RESEARCH

Educational Program Report

HOUSTON Independent School District

Creating a College-Bound Culture

Career and Technical Education
2006-2007

Department of Research and Accountability
Houston Independent School District

HOUSTON
Independent School District
Creating a College-Bound Culture

2007 Board of Education

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Executive Summary

Career and Technical Education 2006–2007

Introduction

Background

The Career and Technical Education program (CTE) in the Houston Independent School District (HISD) has a mission to equip students with marketable academic and technical skills needed to strengthen the social and economic foundation of a global society. Consequently, the goals of the CTE program are to provide consistency in instruction among program areas, curriculum that leads to industry certifications, appropriate uses of technology in each instructional program area; and, the implementation of professional development that focuses on best practices in career and technical education. Ultimately, CTE students are empowered to strengthen the economic and social foundation of the local community and beyond.

The CTE department collaborates with regular education peers, including principals and instructional leaders in the district to design, implement, and assess core and career program offerings. To ensure continuous student achievement, basic and advanced academics, as well as technical skills, are integrated in the curriculum to enhance the attainment of competent proficiencies and standards.

The CTE department also provides equity in excellence and unlimited educational opportunities for entry into a high-skill, high-wage, high-demand, global workforce and/or for continuing their education at the postsecondary level. This is accomplished by partnering with local businesses, such as the Houston Restaurant Association and secondary education institutions, including the Houston Community College and the University of Houston.

CTE's philosophy clearly emphasizes that a rigorous academic foundation contributes to success in school and in life; that all students should be provided equal access to opportunities that will help them succeed; and that career and technology education should complement and enhance academic preparation by enabling students to apply academic principles to a variety of family, community, and career situations.

In support of the plan's goals and objectives, the CTE program in HISD offers a variety of career education courses that prepare students for entry into institutions of higher learning or the workforce though participation in the School-to-Careers Transition program. A comprehensive study of the Texas Education Agency (TEA) approved career concentrations is designed to follow a coherent sequence of courses presented in the student's graduation plan. TEA has identified the following career concentrations:

- Agriculture Science Technology;
- Art, Communication, and Media Technology;
- Business and Marketing Technology;
- Health Science Technology;
- Human Development, Management, and Services Technology;
- Personal and Protective Services; and
- Family and Consumer Sciences.

The development of an effective career concentration that is planned from a strong coherent sequence of courses affords students and parents the opportunity to identify and design broad career options that will create transferable skills and knowledge.

The HISD CTE program has adopted the state plan to provide academic excellence as defined by the federal *No Child Left Behind* law. This includes the provision of quality career and guidance counseling; partnerships that benefit students and schools; rigorous academic and technical curricula supporting seamless career pathways; professional development for educators to enhance teaching and learning; ongoing data evaluation of student performance; and, administrative leadership for program effectiveness and compliance.

It is the policy of the CTE Department not to discriminate on the basis of age, color, handicap or disability, ancestry, national origin, marital status, race, religion, sex, veteran status or political affiliation

in its education or employment programs and activities, as required by Title VI of the Civil Rights Act of 1964, as amended; Title XI of the Educational Amendments of 1972; and Section 504 of the Rehabilitation Act of 1973, as amended.

The purpose of this evaluation is to document the impact of the CTE program's implementation of career and technology education programs. The evaluation will encompass the following questions:

1. What are the demographic characteristics of students enrolled in the Career and Technical Education program over the past three years (2003–2004 through 2005–2006)?

2. What are the Career and Technical Education programs and career pathways implemented in HISD?

3. What programs and activities were implemented to ensure successful transition of students from the Career and Technical Education program to secondary institutions and into the workforce?

4. What was the number of students enrolled in CTE courses during the 2005–2006 academic year? How do enrollment rates compare across HISD regions?

5. What were the trends in TAKS performance of CTE students over the past three years?

6. What were the graduation and dropout rates of CTE students?

7. What were the perceptions of middle and high school guidance counselors concerning the enrollment of students in CTE programs?

Findings

- Trends revealed that students enrolled in CTE 1 courses as elective-takers decreased from 2004–2005 to 2005–2006 by 16.5%, while CTE 2 students participating in a coherent sequence of courses increased by 90.1%. Tech Prep participants (CTE 3) also decreased by 60.1% over the same time.

- There was an increase in representation of at-risk CTE 1 students among all CTE 1 students from 2003–04 to 2005–06. At the same time, there was a decrease in the proportion of CTE 2 and 3 at-risk students among all CTE 2 and 3 students.

- Among special education students, a decrease in representation was apparent from 2003–2004 to 2005–2006 for students identified as CTE 2 (15.0% to 8.8%) and CTE 3 (13.7% to 9.6%).

- The percentage of CTE 1, 2, and 3 students identified as LEP fluctuated, showing a decrease of 2.2 percentage points among CTE 1 students, a 3.9 percentage point increase among CTE 2 students, and a 5.8 percentage point increase among the CTE 3 students from 2003–2004 to 2005–2006.

- The representation of CTE students identified as gifted and talented increased slightly for all CTE 1 students (less than one percentage point) and increased moderately for all CTE 2 and 3 students (between 3.4 and 8.3 percentage points) from 2003–2004 to 2005–2006.

- Based on spring 2004 through 2006 TAKS results, the performance of all CTE students on the reading/ELA subtest increase by 1.8 percentage points. In contrast, there was a steady decrease in the passing rates of all CTE students on the mathematics, science, and social studies subtests. Over the three-year period, the decrease was 6.8 percentage points in mathematics and 9.1 percentage points in science and social studies.

- The performance of all CTE students on the spring 2006 TAKS exceeded the performance of students districtwide on the reading/ELA subtest (79% vs. 77%), as well as the social studies subtest (83% vs. 79%). At the same time, there was a gap in the performance of all CTE students and students districtwide, in favor of the district, by 6 percentage points on the mathematics and science subtests.

