs for students of low-income families; established a Job Corps program and authorized support for work training programs to provide education and vocational training and work experience for unemployed youth; provided training and work experience opportunities in welfare programs; authorized support of education and training activities and community action programs including Head Start, Follow Through, Upward Bound, authorized the establishment of the Volunteers in Service to America, commonly called VISTA.
- 1965 The Lafayette Area Vocational School, Lexington, became a state school known as Central Kentucky Vocational-Technical School.
- Establishment of the Appalachian Regional Commission, initially containing 49 counties in eastern Kentucky, which were now eligible for federal construction funds up to 80 percent of the construction and equipment cost.
- 1966 The Owensboro Area Vocational School, Owensboro, transferred to state control.
- 1968 Federal vocational education amendments: Changed the basic formula for allotting federal funds; provided for a National Advisory Council on Vocational Education, expanded vocational education services to meet the needs of the disadvantaged, and required the collection and dissemination of information on programs administered under the Federal Vocational Education Act.
- 1970's Secondary enrollment in state-operated facilities declined and local administrators were encouraged to enroll adults in slots previously reserved for secondary students in area centers.
- 1972 Federal education amendments: Established a National Institute of Education; provided general aid for institutions of higher education and federal matching grants for state student incentive grants; established a National Commission on Financing Postsecondary Education, a State Advisory Councils on Community Colleges, and a Bureau of Occupational and Adult Education; provided state grants for the design, establishment, and conduct of postsecondary occupational education; and created a bureau-level Office of Indian Education.
- 1973 Comprehensive Employment and Training Act (CETA): Consolidated previous labor and public service programs; authorized funds for employment counseling, supportive services, classroom training, training on the job, work experience, and public service employment; incorporated essential principles of revenue sharing, giving state and local governments more control over use of funds and determination of programs.
- 1974 The Kentucky General Assembly eliminated the bonus value of vocational classroom units with a deduction in the calculation.
- Federal education amendments: Established the National Center for Educational Statistics; continued research activities under the Education for the Handicapped Act.
- 1975 Education for All Handicapped Children Act: provided free, appropriate public education to the handicapped; provided funds to integrate handicapped children into regular schools and classes to the maximum extent possible.

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- 1976 Federal education amendments: Extended and revised the Vocational Education Act of 1963 and the Vocational Education Amendments of 1968; permitted more latitude to states in the use of funds by consolidation of programs into the basic grant, except for special programs for the disadvantaged, consumer and homemaking education, bilingual vocational training, and emergency assistance for remodeling and renovating vocational education facilities.
- 1977 Career Education Incentive Act: Assisted states and local education agencies and institutions of postsecondary education in making preparation for work a major goal of all who teach and all who learn.
- Governor Julian Carroll established a State Board for Occupational Education as a part of the Kentucky Department of Education.
- 1978 The Occupational Board was confirmed by the General Assembly.
- Comprehensive Employment and Training Amendments of 1978: Provided for continuation of the Comprehensive Employment and Training Act of 1973 and the Manpower Development and Training Act of 1962; ensured coordination and cooperation among all federal, state, and local private and public agencies involved in the vocational education and training of workers.
- 1980's Twelve schools formerly operated by the Kentucky Department of Education were contracted to local control: Allen County; Ballard County; Boyd County; Carter County; Covington Independent-Chapman School; Fayette County, Eastside and Westside; Franklin County; Grayson County; Lewis County; Marshall County; and Union County.
- 1982 Authority for the Kentucky Occupational Board was repealed.
- 1982 Jobs Training Partnership Act, commonly referred to as JTPA, replaced CETA and put new emphasis on directing monies through local private industry councils and eliminated much of the public works employment. Emphasized helping underemployed and displaced workers.
- 1984 Carl D. Perkins Act: Replaced the 1976 amendments on vocational education; emphasized services to the handicapped; removed regular money for maintenance of programs; emphasized program improvement; opened up opportunity for community-based organizations to participate; and earmarked money for special categories, such as programs in correctional facilities.
- 1985 The General Assembly granted Jefferson County a special appropriation for equipment.
- 1986 A line item general fund appropriation was included in the Kentucky Department of Education budget to provide supplemental funds to districts operating departments and area centers including: Bowling Green Independent, Edmonson County, Fleming County, Lawrence County, Magoffin County, McCreary County, Newport Independent, Powell County, Simpson County, Jefferson County, and those that had been transferred from the Kentucky Department of Education to local control.
- 1988 The Kentucky General Assembly created a State Board for Adult, Vocational Education, and Vocational Rehabilitation.
- 1990 The Kentucky General Assembly created a Cabinet for Workforce Development. The cabinet included a State Board for Adult and Technical Education and a Department for Adult and Technical Education. This action removed the state-operated vocational-technical system and the sole state agency responsibility for the federal program from the Kentucky Department of Education. Responsibility for secondary vocational education curriculum standards and responsibilities remained with the Kentucky Department of Education. The title "KY Tech" was established to describe the state-operated system.

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- 1990 The Kentucky Education Reform Act was passed and created expectations for locally operated secondary schools, but did not address the issue for state-operated secondary programs and included funding for the state-operated programs in the Support Education Excellence in Kentucky program
- 1992 The General Assembly adopted an average daily attendance (ADA) deduct of .30 for students attending a state-operated vocational school or center for the time spent there.
- 1992-1998 State and federal initiatives focused on Tech Prep and High Schools That Work.
- 1997 The General Assembly adopted the Postsecondary Improvement Act that created the Kentucky Community and Technical College System. This system assumed governance of the state-vocational technical schools in 1998, but permitted some secondary students through agreement with the Cabinet for Workforce Development to be served in the technical colleges.
- 1998 The General Assembly created the School-to-Careers program with limited funding for programs in the local school districts.
- 1998 Adopted language in the budget bill to permit participation of state-operated area technology centers in the Education Technology Program and to describe procedures for a local district to request the transfer of a state-operated center to the control of a local board of education and how funds were to be transferred.
- 2000 Christian County and Henderson County Boards of Education assumed control of their area centers.
- 2000 The General Assembly eliminated the vocational education deduct for students attending state-operated programs.
- 2000 The General Assembly increased set aside funds for supplementing costs to local school districts for operating area technology centers or vocational departments and established formula requirements in the budget bill.
- 2001 Adopted HB 185 that specified the purposes of vocational education, required a study of funding, and specified a funding formula for distribution of supplemental funds to selected school districts, previously stated in the budget bill.

Sources: Cabinet for Workforce Development, Resource Document: Secondary Vocational Education. Frankfort: 1992; Legislative Research Commission, historical files.

APPENDIX C

AGRICULTURE EDUCATION

Course Title	Recommended Grade Level						Recommended Credit ***
	7	8	9	10	11	12	
Agri-Biology ****			x	x	x	x	1
Agriscience Exploration	x	x					NA
Principles of Agr Sci & Tech		x	x				1
Agriscience				x	x		1
Animal Science				x	x		1
Equine Science					x	x	1
Animal Technology *					x	x	1
Adv. Animal Science **						x	1
Plant and Land Science				x	x		1
Crop Technology *					x	x	1
Adv. Plant Science **						x	1
Small Power & Equip				x	x	x	1
Agri. Construction Skills *				x	x	x	1
Agri. Structures & Design				x	x	x	1
Agriculture Power and Machinery Operation*				x	x	x	1
Floriculture & Floral Design*				x	x	x	1
Greenhouse Technology *				x	x	x	1
Landscape and Turf Management*				x	x	x	1
Nursery & Orchard Tech.*				x	x	x	1
Agri. Bus/Farm Mgmt *				x	x	x	1
Agri. Employability Skills				x	x	x	1
Agri. Sales & Marketing				x	x	x	1
Agri. Bio-Technology					x	x	1
Agri. Communication				x	x	x	1
Aquaculture				x	x	x	1
Environmental Tech.				x	x	x	1
Food Technology				x	x	x	1
Forestry				x	x	x	1
Small Animal Tech. *				x	x	x	1
Wildlife Resources				x	x	x	1
Adv. Wildlife Mgmt. **						x	1

* These courses may be offered for additional units of credit providing the course content material in each section of the course is different.

** These courses can provide college credit when all course guidelines are met. Instruction provided over KET and coordinated by the local agriculture instructor.

*** All courses may be offered for less than one credit based on the local school schedule.

**** Interdisciplinary course that meets the life science requirement for science credit.

APPENDIX C

BUSINESS EDUCATION

Course Title			Recommended Grade Level								Recommended Credit
	4	5	6	7	8	9	10	11	12		
Business Economics**						x	x	x	x	½- 1	
Touch Keyboarding for 4-6 th Grade	x	x	x							N/A	
Business and Marketing Career Exploration				x	x	x				1	
Exploratory Computers				x						1	
Keyboarding Applications					x	x				1	
Computer & Technology Applications						x	x	x	x	1	
Advanced Computer Applications							x	x	x	1-3	
Mathematics for Business and Industry						x	x	x		1	
Business Principles and Applications						x	x			1	
Accounting I						x	x	x		1	
Accounting II*							x	x	x	1-3	
Financial Services I*							x	x	x	1-3	
Financial Services II*								x	x	1-3	
Advanced Finance and Credit*											
Business Law*							x	x	x	1-3	
Business Management*								x	x	1-3	
Business Technology						x	x	x	x	1	
Entrepreneurship*								x	x	1-3	
Word Processing						x	x	x	x	1	
Business Communication*								x	x	1-3	
Electronic Office*								x	x	1-3	
Multi-Media Publishing*							x	x	x	1-3	
International Business*								x	x	1-3	
Medical Office*								x	x	1-3	
Legal Office*								x	x	1-3	

* Credit may be awarded for junior/senior level courses for both the related class (1 credit) and the work-site experiences. The credit for work-site experiences is based on the number of class hours spent at the work site for a maximum of two (2) credits per related class.

** Business Economics is an interdisciplinary course which meets the graduation requirement for Economics.

FAMILY AND CONSUMER SCIENCES

Course Title	Recommended Grade Level							Recommended Credit
	6	7	8	9	10	11	12	
* Nutritional and Food Science					x	x	x	1
*Consumer Economics					x	x	x	½
Introductory Life Skills	x	x	x					
Life Skills				x	x			1
Apparel Management					x	x	x	½
Career and Family					x	x	x	½
Careers in Interiors/Furnishings						x	x	2
Child Development Services I						x	x	3
Child Development Services II							x	3
Child/Human Development					x	x	x	1
Commercial Foods I						x	x	3
Commercial Foods II							x	3
Culinary Skills						x	x	1
Foods					x	x	x	½
Housing Environments					x	x	x	½
Parenting					x	x	x	½
Relationships					x	x	x	½
Specialized Services in Hospitality					x	x	x	1
Textile Services						x	x	2

***Interdisciplinary Course** which meet requirements for high school graduation.

Overview of Family and Consumer Sciences

Family and Consumer Sciences Education prepares students for family life, work life and careers in Family and Consumer Sciences. Opportunities are provided to develop knowledge and skills that focus on career majors/clusters. These include Family and Consumer Sciences Education, Child Care, Food Service, Housing and Interiors, Textiles and Apparel, Hospitality Services and Family Services.

A statewide articulation agreement in Early Childhood Education provides students an opportunity to proceed in the identified child development areas in a non-duplicative manner from the secondary level to postsecondary technical and/or higher education.

Units of instruction at the middle school level introduce students to the field of Family and Consumer Sciences. At the secondary level in-depth courses allow students to pursue specific career majors/clusters and participate in work-based learning.

HEALTH SCIENCE

Course Title	Recommended Grade Level				Recommended Course Credit
	9	10	11	12	
*Medical Science		x	x	x	1
*Health & Wellness		x	x	x	½-1
Health Science Introduction	x	x	x	x	1
Emergency Procedures		x	x	x	½-1
Medical Math		x	x	x	½-1
Medical Terminology		x	x	x	½
Health Care Fundamentals			x	x	1-2
Advanced HCS/Practicum			x	x	1-3
◦ Medicaid Nurse Aide			x	x	1

*Interdisciplinary Courses. May be taught for required graduation requirement. See Course Overview and description for details.

◦Curriculum available through Kentucky Workforce Cabinet, Department for Technical Education.

Overview of Health Sciences Program

The Health Sciences Program provides the secondary student with orientation, exploration, and preparation into the health care industry. Courses are sequenced to provide continuous student progress toward achievement of the career major goal. The integration of mathematics, science, communication and technical knowledge is a vital component of each course offering.

This program assists the student in developing essential cognitive, affective, and psychomotor skills. The program is designed for students who desire entry-level training and/or plan to enroll in a post secondary program in one of many occupational areas in the health field. After obtaining a satisfactory performance level in the health care core competencies, the student may obtain work experience in a health-related facility.

Why a Health Science Program?

Career/Technical program offerings should always be based on the needs of the community and state. Students should have the opportunity to obtain training in fields of study that offer the probability of employment once that training is completed. Currently, Kentucky joins a nationwide shortage of health care workers. At a time when many industries are laying off thousands of employees, the health care industry is one of the largest industries in the country, with about 11.3 million jobs. About 14% of all wage and salary jobs created between 1998 and 2008 will be in health services. Twelve out of 30 occupations projected to grow the fastest are concentrated in health services.

INDUSTRIAL EDUCATION

Course Title	Recommended Grade Level				Recommended Credit
	9	10	11	12	
Air Conditioning Technology		x	x	x	½-8
Automotive Technology		x	x	x	½ -8
Aviation Technology		x	x	x	½ -8
Collision Repair and Refinish Technology		x	x	x	½ -8
Commercial and Recreational Small Engine Technology		x	x	x	½ -8
Electronics Technology		x	x	x	½ -8
Computer Aided Drafting		x	x	x	½-8
Computer Systems Technology	x	x	x	x	½ -8
Desktop Publishing		x	x	x	½-8
Diesel Technology		x	x	x	½-8
Industrial Automation Technology		x	x	x	½ -8
Industrial Chemical Technology		x	x	x	½ -8
Industrial Electronics Technology		x	x	x	½-8
Industrial Maintenance Technology		x	x	x	½-8
Machine Tool Technology		x	x	x	½ -8
Major Appliance Technology		x	x	x	½-8
Masonry		x	x	x	½-8
Metal Fabrication		x	x	x	½-8
Multimedia Technology		x	x	x	½-8
Plastics Technology		x	x	x	½-8
Plumbing Technology		x	x	x	½ -8
Printing Technology		x	x	x	½ -8
Residential/Commercial Carpentry		x	x	x	½ -8
Residential/Commercial Electricity		x	x	x	½ -8
Telemedia Technology		x	x	x	½ -8
Visual Communication Art Technology		x	x	x	½-8
Welding		x	x	x	½ -8
Wood Products Manufacturing		x	x	x	½ -8

Overview of Industrial Technology Education

Industrial Education programs are designed to provide specialized skills related to a variety of occupations. Emphasis is placed upon employability skills, state and national skill standards and student transition to post-secondary education or the work place. The content of Industrial Technology Education is organized around four distinct program organizers: **Communication, Construction, Manufacturing and Transportation**. The programs are intended to be relevant to the modern workplace as related to technology, academics, skill standards and technical skills.

APPENDIX C

INFORMATION TECHNOLOGY

Course Title	Recommended Grade Level				Recommended Course Credit
	9	10	11	12	
*Computer and Technology Applications	x				1
*Computer Support Essentials		x			1
*Help Desk				x	1
*Multimedia Publishing		x			1
*Web Page Design			x		1
Career Major Title					
Computer Maintenance & Support Services		x	x	x	1-8
Networking**		x	x	x	1-8
Programming**		x	x	x	1-8
Web Design**		x	x	x	1-8

*These classes were developed by the Division of Career & Technical Education. They may be used to fulfill “Career Major” requirements in one or more of the 4 approved “Career Majors” in Information Technology. They are “non-vendor” or “vendor neutral” classes.

**The specific classes that may be utilized in planning a “course of study” in these 4 “Career Majors” may be found in the attached “Career Cluster/Career Major” course sequence documents. Many of these classes are either *CompTIA* generated or “Vendor” produced classes. Specific course content/curriculum should be obtained from these sources.

APPENDIX C

MARKETING EDUCATION

Course Title	Recommended Grade Level						Recommended Credit*
	7	8	9	10	11	12	
Business Economics**			x	x	x	x	½-1
Business & Marketing Career Exploration	x	x	x				1
Business Principles and Applications			x	x			1
Principles of Marketing			x	x	x	x	1-3
Sales & Customer Services				x	x	x	1-3
Advertising Services				x	x	x	1-3
Marketing Communications				x	x	x	1-3
Presentation Skills for Marketing*				x	x	x	1-3
E-Commerce					x	x	1-3
Retail Marketing				x	x	x	1-3
Introduction to Hospitality				x	x	x	1
Travel and Tourism Marketing				x	x	x	1-3
International Marketing					x	x	1-3
Sports and Entertainment Marketing				x	x	x	1-3
Entrepreneurship					x	x	1-3
Advertising/Promotion I				x	x	x	1-3
Advertising/Promotion II					x	x	1-3
Fashion Marketing I				x	x	x	1-3
Fashion Marketing II					x	x	1-3
Financial Services I				x	x	x	1-3
Financial Services II					x	x	1-3
Advanced Finance and Credit					x	x	1-3
Retail Services I				x	x	x	1-3
Retail Services II					x	x	1-3
Business Management					x	x	1-3
Advanced Marketing					x	x	1-3

*Credit may be awarded for Junior/Senior courses for both the related class (1 credit) and for work-site experiences. The credit for work-site experiences is based on the number of class hours spent at the work site for a maximum of two (2) credits per related class.

**Business Economics is an interdisciplinary course which meets the graduation requirement for Economics.

APPENDIX C

TECHNOLOGY EDUCATION

Course Title	Recommended Grade Level							Recommended Credit
	6	7	8	9	10	11	12	
Introduction to Communication	x	x	x	xx				½*
Introduction to Production	x	x	x	xx				½*
Introduction to Transportation	x	x	x	xx				½*
Survey of Technology	x	x	x	xx				½*
xx Only when 9 th grade is housed at the middle school *Credit is granted only when offered at the 9th grade level **This course may be scheduled for 1 year or 2 semesters and credit granted only when offered at the 9 th grade level								
Overview of Technological Systems				x	x	x	x	2*
Production Systems				x	x	x	x	1
Communication Systems				x	x	x	x	1
Transportation Systems				x	x	x	x	1
Bio-Related Systems				x	x	x	x	1
Construction Technology					x	x	x	1
Drafting/Computer Assisted Design Technology					x	x	x	
Electricity/Electronics Technology					x	x	x	1
Graphics Communications Technology					x	x	x	1
Manufacturing Technology					x	x	x	1
Special Problems in Technology Education					x	x	x	1
* This course may be scheduled for a two-hour period or offered for two years.								