- The highest number of LEP students participated in Business courses in each of the HISD regions. Findings by region revealed that the East and West regions had the highest participation in these courses, which was 133 students in the East Region, followed by the West Region, which was 102 students.

- Overall, the results of the survey revealed that in-depth training is needed on local and state guide-

lines relative to placement of students in CTE programs. Best practices for placement included consistently involving CTE staff on LEP and Admission, Review, and Dismissal (ARD) committees, adequately utilizing assessment instruments, and effectively preparing LEP and special education students for the instructional rigor of high school.

Recommendations

1. As enrollment of students in CTE courses increases in the district, it may necessitate in-depth training to counselors and school administrative staff on local and state CTE guidelines for placement. Training on coding of CTE students will facilitate appropriate placement of all students in CTE programs.
2. Since participation in CTE courses vary widely throughout the district due to course offerings and limitations in funding, the CTE administrative staff should consider alternative ways for expansion, such as additional grants and community sponsors. New programs should be based on the marketability of the program and student interests.
3. The deficits in performance of bilingual and special education students on TAKS warrants continued collaboration between CTE, Multilingual, and Special Education staff to ensure that sufficient instructional supports are provided for targeted students. These resources will also facilitate the students' success in CTE courses.

Career and Technical Education 2006–2007

Purpose: *The purpose of this evaluation is to document the impact of the CTE program's implementation of career and technology programs relative to enrollment in CTE courses and student achievement.*

Design: *Quasi-experimental and descriptive methods were used to analyze the data. A retrospective approach was employed to measure course enrollment and TAKS performance over the past three years.*

Population: *CTE students were identified as those coded "2" or "3" based on TEA criteria of participation in CTE courses. CTE status was retrieved from the PEIMS database.*

Methods: *Academic achievement was measured using spring 2004 through spring 2006 TAKS results. Trend analysis included a comparison of CTE student performance to districtwide TAKS performance over the past three years. Enrollment, graduation, and dropout rates were measured. The perceptions of middle and high school guidance counselors were summarized based on survey data collected at a fall 2006 conference.*

Findings: *Three-year trends, from 2003–2004 to 2005–2006, revealed a gradual increase in students coded CTE 2 compared to a decrease in students coded CTE 1 among LEP, special education, and all CTE students. Enrollment figures showed the highest enrollment in Business courses in most HISD regions for CTE and LEP students. There was a gap in TAKS performance between CTE and the district in mathematics and science and a decrease in performance in math, science, and social students over the past three years. To ensure successful transition into the workforce, high schools have incorporated a variety of programs and activities, such as hospital visits, automotive internships, catering opportunities, and vocational clubs. College entry is enhanced by requirements of advanced math and science courses to complete CTE programs. Secondary counselors are being trained to develop graduation plans to promote successful graduation; however, additional training is needed on coding students in CTE programs.*

Conclusions: *Findings indicate that the program objectives are being addressed in specific CTE areas and schools. Recommendations include coordinating efforts and instructional supports to expand opportunities for all students interested in CTE programs.*

Introduction

Background

According to the National Dissemination Center for Career and Technical Education (2006), the workforce will continuously require more highly developed technical skills if the United States expects to remain competitive in the global marketplace. Additionally, all students need to be prepared to enter either college or employment upon completion of high school, earning wages that allow them to maintain a sustainable lifestyle. Career and technical education programs at the high school, as well as college levels, continue to play a significant role in this process (National Dissemination Center for Career and Technical Education, 2006). Building rigorous career and technical education programs at the state and local levels for all students requires knowledge about what technical skill content is needed, how the instructional content is aligned with the required technical skills, and how student performance is evaluated in the technical skill content area.

Career and technical education is a massive enterprise in the U.S. Thousands of comprehensive high schools, vocational and technical high schools, area vocational centers, and community colleges offer career and technical education programs. Virtually every high school student takes at least one career and technical education course, and one in four students takes three or more courses in a single program area. One-third of college students are involved in career and technical programs, and as many as 40 million adults engage in short-term postsecondary occupational training (National Dissemination Center for Career and Technical Education, 2006).

Eighty-five years after the passage of the first piece of federal vocational education legislation, career and technical education is evolving from its original and sole focus on preparing students for work immediately following high school. Today's career and technical education programs, increasingly, incorporate rigorous and challenging academic content standards and provide a non-duplicative sequence of courses leading to an industry-recognized credential or certificate, or an associate or baccalaureate degree (National Dissemination Center for Career and Technical Education, 2006).

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Purpose of the Evaluation

The purpose of this evaluation is to document the impact of the CTE program on the implementation of career and technology programs. The evaluation will encompass the following questions:

1. What are the demographic characteristics of students enrolled in the Career and Technical Education program over the past three years (2003–2004 through 2005–2006)?
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4. What was the number of students enrolled in CTE courses during the 2005–2006 academic year? How do enrollment rates compare across HISD regions?
5. What were the trends in TAKS performance of CTE students over the past three years?
6. What were the graduation and dropout rates of CTE students?
7. What were the perceptions of middle and high guidance counselors concerning the enrollment of students in CTE programs?

Program Personnel/Resources

The CTE program utilizes Central Office administrative staff to coordinate instructional services in HISD schools. The staff includes a Director, a Curriculum Director along with six supervisors, one in the East, West, Alternative, Central, South, and North Regions of HISD. Additionally, there are CTE managers that coordinate activities related to technical support, inventory, facilities support, and workforce development. A part-time corporate liaison helps to raise funds to offer scholarships to students. Four administrative support staff members assist in fulfilling the clerical responsibilities necessary to operate the program.