Overview of Technology Education

Technology education should enrich students' lives in school and beyond. It should assist students in learning to live with technology, while retaining their individual human identity in a world often dominated by technology. Technology education students should learn basic, conceptual content that endures, transcending time and specific application.

Technology education should be about learning to assess when, why, or even *if* technology should be used. These assumptions spring from a belief that, in order for students to fully develop and enhance their technological literacy, a quality technology education program should provide opportunities to

- ⇒ Apply a systems approach, 21st century skills (e.g., creative problem-solving, critical thinking, teamwork, leadership, acceptance of personal responsibility), and a variety of resources (including information, tools, and materials) to solve technical problems.

APPENDIX C

PATHWAY TO CAREERS

Course Title	Recommended Grade Level							Recommended Credit
	6	7	8	9	10	11	12	
Career Choices	x	x	x					N/A
Career Choices				x				½
Career Options: Level I				x	x	x	x	1
Career Networking: Level II					x	x	x	1
Career Work Experience: Level III						x		3*
Career Work Experience: Level IV							x	3*

* High school credit for this course is to be determined at the district level based on the number of hours students are working in business/industry.

Overview of Pathway to Careers

Pathway to Careers is a program area in Career and Technical education which provides a continuum of career education experiences. Career Choices in the middle school is an exploratory course which introduces students to a broad range of career opportunities. For secondary students, Career Options and Career Networking offer opportunities to develop job finding and keeping skills and focus on orientation and exploration in the fourteen career clusters. Upon completion of Career Options and Networking students may select a career major or Career Work Experience to complete his/her program.

Incorporated in the Pathway to Careers curriculum are basic concepts of human relations, life skills, overview of career clusters and opportunities for work-based learning. Students are encouraged to participate in cooperative education and other work-based learning experiences. Cooperative Education Consists of in-school instruction combined with on-the-job work experience. Specific guidelines are outlined in 705 KAR 4:041. Information on other types of work-based learning are described in detail in the document Work-based Learning Guide 2000, which is available on the KDE web page at: [www.kde.state.ky.us/careerandtechnicaleducation/resources and publications](http://www.kde.state.ky.us/careerandtechnicaleducation/resources%20and%20publications).

One of the expectations of students enrolled in Career and Technical Education programs is to declare a career major which needs to be done by the tenth grade. In an effort to assist students in this process, Career Options in the Pathway to careers Program may serve as one of the four credits needed for a career major in agriculture, business/marketing, family and consumer sciences, health science, industrial education, information technology and technology.

These courses are open to all students and provisions are to be made for meeting the diverse needs of all learners. The Pathway to Careers program is based upon needs assessment of students including vocational assessment and Individual Graduation Plans.

APPENDIX D

Vocational Education Area Centers Selected Historical Information & Current Service Relationships

Introduction: The following information provides the original dates of approval by the Kentucky State Board of Education (formerly the Board for Elementary and Secondary Education); the date funding was approved; opening date; costs and source of funding as well as information relating to the governance and operations. In some cases data is unavailable Listed under the name of the center are the names of schools served by the center, the distance students travel, and the enrollment by headcount and full time equivalency based on a three hour period for the 2002-003 school year as provided by the Department for Technical Education. Some school districts send students to multiple centers, including counties that have area centers within their own county, but send students across county lines to access programs not otherwise available. The term "Region" refers to the general area of the state. The acronym "AVEC" stands for area vocational education center in this document although most of the centers are now called area technology centers or other names locally.

Some information is incomplete as data was not readily available. Further, some of the state-vocational technical schools that are now part of the Kentucky Community and Technical College System were originally called "area vocational-technical schools" and were operated by local boards of education initially are not included in this list. The state-operated area centers listed below were referred to as "extension centers". Originally, the area "extension" centers were accredited as a part of a state vocational technical school.

In the chart, the name of the center reflects the school district that owns the building or if the area center name does not include the district, the district is enclosed in parenthesis. Key: HC-headcount FTE full time equivalent

REGION	AREA CENTER/SCHOOLS SERVED Student Enrollment in 2002-2003	YEAR	COST	SOURCES OF FUNDING	LOCALLY OPERATED	STATE OPERATED
West	Ballard County AVEC Ballard County HS 1 HC 0.25 FTE On campus of the HS	1976- bd. app. 1977- opened	\$1,000,000	50% state/50% local	Since 7/1/80	Until 7/1/80
West	Fulton County AVEC Fulton City HS 20 miles, 346 HC, 73.67 FTE Fulton Independent HS-walk, 8 HC, 40. FTE Hickman County HS 18 miles, 15 HC, 7.50 FTE	1971- bd. app. 1972- funded 1973- opened	\$552,000	50% state/50% local		✓
West	Marshall County AVEC Marshall Co HS, 569 HC, 89.75 FTE	1971- bd app 1972- funded 1973- opened	\$540,000	50% federal/50% local	Since 7/1/84	Until 7/1/84
West	Mayfield/Graves Co. AVEC Carlisle County HS- 30 miles, 15 HC, 3.75 FTE Graves County HS- 7 miles, 140 HC, 52.00 FTE Mayfield Independent HS- walk, 194 HC, 41.75 FTE	1971- bd app 1972- funded 1973- opened	\$515,200	80% federal/20% local		✓

Sources: Data from the Department for Technical Education (April- 2003); Data from the Kentucky Department of Education, May, July 2001; *Resource Document: Secondary Vocational Education*, Cabinet for Workforce Development, August 1992; *Construction of Vocational Education Facilities to be Operated Under the Management and Control of the State Board of Education*- State Department of Education, Bureau of Vocational Education, Frankfort: 1976. Document REVISED by LRC Staff, May 2003.

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REGION	AREA CENTER/SCHOOLS SERVED Student Enrollment in 2002-2003	YEAR	COST	SOURCES OF FUNDING	LOCALLY OPERATED	STATE OPERATED
West	Murray AVEC Calloway County HS- 2 miles, 228 HC, 101.25 FTE Murray Independent HS- walk, 70 HC, 20.17 FTE	1969- bd app 1970- funded 1972- opened	\$650,000	55% federal/18% state/ 27% local		✓
West	Paducah AVEC McCracken County Heath HS- 11.5 miles, 44 HC, 21.17 FTE Lone Oak HS- 8 miles, 54 HC, 25.50 FTE Reidland HS- 7 miles, 41 HC, 21.83 FTE Paducah-Tilghman HS- walk, 222 HC, 51.92 FTE St. Mary HS 18 HC, 7.17 FTE	1964- bd app 1965- funded 1966- opened	\$679,981	50% federal/50% state		✓
	Paducah AVEC Expansion	1974 bd app. 1974- funded 1975- opened	\$161,517	45% federal/50% state/5% local		
West	Caldwell County AVEC Caldwell County-HS walk, 162 HC, 55.50 FTE Crittenden County -HS 23 miles, 28 HC, 1.00 FTE Dawson Springs Ind. HS-17 miles, 14 HC, 6.50 FTE Lyon County HS-12.5 miles, 31 HC, 15.75 FTE Trigg County HS , 29 HC, 14.50 FTE	1973- bd app. 1973- funded 1976- opened	\$900,000	45% federal/50 % local/5% state		✓
West	Trigg County Voc. Dept. Trigg Co HS walk, 917 HC, 211.58 FTE				✓	
West	Christian County AVEC Christian Co HS, 448 HC, 129.50 FTE Christian Co Learning Academy Christian County AVEC Expansion	1964- bd app. 1964- funded 1966- opened 1973- bd approved 1973- funded 1975- opened	\$240,754 \$300,000	50% federal/50% local 50% federal/50% local	Since 1999-2000	Until 1999-2000
West	Muhlenburg County AVEC Muhlenburg County N HS 2 miles, 87 HC, 38.50 FTE Muhlenburg County S HS 6 miles, 43 HC, 18.50 FTE Muhlenburg County AVEC Expansion	1965- bd app 1965- funded 1966- opened 1974- bd app 1975- opened	\$324,000 \$200,000	50% federal/50% local 50% federal/50% local		✓

Sources: Data from the Department for Technical Education (April- 2003); Data from the Kentucky Department of Education, May, July 2001; *Resource Document: Secondary Vocational Education*, Cabinet for Workforce Development, August 1992; *Construction of Vocational Education Facilities to be Operated Under the Management and Control of the State Board of Education*- State Department of Education, Bureau of Vocational Education, Frankfort: 1976. Document REVISED by LRC Staff, May 2003.

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REGION	AREA CENTER/SCHOOLS SERVED Student Enrollment in 2002-2003	YEAR	COST	SOURCES OF FUNDING	LOCALLY OPERATED	STATE OPERATED
West	Henderson County AVEC Henderson Co HS, HC, FTE (NO ENROLLMENT ENTERED FOR 02-03)	1964- bd app. 1967- funded 1968- opened	\$371,000	50% federal/50% local	Since 1999-2000	Until 1999-2000
West	Henderson County AVEC Expansion Ohio County AVEC Ohio Co HS walk, 6598HC, 347 FTE	1973- bd app. 1973- funded 1975- opened 1972- bd app. 1976- funded 1976- opened	\$200,000 \$1,056,297	50% federal/50% local 50% federal/50% local		✓
West	Union County AVEC Union Co HS, 490 HC, 99.50 FTE	1962- bd app. 1964- funded 1964- opened	\$175,000	100% local	Since 7/1/88	Until 7/1/88
Southern	Allen County AVEC Allen Co HS, 890 HC, 228.75 FTE	1967- bd app. 1967- funded 1969- opened	\$350,370	50% federal/50% local	Since 7/1/81	Until 7/1/81
Southern	Franklin-Simpson Dept (Simpson County) Franklin-Simpson HS- 807 HC, 102 FTE	1973-bd app			✓	
Southern	Bowling Green Ind Dept Bowling Green HS-533 HC, 59.92 FTE				✓	
Southern	Barren County AVEC (replaced old Glasgow AVEC) Barren County HS- walk, 366 HC, 133.00 FTE Caverna Independent HS-14 miles, 19 HC, 8.92 FTE Glasgow Independent HS-3.3 miles, 32 HC, 15.25 FTE	1971- bd app 1972- funded 1974- opened	\$700,000	50% federal/50% local		✓
Southern	Hart County HS-25 miles, 11 HC, 5.25 FTE Metcalfe County HS-22 miles, 99 HC, 30...33 FTE Edmonson County Department Edmonson HS, 712 HC, 220.00 FTE	1979-bd approved			✓	
Southern	Monroe County AVEC Monroe County HS- 0 miles, 486 HC, 133.75 FTE	1968- bd app 1969- funded 1971- opened 2002 – new open	\$400,000 \$2,900,000	80% federal/20% local FSPK, SFCC, C.Outlay		✓
Southern	New ATC constructed & joined to the high school Russellville AVEC Logan County HS-4 miles, 269 HC, 75.50 FTE Russellville Independent HS-walk, 308 HC, 87 FTE Todd County Central HS-15 miles, 42 HC, 18 FTE Russellville AVEC Expansion	1964- bd app 1968- funded 1971- opened 1973	\$300,000 \$ 16,944	50% federal/50% local 100% local		✓

Sources: Data from the Department for Technical Education (April- 2003); Data from the Kentucky Department of Education, May, July 2001; *Resource Document: Secondary Vocational Education*, Cabinet for Workforce Development, August 1992; *Construction of Vocational Education Facilities to be Operated Under the Management and Control of the State Board of Education*- State Department of Education, Bureau of Vocational Education, Frankfort: 1976. Document REVISED by LRC Staff, May 2003.

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REGION	AREA CENTER/SCHOOLS SERVED Student Enrolled in 2002-2003	YEAR	COST	SOURCES OF FUNDING	LOCALLY OPERATED	STATE OPERATED
Southern	Casey County AVEC Casey County HS-walk, 560 HC, 159 .25FTE	1968- bd app 1969- funded 1970- opened	\$400,000	80% federal/20% local		✓
Southern	Clinton County AVEC Clinton County HS- .5 mile, 464 HC, 90.17 FTE Cumberland County HS-20.7 miles, 48 HC, 23.67 FTE	1964- bd app 1967- funded 1969- opened	\$351,583	80% federal/20% local		✓
Southern	Green County AVEC Green County HS- walk, 459 HC, 112.50 FTE Campbellsville Ind. HS- 14 miles, 27 HC, 13..50 FTE Taylor County HS- 14 miles, 59 HC, 29.50 FTE Green County AVEC Expansion	1965- bd app 1968- funded 1968- opened 1970- bd app 1970- funded 1972- opened	\$399,773 \$300,000	80% federal/20% local 80% federal/20% local		✓
Southern	Lake Cumberland AVEC (Russell County) Adair County HS- 16 miles, 67 HC, 26.50 FTE Russell County HS- walk, 305 HC, 84.00 FTE	1965- bd app 1966- funded 1967- opened	\$272,250	80% federal/20% local		✓
Southern	Wayne County AVEC Monticello Ind. HS- 1.5 miles, 17 HC, 4.25 FTE Wayne County HS- .5 miles, 769 HC, 215.33 FTE	1969- bd app 1969- funded 1971- opened	\$450,000	80% federal/20% local		✓
Southern	McCreary County Voc. Dept. McCreary HS- 521 HC, 156.50.FTE				✓	
Northwest	Breckenridge County AVEC Breckenridge Co HS- walk, 453 HC, 138.33 FTE Frederick Fraize HS(Cloverport)- 14 miles, 15 HC, 6.83 FTE Homeschool -2 HC, .067 FTE	1967- bd app 1969- funded 1970- opened	\$455,861	49% federal/51% local		✓
Northwest	Grayson County AVEC Grayson HS- 457 HC, 85.75 FTE	1974-bd app 1977-opened	\$827,600	50% state/50% local	Since 7/1/83	Until 7/1/83

Sources: Data from the Department for Technical Education (April- 2003); Data from the Kentucky Department of Education, May, July 2001; *Resource Document: Secondary Vocational Education*, Cabinet for Workforce Development, August 1992; *Construction of Vocational Education Facilities to be Operated Under the Management and Control of the State Board of Education*- State Department of Education, Bureau of Vocational Education, Frankfort: 1976. Document REVISED by LRC Staff, May 2003.

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REGION	AREA CENTER/SCHOOLS SERVED Student Enrollment in 2002-2003	YEAR	COST	SOURCES OF FUNDING	LOCALLY OPERATED	STATE OPERATED
Northwest	Meade County AVEC Meade Co HS walk, 318 HC, 127.83 FTE	1974- bd app 1974- funded 1975- opened	\$1,350,000	30% federal/50% local/20% state		✓
Northwest	Detrick AVEC -Jefferson Co* (no longer in operation; magnet programs moved to other schools)	1969- bd app 1971- funded 1972- opened	\$800,000	50% federal/50% local	✓	
Northwest	Fairdale AVEC -Jefferson Co* (selected programs now a part of Fairdale HS Career Magnet)	1969- bd app 1971- funded 1973- opened	\$1,540,644	39% federal/61% local	✓	
Northwest	Pleasure Ridge Park AVEC-Jefferson Co* (selected programs now a part of Pleasure Ridge Park HS Career Magnet)	1969- bd app 1971- funded 1971- opened	\$2,018,573	30% state/70% local	✓	
Northwest	Westport Road AVEC-Jefferson Co* (no longer in operation; magnet programs moved to other schools)	1974- bd app 1974- funded 1975- opened	\$2,785,500	100% local	✓	
Northwest	Oldham County AVEC Buckner Alter. HS 14miles, 5 HC, 5 FTE Henry Co HS- 17.5 miles, 15 HC, 7.50 FTE Oldham Co HS- .5 miles, 59 HC, 29.25 FTE South Oldham HS- 6 miles, 94 HC, 47.00 FTE	1975- bd app 1980- opened	\$1,563,460	50%federal/50%local		✓
Northwest	Shelby County AVEC Eminence Ind. HS- 15 miles, 11 HC, 5.00 FTE Shelby County HS- walk, 817 HC, 227.50 FTE Spencer County HS- 22 miles, 28 HC, 12.50 FTE	1965- bd app 1969- funded 1969- opened	\$457,639	49% federal/51% local		✓
North Central	Shelby County Renovation Boone County AVEC Boone Co HS- 7.5 miles,49 HC, 24.50 FTE Conner Sr. HS- walk, 103 HC, 44.25 FTE Ryle HS- 9 miles, 23 HC, 11.50 FTE Walton Verona Ind.- 15 miles, 18 HC, 5.75 FTE Grant County HS- 36 miles, 39 HC, 19.50 FTE	2000-funded 1971- bd app 1972- funded 1974- opened	\$1,200,000 \$800,000	83% state 17% local 50% federal/50% local		✓

* Jefferson County reorganized its area centers and distributed the programs among high schools identified to house magnet programs in the early 90's. Jefferson County also formerly operated Ahren Vocational-Technical High School which dated back to 1913. A new building was constructed around the existing structure by the Louisville Independent School District which opened in 1926. The facility went through expansion and renovations in 1939- 1963. Pursuant to federal court orders to desegregate schools- the Ahrens Vocational-Technical High School was classified in 1975 as a district high school in Jefferson County. This school is now known as the Ahrens Educational Resource Center and no longer functions as a vocational center.