Program Costs

The CTE program is primarily funded by the Carl D. Perkins Vocational and Technical Education Act of 1998. The Texas State Plan guides the use of funding under the Perkins Act. Texas' Perkins funds enhance the state's efforts to ensure that students pursue a rigorous course of study by providing support for districts to implement programs such as College Tech-Prep, Project Lead the Way, High Schools that Work Redesigned Network, and the Advanced Technical Credit statewide articulation program (http://www.tea.state.tx.us/opge/formfund/carlperkins/plan.doc). Local education agencies who accept Perkins funds must utilize those funds to conduct the following activities:

- Strengthen the academic and technical skills of CTE students by integrating academics with CTE programs through a coherent sequence of courses;
- Provide students with strong experience and understanding of all aspects of an industry;
- Develop, improve, or expand the use of technology in CTE, through training of personnel to use state-of-the art technology; providing CTE students with the academic and technical skills to entry into the high technology and telecommunications fields; or encouraging schools to work with high technology industries that offer voluntary internships and mentoring programs;
- Provide professional development programs to teachers, counselors, and administrators in state-of-the-art CTE programs and techniques, in effective teaching skills based on research, and in effective practices to improve parental and community involvement support of education programs for CTE teachers and other public school personnel.
- Develop and implement evaluations of the vocational and technical education programs carried out with funds under this title, including an assessment of how the needs of special populations are being met;
- Initiate, improve, expand and modernize quality career and technology programs;
- Provide services and activities that are of sufficient size, scope and quality to be effective; and
- Link secondary career and technical education and postsecondary career and technical education, including implementing tech prep programs (http://www.tea.state.tx.us/opge/formfund/carlperkins/localplan.html).

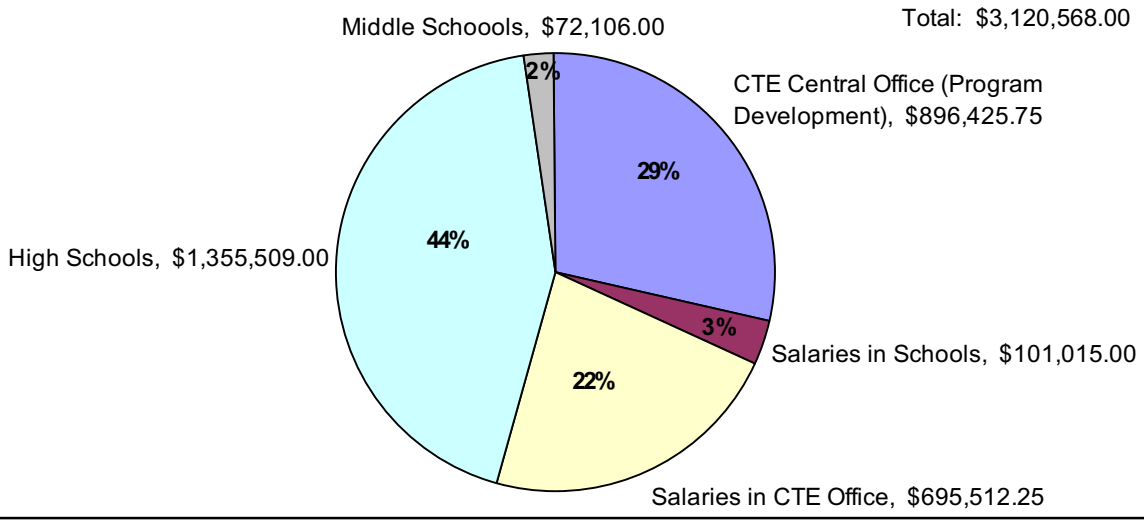

Figure 1: Carl E. Perkins Allocation for CTE Programs, 2006–2007

Figure 1 shows the allocation of Perkins funds during the 2006–2007 academic year. As shown in Figure 1, a total of $3,120,568 was awarded to HISD. The highest percentage of the funds was allocated to high school programs (44%) compared to 2% to middle school programs. The majority of the funds facilitated support of CTE Central Office operations (51%).

Methodology

Data Collection

The qualitative data, including student demographic characteristics and longitudinal enrollment figures in CTE Courses were obtained from several sources, particularly the Public Education Information Management System (PEIMS). (See **Table 1** for enrollment.) CTE indicators codes include "1" - students who took a CTE course as an elective, "2" - students enrolled in a CTE course as part of a coherent sequence of CTE courses with a 4 year plan of study, and "3" - students enrolled in a CTE course as part of a state approved Tech Prep high school plan of study leading to post secondary education and training.

Quantitative analysis was accomplished using results abstracted from the TAKS database. TAKS results were used in this report since it is a criterion-referenced test, specifically developed to reflect good instructional practices and to measure student learning. In addition, TAKS is vertically aligned with the Texas Essential Knowledge and Skills (TEKS) curriculum. This allows for comparisons of student performance from grade to grade. (http://www.houstonisd.org/portal/site/careertech).

Survey Data

Middle and High School Counselor Survey

A survey was administered to middle and high school guidance counselors in November 2006 at a routine meeting. The survey data were, then, aggregated into one EXCEL database and SPSS was used to calculate descriptive statistics. Items marked "N/A" and missing data were not included in calculating the percentages. Percentages were based upon the total number of responses. Open-ended responses were summarized for each respondent.