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REGION	AREA CENTER/SCHOOLS SERVED Student Enrolled in 2002-2003	YEAR	COST	SOURCE OF FUNDING	LOCALLY OPERATED	STATE OPERATED
North	Campbell County AVEC (called CE McCormick ATC) Bellevue Ind. HS-15 miles, 19 HC, 9.50 FTE Bishop Brossart HS- walk, 22 HC, 11.00 FTE Campbell Co HS- 5 miles, 162 HC, 74.00 FTE Comm'ty Christian-20 miles, 2 HC, 2 FTE Dayton HS- 14.4 miles, 119 HC, 5 FTE Highlands HS-12 miles, 20 HC, 10.00 FTE Newport Alter.- 7 miles- none Newport HS- 13.5 miles, 15 HC, 7.50 FTE Pendleton Co HS- 22 miles, 49 HC, 24.50 FTE Silver Grove HS- 8 miles, 17 HC, 8.00 FTE Newport Ind. Dept. Newport HS -297 HC, 105.75 FTE	1972- bd app. 1972- funded 1973- opened	\$806,800.	49% federal/51% local		✓
North	Newport HS -297 HC, 105.75 FTE				✓	
North	Carroll County AVEC Carroll County HS-walk, 315 HC, 102.50 FTE Gallatin County HS-20 miles,6 HC, 3.00 FTE Owen County HS-33 miles, 56 HC, 28.00 FTE Trimble County HS- 16 miles, 37 HC, 18.50 FTE	1966- bd app. 1968- funded 1969- opened	\$450,000	50% federal/50% local		✓
North	Chapman Academic/Vocational Covington Ind. HS	1980- opened	\$2,884,599	42% federal/15% state/43% local	Since 7/1/81	Until 7/1/81
North	Kenton County AVEC (called JD Patton ATC) Beechwood Ind. HS. 4 miles, 6 HC, 3.00 FTE Boone Co HS- 7.5 miles, 7 HC, 3.50 FTE Boone Co-Ryle HS- 9 miles, 2 HC, 2 FTE Boone Co-Scott HS- 10 miles, 51 HC, 25.50 FTE Covington Catholic HS- 7 miles, 11 HC, 5.50 FTE Dixie Heights HS- 1 mile, 57 HC, 28.50 FTE Erlanger-Lloyd HS- 3 miles, 11 HC, 11 FTE Ludlow Ind. HS- 10 miles, 4 HC, 2.00 FTE Newport Alter. HS- 0 Simon Kenton HS- 11 miles, 89 HC, 44.50 FTE St. Henry HS- 3.5 miles, 3 HC, 1.50FTE	1972- bd app. 1972- funded 1975- opened	\$1,296,000	49% federal/1% local/50% state		✓

Sources: Data from the Department for Technical Education (April- 2003); Data from the Kentucky Department of Education, May, July 2001; *Resource Document: Secondary Vocational Education*, Cabinet for Workforce Development, August 1992; *Construction of Vocational Education Facilities to be Operated Under the Management and Control of the State Board of Education- State Department of Education*, Bureau of Vocational Education, Frankfort: 1976. Document REVISED by LRC Staff, May 2003.

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Geographic Region	AREA CENTER/SCHOOLS SERVED Student Enrollment in 2002-2003	YEAR	COST	SOURCE OF FUNDING	LOCALLY OPERATED	STATE OPERATED
Central	Clark County AVEC George Rogers Clark HS, 130 HC, 58.25 FTE (used to serve Paris Ind./Bourbon County)	1967- bd app. 1968- funded 1970- opened	\$402,848	80% federal/20% local		✓
Central	Franklin County AVEC Served Franklin /Frankfort Ind. Franklin HS-454 HC, 52.75 FTE	1967- bd app. 1968- funded 1969- opened	\$409,735	49% federal/51% local	Since 7/1/81	Until 7/1/81
Central	Garrard County AVEC Boyle County HS- 15 miles, 15 HC, 6.50 FTE Danville Ind. HS- 12 miles, 108 HC, 26.58 FTE Garrard County HS- walk, 75 HC, 26.58 FTE Lincoln County HS- 11 miles, 71 HC, 27.00 FTE	1965- bd app. 1966- funded 1967- opened	\$303,993	60% federal/40% local		✓
Central	Harrison County AVEC Bourbon County HS- 18 miles, 91 HC 28.50 FTE Paris Ind., 18 miles, 73 HC, 3 FTE Harrison County HS- walk, 506 HC, 147.00 FTE Nicholas County HS- 19 miles, 36 HC, 10.25 FTE Pendleton County HS- 22 miles, 40 HC, 14.25 FTE	1967- bd app 1968- funded 1969- opened	\$450,000	50% federal/50% local		✓
Central	Harrodsburg AVEC Anderson County HS- 19 miles, 87 HC, 41.25 FTE Burgin Ind. HS- 6.2 miles, 30 HC, 12.92 FTE Harrodsburg HS- 2.5 miles, 41 HC, 15.50 FTE Mercer County HS- 1 mile, 203 HC, 69.25 FTE	1966- bd app 1969- funded 1970- open	\$450,000	50% federal/ 50% local		✓
Central	Lincoln County ATC Lincoln County HS – walk, 696 HC, 116.25, FTE	2002 - opened	\$5,600,000	45% state 55% local		✓
Central	Madison County AVEC Berea Community HS-15 miles, 15 HC, 5.75 FTE Madison Central HS-walk, 747 HC, 203.50 FTE Madison Souther HS-22 miles, 88 HC, 35.25 FTE Model Laboratory HS-4 miles, 7 HC, 1.7.5 FTE Estill, 92 HC, 44.75 FTE	1967- bd app. 1968- funded 1970- opened	\$428,860	80% federal/ 20% local		✓

Sources: Data from the Department for Technical Education (April- 2003); Data from the Kentucky Department of Education, May, July 2001; *Resource Document: Secondary Vocational Education*, Cabinet for Workforce Development, August 1992; *Construction of Vocational Education Facilities to be Operated Under the Management and Control of the State Board of Education*- State Department of Education, Bureau of Vocational Education, Frankfort: 1976. Document REVISED by LRC Staff, May 2003.

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REGION	AREA CENTER/SCHOOLS SERVED	YEAR	COST	SOURCE OF FUNDING	LOCALLY OPERATED	STATE OPERATED
Central	Student Enrollment in 2002-2003 Southside AVEC (Fayette Co) ** Now called Southside Center for Applied Technology Receives some students from Woodford and Scott County 184 HC, 92 FTE	1975- bd app 1978- opened	\$2,014,500	39% state/61% local	Since 7/1/87	Until 7/1/87
Northeast	Mason AVEC (originally owned by Maysville Ind) Augusta Ind.- 21 miles, 9 HC, 4.50 FTE Bracken County- 18.5 miles, 56 HC, 28.00 FTE Mason County- .4 miles, 153 HC, 61.17 FTE Deming HS- 25 miles, 16 HC, 9 FTE St. Patrick H.S.- 3 miles, 3 HC, 2 FTE Faith Academy- 4 miles, 1 HC, 1 FTE	1965- bd app 1965- funded 1967- opened	\$350,610	50% federal/50% local		✓
Northeast	Fleming County Dept. Fleming HS 938 HC, 114 FTE				✓	
Northeast	Montgomery County AVEC Bath Co HS- 15 miles, 20 HC, 6.67 FTE Menifee Co HS 21 HC, 7.00 FTE Montgomery HS- walk, 586 HC, 151.83 FTE	1966- bd app 1966- funded 1967- opened	\$286,211	80% federal/20% local		✓
Northeast	Morgan County AVEC Morgan Co HS-walk, 445 HC, 125.00 FTE	1960- opened	\$75,000	100% local		✓
	Morgan County AVEC Expansion.#1	1971- bd approved 1971- funded 1973. opened	\$480,000	80% federal/20% state		
	Morgan County AVEC Expansion #2	1974- bd app 1974- funded 1976- opened	\$168,250	80% federal/16% state/4% local		
Northeast	Powell County Dept. Powell Co HS 697 HC, 206.25 FTE				✓	

** Fayette County owned and operated the Lafayette Area Vocational Education Center that was moved to a state school in 1965 and eventually replaced with Central Kentucky Vocational Technical School. Fayette County eventually had two state-operated centers Northside and Southside which were state operated until 1987.

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REGION	AREA CENTER/SCHOOLS SERVED Student Enrollment in 2002-2003	YEAR	COST	SOURCE OF FUNDING	LOCALLY OPERATED	STATE OPERATED
Northeast	Lawrence County Dept Lawrence Co HS 1,012 HC, 252.92 FTE	1971- bd app 1972- funded 1975- opened	\$950,000	80% federal/20% local	✓	Until 7/1/83
Northeast	Boyd County AVEC Boyd County HS 673 HC, 181.92 FTE	1967- bd app 1967- funded 1968- opened	\$390,000	80% federal/20% state	Operated by district; state; returned to district on 7/1/83	Briefly in the 80's
Northeast	Carter County AVEC Carter HS-37 HC, 67.50 FTE	1975-bd approved 1966- bd app 1967- funded 1968- opened	\$398,866	80% federal/20% state	✓	✓
Northeast	Russell AVEC Russell Ind. HS- walk, 389 HC, 20.67 FTE Raceland HS- 3.5 miles, 19 HC, 7.00 FTE Fairview HS- 5 miles, 26 HC, 6.50 FTE	1973- bd app 1973- funded 1976- opened	\$1,231,250	62% federal/18% state/20% local		✓
East	Belfry AVEC (Pike County) Belfry HS-232 HC, 62.33 FTE PHELPS HS-4 HC, 2.00 EFT Pike Co. Central HS-39 HC, 12.33 EFT	1962- bd app 1966- funded 1966- opened	\$383,820	80% federal/20% local		✓
East	Floyd County AVEC(Garth) Allen Central HS- 6 miles, 40 HC, 20.00 FTE Betsy Layne HS- 17 miles, 40 HC, 19.42 FTE Prestonsburg HS- 16 miles, 220 HC, 55.92 FTE South Floyd HS- 18 miles, 15 HC, 7.50 FTE	1962- bd app 1964- funded 1964- opened	\$167,456	100% local		✓
	Floyd County AVEC Expansion	1971- bd app. 1971- funded 1974- opened	\$250,000	80% federal- 20% local		
East	Magoffin County High School Department Magoffin HS-591 HC, 130.00 FTE	1973- bd app 1974- funded 1976- opened			✓	
East	Martin County AVEC Sheldon Clarlk-. 5 miles, 303 HC, 111.25 FTE	1964- bd app 1966- funded	\$386,000	80% federal/20% local		✓

Sources: Data from the Department for Technical Education (April- 2003); Data from the Kentucky Department of Education, May, July 2001; *Resource Document: Secondary Vocational Education*, Cabinet for Workforce Development, August 1992; *Construction of Vocational Education Facilities to be Operated Under the Management and Control of the State Board of Education*- State Department of Education, Bureau of Vocational Education, Frankfort: 1976. Document REVISED by LRC Staff, May 2003.

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Geographic REGION	AREA CENTER/SCHOOLS SERVED Student Enrollment in 2002-2003	YEAR	COST	SOURCE OF FUNDING	LOCALLY OPERATED	STATE OPERATED
East	Millard AVEC (Pike County) Elkhorn City HS- 15 miles, 3 HC, 1.50 FTE Millard HS- walk, 14 HC, 4.67 FTE Pike Central- 20 miles, 36 HC, 15.00 FTE Shelby Valley HS- 18 miles, 34 HC, 14.25 FTE Millard AVEC Expansion.	1962- bd app 1962- funded 1962- opened 1974- bd app 1980- opened	\$155,000 \$828,409	100% local 65% federal/2% state/ 33% local		✓
East	Phelps AVEC Feds Creek HS- 15 miles, 5 HC, 21 FTE Phelps HS- walk, 73 HC, 30.83 FTE Pike Central HS- 35 miles, 36 HC, 15.00 FTE	1972- bd app 1972- funded 1976- oprnrf	1,166,400	56% federal/21% state/23% local		✓
Southeast	Breathitt County AVEC Breathitt Co HS-walk, 356 HC, 94.25 FTE Jackson Ind. HS, .8 mile, 50 HC, 6.08 FTE	1962- bd app 1962- funded 1963- opened				✓
Southeast	Breathitt County AVEC Expansion. Jackson County ATC Jackson County HS-walk, 385 HC, 64.25 FTE	1966- bd app 1966- funded 1968- opened 2001- opened	\$419,000 \$4,700,000	60% federal/40% local 5% federal 30% state 65% local		✓
Southeast	Knott County AVEC Knott Central HS- 2 miles, 429 HC, 130.67 FTE Cordia, 105 HC, 2.67 FTE Pearl Combs Alternative, 11 HC, 4.25 FTE	1966- bd app 1966- funded 1969- opened	\$448,044	80% federal/20% local		✓
Southeast	Lee County AVEC Lee County HS- less than mile, 313 HC, 86.92 FTE Owsley County- 11 miles, 14 HC 5.83 FTE Wolfe County- 21 miles, 50 HC, 22.33 FTE Lee County Expansion	1965- bd app 1966- funded 1967- opened 1975- bd app but not funded	\$391,158	80% federal/20% local		✓
Southeast	Leslie County Leslie Co HS-walk, 647 HC, 147.83	1968- bd app 1969- funded 1971- opened	\$480,810	80% federal/20% local		✓

Sources: Data from the Department for Technical Education (April- 2003); Data from the Kentucky Department of Education, May, July 2001; *Resource Document: Secondary Vocational Education*, Cabinet for Workforce Development, August 1992; *Construction of Vocational Education Facilities to be Operated Under the Management and Control of the State Board of Education*- State Department of Education, Bureau of Vocational Education, Frankfort: 1976. Document REVISED by LRC Staff, May 2003.

APPENDIX D

Geographic REGION	AREA CENTER/SCHOOLS SERVED Student Enrollment in 2002-2003	YEAR	COST	SOURCE OF FUNDING	LOCALLY OPERATED	STATE OPERATED
Southeast	Letcher County Fleming-Neon HS- 11 miles, 29 HC, 16 FTE Jenkins HS- 14 miles, 22 HC, 18 FTE Letcher Co. HS- 15 miles, 17 HC, 11.34 FTE Whitesburg HS- 2.5 miles, 289 HC, 188.84 FTE	1965- bd app 1966- funded 1968- opened	\$489,602	80% federal/20% local		✓
	Letcher County Expansion	1971- bd app 1973- funded 1973- opened 1974- bd ap additional land purchase	\$93,200	80% federal/20% local		
Southeast	Bell County AVEC Bell Co HS-5 miles, 147 HC, 75.00 FTE Middlesboro HS-16 miles, 143 HC, 68.00 FTE Pineville HS-4 miles, 23 HC, 11.50 FTE	1965-bd app 1966-funded 1967-opened	\$400,622	80% federal/20% local		✓
	Bell County AVEC Expansion Bell County AVEC Expansion	1970-bd app 1970-funded 1971-opened 1974-bd app not funded until later; additional renovations in '80's	\$250,000	80% federal/20% local		
Southeast	Clay County AVEC Clay County HS-7 miles, 200 HC, 89.33 FTE Jackson County HS-22 miles, 550 HC, 20 FTE	1964-bd app 1966-funded 1967-opened	\$468,012	80% federal/20% local		✓
	Clay County AVEC Expansion Corbin AVEC Corbin Ind.HS-walk, 259 HC, 76.50 FTE Whitley County-14 miles, 29 HC, 13.75 Williamsburg Ind. HS-17 miles, 6 HC, 3.00 FTE	1975-bd app 1965-bd app 1966-funded 1968-opened	\$363,000	80% federal/20% local		✓

Sources: Data from the Department for Technical Education (April- 2003); Data from the Kentucky Department of Education, May, July 2001; *Resource Document: Secondary Vocational Education*, Cabinet for Workforce Development, August 1992; *Construction of Vocational Education Facilities to be Operated Under the Management and Control of the State Board of Education- State Department of Education*, Bureau of Vocational Education, Frankfort: 1976. Document REVISED by LRC Staff, May 2003.

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Geographic REGION	AREA CENTER/SCHOOLS SERVED Student Enrollment in 2002-2003	YEAR	COST	SOURCE OF FUNDING	LOCALLY OPERATED	STATE OPERATED
Southeast	Knox County AVEC Barborville HS-1 mile, 60 HC, 14.83 FTE Knox Co HS-walk, 369 HC, 89.17 FTE Lynn Camp HS-17 miles, 61 HC, 15.42 FTE Knox Co Learning Center-22 miles, 15 HC, 6.17 FTE Knox County AVEC Expansion	1962-bd app 1963-opened 1966-bd app 1966-funded 1967-opened	\$55,000 \$200,769	100% local 80% federal/20% local		✓
Southeast	Rockcastle County AVEC Rockcastle HS-walk 516 HC-156.75 FTE	1966-bd app 1967-funded 1969-opened	\$385,967	80% federal/20% local		✓

Sources: Data from the Department for Technical Education (April- 2003); Data from the Kentucky Department of Education, May, July 2001; *Resource Document: Secondary Vocational Education*, Cabinet for Workforce Development, August 1992; *Construction of Vocational Education Facilities to be Operated Under the Management and Control of the State Board of Education*- State Department of Education, Bureau of Vocational Education, Frankfort: 1976. Document REVISED by LRC Staff, May 2003.

APPENDIX E

Program Enrollment

Friday, April 25, 2003

Agency:	KDE	Effective Year:	2002-2003
Institution Name:	ALL	Program Level:	ALL
Program:	ALL	Section:	ALL
Program Definition:	ALL	Termination Status:	ALL
Student Objective:	ALL	Duplicates:	Duplicates
Education Level:	High School		
Student Criteria:	<i>Aggregate</i>		
Order By:	<i>Program</i>		

		HS	LAVEC	TOTAL
Program	ACCOUNTING SERVICES [52.0301]	811	336	1,147
Program	ADMINISTRATIVE SUPPORT SERVICES [52.0401]	4305	950	5,255
Program	ADVERTISING SERVICES [09.0201]	78	0	78
Program	AGRIBUSINESS [01.0101]	1176	184	1,360
Program	AGRICULTURAL MECHANICS/ENGINEERING [01.0201]	1760	343	2,103
Program	AGRICULTURAL PRODUCTION [01.0301]	6649	542	7,191
Program	AIR CONDITIONING TECHNOLOGY [47.0201]	0	85	85
Program	ALLIED HEALTH [51.0000]	296	1368	1,664
Program	AUTOBODY/COLLISION REPAIR TECH [47.0603]	0	388	388
Program	AUTOMOTIVE TECHNOLOGY [47.0604]	155	1014	1,169
Program	AVIATION TECHNOLOGY/FLIGHT	0	61	61
Program	BUSINESS MANAGEMENT [52.0201]	1896	834	2,730
Program	CAREER CHOICES [32.0194]	191	0	191
Program	CAREER EXPLORATION LEVEL III (DISABLED) [32.0195]	17	0	17
Program	CAREER NETWORKING: LEVEL II [32.0196]	313	0	313
Program	CAREER OPTIONS: LEVEL I [32.0197]	983	0	983
Program	CAREER WORK EXPERIENCE: LEVEL III [32.0198]	266	0	266
Program	CAREER WORK EXPERIENCE: LEVEL IV [32.0199]	175	0	175
Program	CARPENTRY [46.0201]	130	866	996
Program	CHILD DEVELOPMENT [20.0201]	3427	392	3,819
Program	COMMUNICATIONS ELECTRONICS [47.0105]	0	177	177
Program	COMPUTER AIDED DRAFTING [48.0101]	32	335	367
Program	COMPUTER INFORMATION SYSTEMS TECH [52.1000]	30	0	30
Program	COMPUTER MAINTENANCE AND SUPPORT SERV [47.0104]	20	384	404
Program	COMPUTER PROGRAMMING [11.0201]	0	40	40
Program	CONSTRUCTION TECHNOLOGY [15.1001]	39	0	39
Program	CONSUMER SERVICES [19.0403]	282	0	282
Program	COOPERATIVE WORK EXP (DISABLED) [32.0903]	8	0	8
Program	COOPERATIVE WORK EXP (DISADV) [32.0803]	81	0	81
Program	COSMETOLOGY	0	8	8
Program	CULINARY ARTS [20.0401]	1023	167	1,190
Program	DEVELOPMENTAL OCCUP PGMS LVL 1 (DISADV) [32.0801]	46	0	46
Program	DIESEL TECHNOLOGY [47.0605]	0	150	150
Program	ELECTRICITY [46.0302]	0	398	398