Table 1: Number of CTE Teachers, Students by CTE Codes and Enrollment, 2003–2004 Through 2005–06

	2003–2004	2004–2005	2005–2006
Number of CTE Teachers	364.5	374.1	375.7
Number of CTE Students Coded 1	36,438	29,825	24,906
Number of CTE Students Coded 2	1,163	7,115	13,523
Number of CTE Students Coded 3	445	320	125
Total Number of CTE Students	38,046	37,260	38,554
Total HISD Student Enrollment	211,157	208,454	209,879

Note: Data retrieved from AEIS

Table 2: Districtwide Enrollment Compared to CTE Enrollment by At Risk Status, Special Education, LEP, and G/T Program Participation, 2003-2004 Through 2005-2006

Subgroup	Academic Year					
	2003–2004		2004–2005		2005–2006	
At Risk	**N**	**%**	**N**	**%**	**N**	**%**
Districtwide	125,913	59.6	131,297	63.0	140,956	67.2
CTE 1	24,457	67.0	21,323	71.0	18,635	74.8
CTE 2	885	76.0	4,550	64.0	9,929	73.4
CTE 3	375	84.0	188	59.0	102	81.6
All CTE	25,717	68.0	26,061	70.0	28,666	74.4

	2003–2004		2004–2005		2005–2006	
Special Education	**N**	**%**	**N**	**%**	**N**	**%**
Districtwide	21,128	10.0	21,112	10.1	20,223	9.6
CTE 1	4,624	12.7	3,826	12.8	3,226	13
CTE 2	175	15.0	742	10.4	1,186	8.8
CTE 3	61	13.7	35	10.9	12	9.6
All CTE	4,860	12.8	4,603	12.4	4,424	11.5

	2003–2004		2004–2005		2005–2006	
LEP	**N**	**%**	**N**	**%**	**N**	**%**
Districtwide	61,142	29.0	59,481	28.5	58,713	28.0
CTE 1	4,480	12.3	3,311	11.1	2,510	10.1
CTE 2	57	4.9	502	7.1	1,196	8.8
CTE 3	24	5.4	12	3.8	14	11.2
All CTE	4,561	12.0	3,825	10.3	3,720	9.6

	2003–2004		2004–2005		2005–2006	
Gifted & Talented (G/T)	**N**	**%**	**N**	**%**	**N**	**%**
Districtwide	20,713	9.8	21,716	10.4	23,440	11.2
CTE 1	3,001	8.2	2,415	8.1	2,144	8.6
CTE 2	46	4.0	896	12.6	1,657	12.3
CTE 3	31	7.0	20	6.3	13	10.4
All CTE	3,078	8.1	3,331	8.9	3,814	9.9

Results

What are the demographic characteristics of students enrolled in the Career and Technical Education program over the past three years (2003–2004 through 2005–2006)?

Over the past three years, student enrollment in the district fluctuated from 211,157 in 2003–2004 to 208,454 students in 2004–2005, which reflects a substantial decrease of 1.3% (refer to Table 1). However, by 2005–2006, the enrollment increased nearly 1% to 209,879 students. Students enrolled in CTE 1 courses as elective takers decreased over the past two years by 16.5%, while CTE 2 students increased by 90.1%. Tech Prep participants (CTE 3) also decreased by 60.1%. At the same time, Table 1 also shows that the number of CTE teachers increased steadily over the three-year period, from 364.5 in 2003–2004 to 375.7 in 2005–2006.

Table 2 presents the enrollment of CTE students by at-risk, special education, LEP, and G/T status. (Refer to Table 1 for the totals for the subgroups by CTE codes.) According to Table 2, there was an increase in representation of at-risk CTE 1 students among all CTE 1 students from 2003–2004 to 2005–2006 (67.0% to 74.8%). At the same time, there was a decrease in the proportion of CTE 2 and 3 at-risk students among all CTE 2 and 3 students. A similar trend was found among special education CTE 1 students (12.7% to

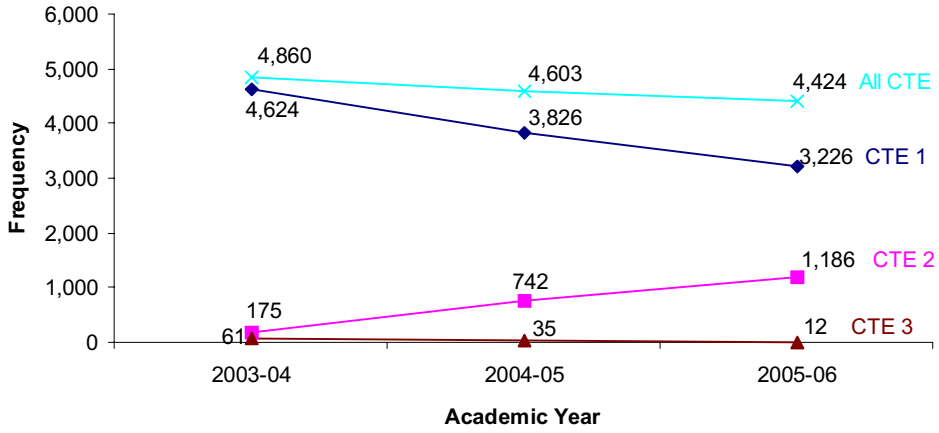

Figure 2: Trends in CTE Enrollment of Special Education Students, 2003-2004 Through 2005-2006