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Program	ELECTROMECHANICAL TECH	0	181	181
Program	ENVIRONMENTAL SCIENCE TECHNOLOGY [15.0599]	0	13	13
Program	EXPLORATORY AGRICULTURE [01.9990]	10657	0	10,657
Program	EXPLORATORY BUSINESS EDUCATION [52.9990]	32314	0	32,314
Program	EXPLORATORY HEALTH [51.9990]	646	0	646
Program	EXPLORATORY HUMAN SERVICES [20.9990]	20810	0	20,810
Program	EXPLORATORY INFORMATION TECHNOLOGY [11.9990]	153	0	153
Program	EXPLORATORY MARKETING [08.9990]	1408	0	1,408
Program	EXPLORATORY TECHNOLOGY EDUCATION [41.0000]	1300	0	1,300
Program	FAMILY AND CONSUMER SCIENCES EDUCATION [20.0101]	9691	147	9,838
Program	FAMILY SERVICES [20.0602]	2399	86	2,485
Program	FINANCIAL SERVICES BE [52.0803]	1097	211	1,308
Program	FINANCIAL SERVICES ME [08.0401]	99	0	99
Program	FIRE PROTECTION/SAFETY TECH	0	324	324
Program	FORESTRY/RESOURCE MANAGEMENT [03.0101]	181	50	231
Program	GENERAL RETAILING/WHOLESALE [08.0705]	1552	292	1,844
Program	HEALTH SCIENCES [51.1100]	92	0	92
Program	HEAVY HIGHWAY CONSTRUCTION	0	63	63
Program	HORTICULTURE [01.0601]	3255	618	3,873
Program	HOSPITALITY SERVICES [20.0499]	168	0	168
Program	HOSPITALITY, TRAVEL, TOURISM & RECREATIO [08.0901]	116	0	116
Program	HOUSING & INTERIORS [20.0501]	61	37	98
Program	INDUSTRIAL AUTOMATION TECH [15.0699]	0	54	54
Program	INFORMATION PROCESSING SERVICES [52.0407]	887	267	1,154
Program	INFORMATION TECHNOLOGY [52.1200]	746	217	963
Program	LOGISTICS/SUPPLY CHAIN MGMT	0	38	38
Program	MACHINE TOOL TECHNOLOGY [48.0503]	0	239	239
Program	MANAGEMENT ENTREPRENEURSHIP [08.0301]	0	383	383
Program	MANUFACTURING SYSTEMS TECHNOLOGY [15.0603]	555	109	664
Program	MARINE TECHNOLOGY	0	47	47
Program	MARKETING [08.0708]	1139	174	1,313
Program	MASONRY [46.0101]	0	216	216
Program	MEDICAL OFFICE SERVICES [52.0404]	0	70	70
Program	MULTI-PROGRAM EXPLORATION [40.0700]	765	0	765
Program	MULTIMEDIA TECHNOLOGY [10.0101]	0	786	786
Program	NETWORKING [52.1204]	174	589	763
Program	OFFICE/CLERICAL SERVICES [52.0408]	5433	795	6,228
Program	PLUMBING TECH	0	44	44
Program	PRACTICAL NURSING [51.1613]	16	0	16
Program	PRE-ARCHITECTURE	0	44	44
Program	PRE-ENGINEERING [15.0000]	99	204	303
Program	PRE-NURSING [51.2699]	0	224	224
Program	PRINTING TECHNOLOGY [48.0201]	0	320	320
Program	SALES AND SALES OPERATIONS [08.0706]	107	0	107

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Program	SMALL ENGINE REPAIR [47.0606]	0	53	53
Program	SPORTS MARKETING [08.0299]	329	0	329
Program	SPORTS MEDICINE	0	27	27
Program	TECHNOLOGY EDUCATION [41.1000]	16134	1042	17,176
Program	TELEMEDIA TECHNOLOGY [10.0104]	0	157	157
Program	TEXTILES & APPAREL [20.0301]	53	22	75
Program	TRAVEL/TOURISM	0	60	60
Program	VISUAL COMMUNICATIONS ART TECHNOLOGY [50.0402]	0	164	164
Program	VOC IMPROVEMENT/PGM SUPPORTIVE SERV [32.0904]	21	0	21
Program	WEB DESIGN [11.0801]	93	118	211
Program	WELDING [48.0508]	157	862	1,019
Program	WOOD MANUFACTURING TECH [48.0703]	29	8	37
Program	WORLD OF WORK LEVEL I (DISABLED) [32.0901]	19	0	19
Jefferson Co.	JEFFERSON CO. TOTAL ENROLLMENT	15,651		15,651
Grand Total Enrollments		152,595	18,377	170,972
:				

APPENDIX F

VOCATIONAL UNITS UNDER THE FOUNDATION ACT

Vocational units were of two types, *contract* and *non-contract*. *Non-contract* units were allotted to local school districts for each vocational class offered with a minimum of ten and a maximum of twenty-seven pupils in membership. It did not matter whether the non-contract units were for programs in comprehensive high schools or in locally operated centers. *Contract units* were provided to support programs in state-operated facilities, operated by the Kentucky Department of Education. One *contract* unit was based on thirty students attending class three hours per day, five days per week, which was specified in 705 KAR 2:030. Twenty percent (20%) of the *contract* unit funds was transferred to the district owning the area vocational education center in which the classes were held, for the purpose of maintenance, decreasing debt service, and providing for new construction or renovation. Eighty percent (80%) of the funds was transferred to the Kentucky Department of Education, Bureau of Vocational Education for operation of the program, including salaries, equipment, and supplies.

There was variation between the amount of teacher's salary in a *non-contract* unit and the amount in a *contract* unit. The salary portion of a *non-contract* unit for teachers employed by local school districts was based on their rank and experience. The salary portion of a *contract* unit was based on a Rank III teacher with four to nine years experience and one month extended employment.

APPENDIX G

Secondary Programs Designated for Funding Weights Under the Equalization Formula for Locally Operated Vocational Centers

Programs	Technical Skill*	High-Cost Technical Skill**
<u>AGRICULTURE</u>		
Agricultural Production	X	
Agribusiness	X	
Agricultural Mechanics/Engineering		X
Agricultural Processing/Distribution	X	
Horticulture		X
Forestry/Resource Management	X	
<u>MARKETING</u>		
Advertising Services	X	
Apparel & Access/Fashion Merchandising	X	
Financial Services	X	
Food Market Retailing	X	
General Marketing	X	
General Retailing/Wholesaling	X	
Hospitality, Travel, Tourism & Recreation	X	
Hotel/Motel Services	X	
Management Entrepreneurship	X	
Sports Marketing	X	
<u>HUMAN SERVICES</u>		
Child Care	X	
Family and Consumer Sciences Education	X	
Family Services	X	
Food Service		X
Hospitality Services	X	
Housing and Interiors	X	
Textiles and Apparel	X	
Cosmetology	X	
<u>HEALTH SCIENCES</u>		
Allied Health	X	
Dentistry	X	
Medicine	X	
Nursing	X	
<u>BUSINESS</u>		
Accounting Services	X	
Administrative Support Services	X	
Business Management	X	
Financial Services	X	
General Office/Clerical Services	X	
Information Processing Services	X	
Legal Office Services	X	
Medical Office Services	X	

*Programs that require technical equipment, but high-cost technical equipment, facilities, and materials are not needed to operate the program.