Note: Data Retrieved from AEIS, December 2006

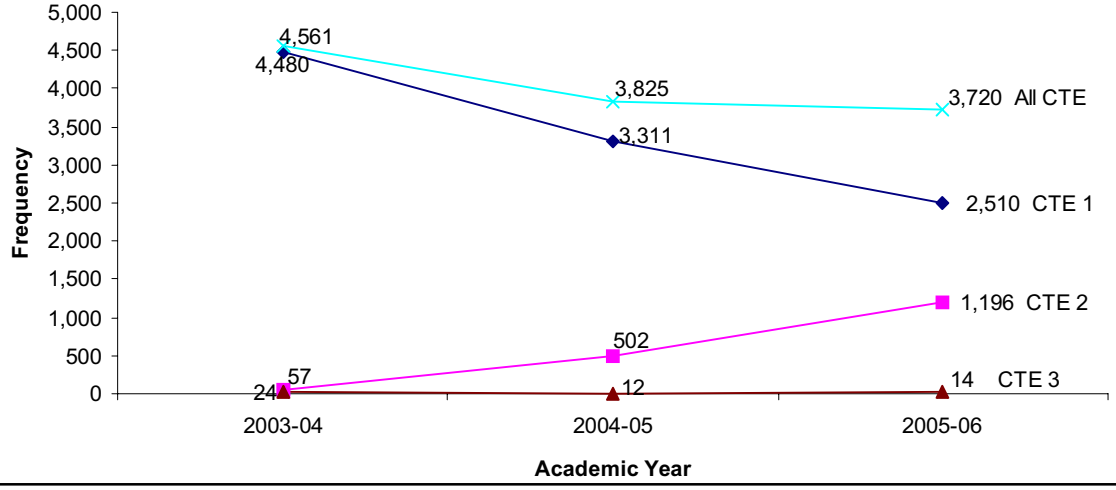

Figure 3: Trends in CTE Enrollment of LEP Students, 2003-2004 Through 2005-2006

13.0%); CTE 2 students (15.0% to 8.8%); and CTE 3 students (13.7% to 9.6%). On the other hand, the percentage of CTE 1, 2, and 3 students identified as LEP fluctuated, showing a decrease of 2.2 percentage points for CTE 1 students, a 3.9 percentage-point increase among CTE 2 students, and a 5.8 percentage-point increase among CTE 3 students. The representation of CTE students identified as gifted and talented increased slightly for all CTE 1 students (less than one percentage point) and increased moderately for all CTE 2 and 3 students (between 3.4 and 8.3 percentage points).

Trends in enrollment of CTE students can also be found in **Figures 2**, **3**, and **4**. It is apparent that there is a steady decline in the enrollment of CTE 1 special education, LEP, and at-risk students compared to an increase in the enrollment of students coded as CTE 2. These trends may indicate improvements in coding students accurately at the school level. Specifically, for special education students, the decrease in CTE 1 students was 30% over the past three years, compared to 44.0% for LEP and 23.8% for at-risk students. Identification as CTE 2 dramatically rose among all of these subgroups by at least 10 times from 2003–2004 to 2005–2006.

Figures 5, **6**, and **7** show the percentage of CTE students represented as special education, LEP, G/T, and at-risk. It is apparent that the majority of CTE students coded 1, 2, or 3 are at-risk. For CTE code 1 students, in Figure 5, the percentage at-risk students ranges from 67.0% in 2003–2004 to 75.0% in 2005–2006. As shown in Figure 6, the percentage of CTE code 2 at-risk students fluctuates from 76.0% in 2003–2004 to 73.0% in 2005–2006. CTE code 3 at-risk students

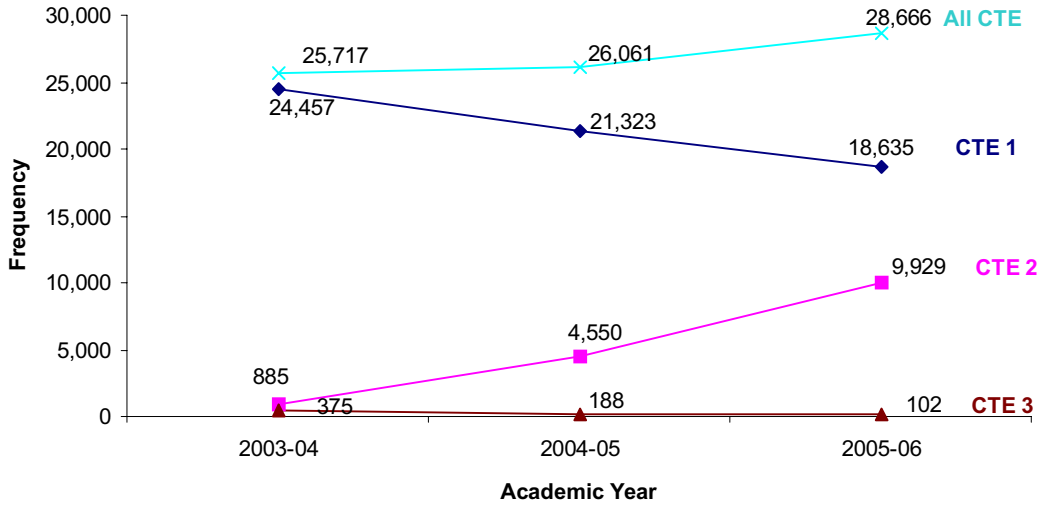

Figure 4: Trends in CTE Enrollment of At Risk Students, 2003–2004 Through 2005–2006

was highest in 2003–2004 at 84.0%, dropped substantially in 2004–2005 to 59.0%, but rose dramatically in 2005–2006 to 82.0%.

What are the Career and Technical Education programs and career pathways implemented in HISD?

Career clusters are groupings of occupations based on common knowledge and skills. These are the tools that are used for identifying and connecting technical, academic, and employability skills. Career pathways provide a plan for all students, regardless of their interests, abilities, talents, or desired levels of education. In addition, they provide all students with areas of focus, along with flexibility, and a variety of ideas to pursue as they make decisions regarding course selection. Ultimately, students comprehend the relevance of selected high school courses. Thus, students enrolled in career concentrations tend to do better in school and to stay in school. Parents, counselors, and teachers are supported through providing better assistance to students as they consider career goals and select high school and/or postsecondary courses for their career plan.