** Technical programs that require high-cost technical equipment, materials, and facilities.

APPENDIX G

<u>INDUSTRIAL TECHNOLOGY EDUCATION</u>	Technical Skill	High-Cost Technical Skill
Aircraft Maintenance		X
Air Conditioning Technology	X	
Automotive Technology		X
Aviation Technology		X
Building Maintenance	X	
Collision Repair and Refinish		X
Commercial/Recreational Small Engine	X	
Communications Electronics		X
Computer Aided Drafting		X
Computer Systems Technology		X
Desktop Publishing		X
Diesel Technology		X
Electromechanical Tech		X
Environmental Tech Prep	X	
Fire Protection & Safety Tech		X
Flight		X
Industrial Automation Technology		X
Industrial Chemical Processes		X
Industrial Electronics Technology		X
Industrial Systems Maintenance		X
Machine Tool Technology		X
Major Appliance Technology	X	
Manufacturing		X
Marine Technology		X
Masonry	X	
Metal Fabrication		X
Multimedia Technology		X
Plastics Technology		X
Plumbing Technology	X	
Pre-Engineering		X
Printing Technology		X
Residential-Commercial Carpentry		X
Residential-Commercial Electricity		X
Telemedia Technology		X
Visual Communication Art		X
Welding		X
Wood Products Manufacturing		X
<u>TECHNOLOGY</u>		
Technology Education	X	

Source: Kentucky Department of Education

APPENDIX H Funding Plan For Locally Operated Vocational Centers

School	FTE**	Level II Program	Level III Program	2001-2002 Actual Cost	Final Allocation		Non-Funded Differences
					2001-2002	2001-2002	
ALLEN COUNTY*	103	6	2	\$536,588.39	\$237,810.00	\$298,778.39	
BALLARD COUNTY*	90	2	5	\$557,529.60	\$217,262.00	\$340,267.60	
BOWLING GREEN IND.	46	6	5	\$385,709.00	\$102,241.00	\$283,468.00	
BOYD COUNTY*	120	6	6	\$895,377.00	\$305,971.00	\$589,406.00	
CARTER COUNTY*	67	1	4	\$441,833.00	\$185,437.00	\$256,396.00	
COVINGTON IND.*	114	2	10	\$1,712,316.02	\$325,767.00	\$1,386,549.02	
EDMONSON COUNTY	93	5	4	\$671,087.00	\$223,276.00	\$447,811.00	
FAYETTE EAST*	203	1	7	\$1,217,948.03	\$572,682.00	\$645,266.03	
FAYETTE SOUTH*	107	2	5	\$1,080,816.85	\$285,673.00	\$795,143.85	
FLEMING COUNTY	113	7	6	\$572,471.31	\$269,886.00	\$302,585.31	
FRANKLIN COUNTY*	146	1	9	\$538,161.00	\$375,134.00	\$163,027.00	
GRAYSON COUNTY*	96	2	5	\$476,775.00	\$250,590.00	\$226,185.00	
LAWRENCE COUNTY	84	6	6	\$691,893.00	\$197,966.00	\$493,927.00	
LEWIS COUNTY*	174	7	2	\$639,995.00	\$405,706.00	\$234,289.00	
LIVINGSTON COUNTY	49	10	5	\$379,959.70	\$109,007.00	\$270,952.70	
MAGOFFIN COUNTY	120	7	5	\$435,800.00	\$300,875.00	\$134,925.00	
MARSHALL COUNTY*	107	3	5	\$572,839.00	\$286,174.00	\$286,665.00	
MCCREARY COUNTY	122	4	4	\$640,556.00	\$294,444.00	\$346,112.00	
NEWPORT IND.	125	5	4	\$537,289.59	\$287,678.00	\$249,611.59	
POWELL COUNTY	76	6	4	\$590,042.88	\$168,397.00	\$421,645.88	
SIMPSON COUNTY	138	4	16	\$480,870.00	\$363,105.00	\$117,765.00	
TRIGG COUNTY	76	6	3	\$464,131.00	\$170,986.00	\$293,145.00	
UNION COUNTY*	137	11	8	\$524,771.00	\$341,053.00	\$183,718.00	
JEFFERSON COUNTY	1176	43	33	\$6,462,089.00	\$3,035,651.00	\$3,426,438.00	
CHRISTIAN COUNTY*	140	0	0	\$831,222.11	\$498,530.00	\$332,692.11	
HENDERSON COUNTY*	194	0	0	\$919,974.27	\$536,399.00	\$383,575.27	
GRAND TOTALS	4016	153	163	\$23,258,044.75	\$10,347,700.00	\$12,910,344.75	

Source: KY Dept. of Education
*Formerly State Operated Center
**Full time Equivalent Enrollment
The 2002-2003 total allocation is the same as the 2001-2002 allocation.

APPENDIX I

COMMONWEALTH OF KENTUCKY

SCHOOL FACILITIES CONSTRUCTION COMMISSION

FUNDING FORMULA

Projects funded by the School Facilities Construction Commission are based upon a local district facility plan developed between the local boards of education and the Kentucky Board of Education (KBE). Projects are funded in the priority order established by that plan.

The Formula

Needs = The estimated cost of implementing the KBE approved plan for each district.

Local Available Resources = are determined based on end of year financial reports as of June 30 in odd numbered years before the Legislature meets. The sum of the following equals:

Local Available Resources:

- (1) Cash in Building Fund account **Plus**
- (2) Cash in Capital Outlay account **Plus**
- (3) Eighty percent of the bonding potential of Capital Outlay appropriation **Plus**
- (4) Bonding potential of \$0.5 local levy and FSPK equalization **Minus**
- (5) Existing Debt Service

Needs Minus Local Available Resources = Unmet Needs

$$\begin{array}{rcccl} \text{State Appropriation} & & \text{Unmet Needs of a Local District} & = & \text{Amount Available} \\ \text{to SFCC} & \text{X} & \frac{\text{Total State Unmet Need}}{\text{Total State Unmet Need}} & & \text{to Local District} \end{array}$$

i

ⁱ Source: School Facilities Construction Commission

APPENDIX J

ADMINISTRATIVE REGULATION 705 KAR 3:141

705 KAR 3:141. Area center or public high school, standards for vocational department.

RELATES TO: KRS 151B.025, 156.029

STATUTORY AUTHORITY: KRS 156.029, 156.070

NECESSITY, FUNCTION, AND CONFORMITY: KRS 151B.025 transfers authority for state-operated area vocational education centers, except for program standards, to the Department of Adult and Technical Education, Workforce Development Cabinet. This administrative regulation establishes minimum standards for the management of a vocational department of a public high school or an area vocational education center owned by a local school district.

Section 1. A vocational department of a public high school or area vocational education center may be established when the following standards are met:

(1) The facility shall be used exclusively or principally for providing vocational education in no less than five (5) different occupational clusters to students in preparation for entering the workforce or postsecondary education.

(2) The facility shall provide the vocational preparation component of the educational program for a minimum of 180 high school students.

(3) Each vocational education program offered in the facility shall meet the minimum state requirements for teachers, curriculum, and equipment and be approved by the chief state school officer.

(4) For a department constructed as a separate facility to serve two (2) or more high schools in a single local school district, a department constructed as a separate facility to serve two (2) or more high schools in two (2) or more local school districts, and a department constructed as a separate facility to serve only one (1) high school for a single local school district, the administrator of the center shall hold the certificate for administration, supervision, and coordination of vocational education. For a department constructed as an addition to the high school facility which is owned and operated by a single local school district for the benefit of only one (1) high school, the assistant high school principal or vocational education department head may be charged with supervision of the total vocational program; but he or she shall have the administration, supervision, and coordination certificate for vocational education.

(5) The facility shall be available to all residents of the area designated and approved by the State Board for Elementary and Secondary Education.

(6) The center shall be available, on a need basis and with approval of the State Board for Adult and Technical Education, to offer programs for postsecondary students and adults within the designated area.

(7) A minimum of five (5) acres of usable land shall be provided for building, expansion, and parking.

Section 2. The maintenance of area centers shall be provided as follows: maintenance of vocational education facilities owned by the local boards of education shall be the responsibility of the local boards of education and shall be accomplished from funds designated by the State Board for Elementary and Secondary Education. Maintenance shall be in accordance with current and approved plans and specifications filed in the office of the chief state school officer as specified by contractual agreements with the state board or its designated representatives.

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Section 3. Requirements, procedures, and responsibilities in relation to construction of area vocational education schools shall be as follows:

(1) Any local educational agency preparing to construct an area vocational education school shall submit to the chief state school officer an appropriate application with proper explanation and supporting evidence to justify the need. Each local educational agency shall complete the necessary surveys to determine the needs, interests, and abilities of the potential enrollees, the demands of the labor market, and the facilities that can be provided.

(2) The State Board for Elementary and Secondary Education shall approve applications for area vocational education schools before any financial resources available shall be used for construction of a facility. Any local educational agency using local funds for the construction of an area vocational education school shall submit an application for program approval of the facility if operating expenses are anticipated from the financial resources available to the state board.

(3) Facilities which are constructed exclusively or principally for providing vocational education in less than the minimum number of vocational preparation programs as required in administrative regulations pertaining to minimum standards for establishing the facilities shall be constructed without federal financial assistance. The programs to be offered in the facilities shall be approved under normal procedures for operating vocational programs by the local educational agency.

Section 4. Procedures for determining the number of secondary school students eligible for enrollment in area vocational education centers when more than one (1) local school district enrolls students in such a facility shall be as follows:

(1) The enrollment quota for eligible secondary school students, fifteen (15) years of age and older, for each cooperating local school district utilizing the facilities of an area vocational education center shall be determined on a pro rata basis. Quotas shall be determined by the following factors:

(a) The ratio of secondary school students who are enrolled in grades nine (9) through twelve (12) in a given school district to the total number of students enrolled in grades nine (9) through twelve (12) in all of the cooperating local school districts;

(b) The total enrollment capacity of the area vocational education center during the regular school day; and

(c) The total capacity of each vocational education program offered in the area vocational education center during the regular school day.

(2) Each participating local school district shall receive its equitable quota of secondary school students to attend the center and to enroll in the different programs offered in the center. If a given local school district does not fill its quota, the enrollment vacancies shall be reallocated to the other cooperating local school districts on the same basis that the original quotas were established.

(3) Quotas shall be determined by the chief state school officer or the applicable regional executive director of vocational education and the principal of the area vocational education center working in cooperation with the official steering committee appointed for the area

APPENDIX J

vocational education center. Quota calculations shall be submitted to the chief state school officer for consideration and approval.

(4) The State Board for Elementary and Secondary Education shall annually submit to the State Board for Adult and Technical Education a report on vocational education in these high schools. (20 Ky.R. 3386; eff. 8-4-94.)