There were 16 broad categories developed by the U.S. Department of Education, Office of Vocational

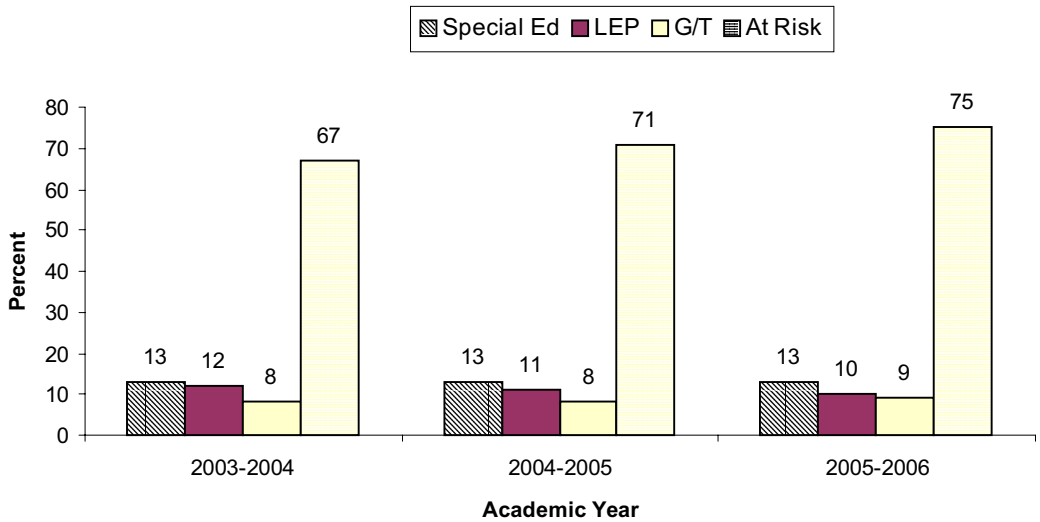

Figure 5: Percent CTE Code 1 Students Represented in Special Ed, LEP, G/T, and At Risk Among All CTE Code 1 Students, 2003–2004 Through 2005–2006

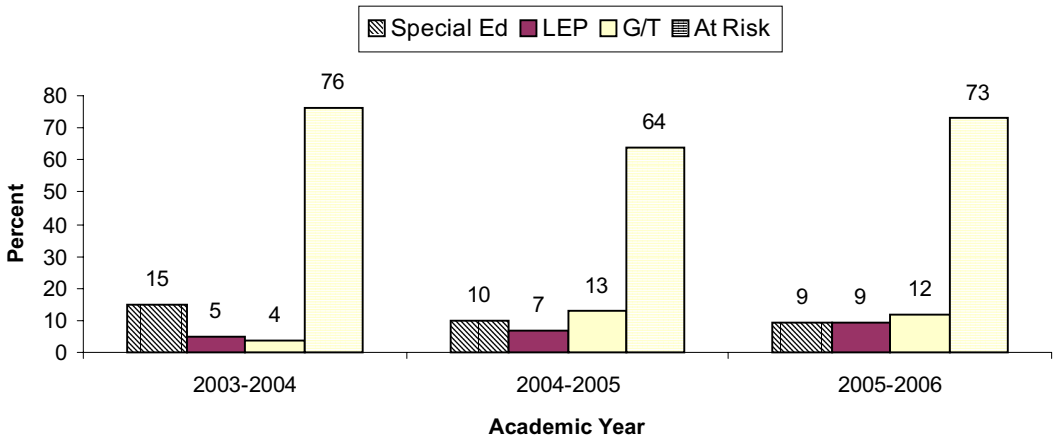

Figure 6: Percent CTE Code 2 Students Represented in Special Ed, LEP, G/T, and At Risk Among All CTE Code 2 Students, 2003–2004 Through 2005–2006

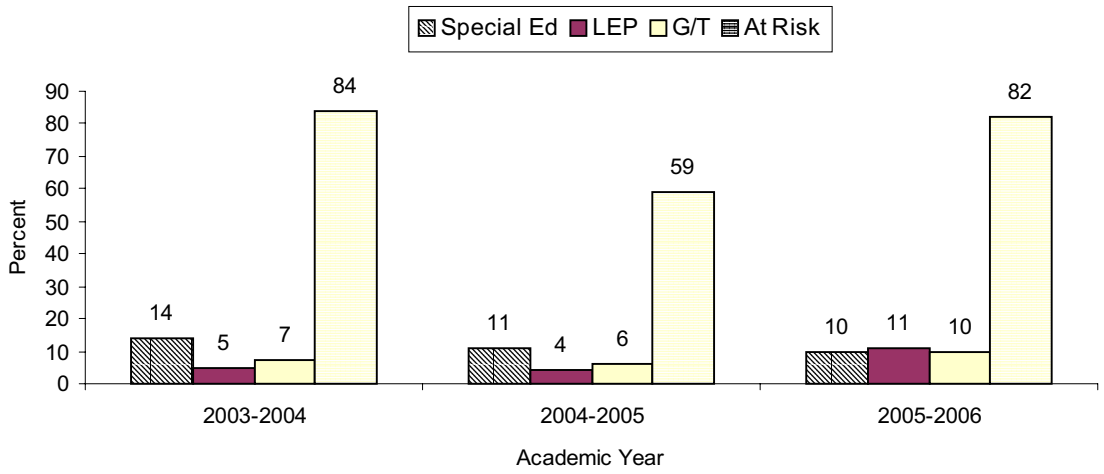

Figure 7: Percent CTE Code 3 Students Represented in Special Ed, LEP, G/T, and At Risk Among All CTE Code 3 Students, 2003–2004 Through 2005–2006

and Adult Education in 1999 that encompass nearly all occupations from entry level to professional occupations. These pathways are designed to be coherent and sequenced utilizing rigorous academic and career and technical courses commencing in the ninth grade and leading to college degrees. Also, many courses offer opportunities toward an industry recognized certificate, and/or licensure organized. The career clusters are grouped according to occupations according to common knowledge and skills for the purpose of organizing educational programs and curricula.

The sixteen Career Clusters that career pathways can be developed from are identified below:

- Agriculture, Food, and Natural Resources,
- Architecture and Construction,
- Arts, Audio Video Technology & Communications,
- Business, Management, & Administration,
- Education & Training Services,
- Finance,
- Government & Public Administration,
- Health Science,
- Hospitality & Tourism,
- Human Services,
- Information Technology,
- Law, Public Safety, Corrections & Security,
- Manufacturing,
- Marketing, Sales & Service,
- Science, Technology, Engineering & Math, and
- Transportation, Distribution & Logistics.

The development of an effective career pathway planned from a rigorous academic and career and technology coherent sequence of courses provides students the opportunity to participate in a 4+2 (+2)

program of study leading to employment in an occupational field and/or continued education and training. As education reform projects are being implemented across the district, instructional leaders are cautioned to carefully examine labor market projections when designing a program of study in career pathways, career academics and/or other smaller learning community structure.

Tech Prep

Another essential component of CTE programs is Tech Prep. Tech Prep accountability measures include the number and percentage of postsecondary Tech Prep students that:

- Are placed in a related field of employment not later than 12 months after graduation from the tech prep program;
- Complete a State or industry-recognized certification or licensure;
- Complete a 2-year degree or certificate program within the normal time for completion of such program; and
- Complete a baccalaureate degree program within the normal time for completion of such a program.

What programs and activities were implemented to ensure successful transition of students from the Career and Technical Education program to the workforce?

There are a variety of programs and activities that have been implemented in CTE to ensure that students successfully transition into the workforce. Several of these programs have been selected for description in this report.

Agricultural Science and Technology

The Agricultural Science and Technology (AST) program has developed as an integral part of the Career and Technology Education Department (CTE) in HISD. The mission of the program was to prepare students for careers, build awareness, and develop leadership for the food, fiber, and natural resource systems. Diverse course offerings made it attractive to students with varying educational goals. Participating students developed needed competencies through mastery of comprehensive integrated curriculum objectives. Students selected from a coherent sequence of courses approved by the Texas Education Agency (TEA) to support their career plans. They learned transferable skills that were in demand by employers to assume employment opportunities that comprised over 17% of the workforce. Many students pursued higher education, some at land-grant institutions, allowing them to pursue career opportunities requiring a college education.

For the past three years, the AST program operated at seven HISD high schools. They were Austin, Bellaire, Lamar, Lee, Madison, Sam Houston, and Yates. Harper Alternative School provided Horticulture courses for students with disabilities. Additionally, the AST program owned six farms. The farms were located near participating schools and varied in size: Madison had 35 acres, Austin and Yates shared 62 acres, Bellaire, Lamar, and Lee had a total of 40 acres, and Sam Houston had 9 acres.

Along with the instructional component, the Agricultural Science and Technology program provided practical, hands-on experience for students. Through practical application, students gained essential knowledge and skills needed in production, managing, processing, marketing, distributing, regulating, and protecting renewable natural resources. Moreover, coordinated group and individual instructional activities integrated classroom and laboratory experiences with supervised leadership activities. These co-curricular activities included the Future Farmers of America (FFA) and the All-Houston Livestock Show and Sale. Participation demanded that students develop leadership, cooperation, and citizenship skills as they prepared for careers in nontraditional areas such as biogenetics, international marketing, engineering, horticulture, communications, and business.

Collaborative efforts were established with organizations throughout Texas to expand students' interest in AST and expose them to advanced technology related to AST. The curriculum was developed through a contract with the state of Texas and Texas A&M University. Texas Parks and Wildlife provided knowledge-based experiences for students that were useful in the All-Houston Livestock Show and Sale. Tours of land-grant institutions including Praire View A&M University and Texas A&M University expanded the students' career interests and exposed them to technological advances in Agricultural Science. Finally, work with the Harris County Extension Agency facilitated the AST program by drafting guidelines for the horticulture program and classroom instruction.

The AST program was founded on the premise that high schools must prepare well-trained, entry-level employees for business and industry if America is to retain its leadership position in agriculture. Subse-

quently, the program served as a powerful tool for students when exploring their career options and preparing for successful careers in the world of high technology and global competition.

Jack Yates School of Communications

Since 1978, the **Jack Yates School of Communications** has established a standard for excellence in the field of media communications. Located, on the campus of Jack Yates High School, the innovative "school within a school", focuses on three specialized areas: Media Technology, Photography and Journalism. It remains committed to providing students with the very best in instruction, resources, technology, and equipment. Jack Yates is the only HISD high school to house separate television and photography studios. The journalism department provides interns for the Houston Chronicle and the "Eye On Third Ward" initiative with the Museum of Fine Arts. They, recently, formed a strong alliance with Texas Southern University and the University of Houston to further teach youth through photography/media and to use the depth of information for positive change as producers and/or consumers. The School of Communications has consistently produced college graduates and professionals who excel in their chosen fields.

Business, Management, and Administration

The **Business, Management, and Administration** program is divided into six pathways, including management, business financial management and accounting, human resources, business analysis, marketing, administration, and information support. This program prepares students for careers in planning, organizing, directing, and evaluation of business functions essential to efficient and productive business operations. Courses in business, management, and administration are offered at all HISD high schools.

Construction/Building Trades

The **Construction/Building Trades** program at Yates High School is divided into four major classifications: (1) Residential Construction, (2) Non-Residential Construction, (3) Highway and Heavy Construction, and (4) Municipal Utilities Construction. Trade and industrial education helps students develop manipulative skills, safety, judgement, technical knowledge and relate occupational information. It trains students for a wide variety of occupations in industrial areas through contextual instruction in the layout, design, production and processing, assembling, testing, diagnosing and maintaining industrial, commercial and residential goods and services. It provides opportunities to develop and apply leadership, social, civic and business-related skills through Vocational Clubs of American (VICA), which is the student organization for young people enrolled in Trade and Industrial programs. The course includes Basic Safety, Introduction to Construction Math, Introduction to Hand Tools, Introduction to Power Tools, Introduction to Blueprints, Basic Communications Skills, and Basic Employability Skills among course offerings.

Hotel and Restaurant Management

The Jeff Davis Magnet program for **Hotel and Restaurant Management** offers an exceptional opportunity for students who are interested in the tourism and hospitality industry to learn a variety of business management and culinary arts skills. Students are placed in at least one magnet class each year; those who wish may take additional elective magnet classes. The curriculum follows through a progression of courses, beginning with an introductory class during the ninth grade and concluding with an internship at the University of Houston during the twelfth grade. All students in the magnet program are enrolled in the Recommended High School Diploma Program, the path for the college-bound student. Students who qualify may enroll in Honors classes and/or Advanced Placement classes.

Students are selected for the program through an application process in which selection is determined by grades, TAKS scores, and conduct. Once accepted into the program, students must sign an agreement to maintain a grade average of 75 or higher in their academic and magnet classes, good conduct, and good attendance. Students who do not maintain these qualities will be placed on probation and/or dismissed. With an overall enrollment of two hundred students, there are approximately 55 spaces available each fall, and students are accepted from any high school within HISD.

***CAST* Construction Career Academy**

The ***CAST*** project is the product of a U.S. Department of Labor grant initiative and was launched in January 2006 as Houston's first Construction Career Academy. The purpose of the ***CAST*** project is to increase academic achievement and career preparedness for students aspiring to construction industry careers at all levels. Recently, the ***CAST*** Construction Career Academy hosted it's first design competition on

the campus of Furr High School on January 31, 2007. The goal of the competition was, not only to pick a winning design, but to also give the children an opportunity to experience the design process. The presentations were judged on design quality, creativity, feasibility, relevance of design and presentation skills. Jury members included distinguished guests from the Greater Houston Area academic, architecture, construction and engineering communities. The jury consisted of the stakeholders from the College of Architecture; Prairie View A&M; Linbeck Group, L.P.; CivilTech Engineering; Brookstone, L.P.; Lucia Group, L.P., and HISD administrative staff. The ***CAST*** Academy students were prepared for a juried competition using a water feature. These students had previously attended a presentation hosted by David Webb of Brookstone. The winning design will be a featured construction project on Furr's campus by the ***CAST*** Academy students with construction expected to begin in late spring 2007. For their efforts, students were awarded prizes, including a first place prize of $250.00 compliments of CBIC Construction & Development, L.P.; a second place prize of an Ipod Nano compliments of Lucia Group, L.P. on behalf of the ASA Houston, and a third place prize of a $50 AMEX Gift Card compliments of Slack & Co Contracting Inc. on behalf of ASA Houston (http://www.houstonisd.org/CareerTech/Home/AprMay2007/CAST_Furr.pdf).

Business Education Career Preparation Program Annual Employers' Appreciation Luncheon

The **Business Education Career Preparation Program** Annual Employers' Appreciation Luncheon was held in April, 2007 at the Houston Club. Each year, the luncheon is hosted by coordinators and students. The purpose of the luncheon is to show appreciation for their willingness to hire and train Business Career Preparation students for work. The students are given opportunities to work with professionals, gain marketable skills, and experiences that will allow them to become successful in many chosen areas. Additionally, the program helps students to become good, responsible, and productive citizens.

This year's theme was, "Business Education ……. Priceless." The coordinators chose this theme because of their excellent Business Education Career Preparation Program. Keynote speakers included HISD administrators and the CTE Program Director. The sound of beautiful music from the Sterling High School Jazz Band.

Approximately 575 people were in attendance for this occasion. Supervisors from over 100 different companies were present to share in this special event. Others attending the luncheon were the Career Preparation advisory board, HISD district superintendents, principals, CTE supervisors, counselors, HISD and Prairie View A & M University retirees.

Automotive Youth Educational Systems (AYES)

With an emphasis on basic technical, academic, and entry-level skills, **Automotive Youth Educational Systems (AYES)** gives young people a "jump start" on a satisfying career in the automotive service. As good a start as it is, it is definitely just the start on a career path. When it comes to sophisticated automotive technology, the young technician will quickly realize that there's a lot more to learn from the industry. Therefore, the goals of the Automotive Technology Academy at Westbury High School are to provide entry-level skills in the field of automotive technology. The students take courses in a coherent sequence to increase the levels of learning. The benefits of the Auto Technology Academy is the development of strong and positive teacher student relationships; real-world, on-the-job experience, and integration of academics (math, science, English, social studies) with technical skills.

The Westbury High School Automotive Technology Academy is the product of extensive and ongoing collaboration between Westbury staff and an established group of automotive industry business partners. During the early 2000's, the Westbury Automotive Technology program had experienced a high degree of success with its affiliation with Automotive Youth Educational Systems (AYES) and certification by the National Automotive Technology Education Foundation (NATEF). Through conversations that took place within an established Business and Education Council, there was consensus that there needed to be a stronger emphasis on core academics in order for high school graduates to be competitive in the job market. Concurrent with these discussions was the implementation of several HISD academic reform initiatives that were directly aligned with the needs of the automotive industry. Initiatives such as the creation of Small Learning Communities, advocacy programs, and the expansion of Advanced Placement courses provide better personalized instruction, dropout intervention and stronger academics for all students.

The planning for The Automotive Technology Academy began in the summer of 2003. The academy was structured to integrate all core academics, including

Advanced Placement, as well as the automotive technology classes at grades nine through twelve. TEA approved the academy offering Transportation Systems at the ninth grade level and HISD added an Automotive Technology III to its course catalog. The additions allow the academy to offer the only four-year Automotive Technology program in the state, and possibly the only one in the nation.

In the fall of 2003, a select group of teachers were asked to be a part of the new academy. The group developed an integrated curriculum to strengthen academics, agreed to work cooperatively with a common group of students to provide better personalization, and help reduce the dropout rate.

Also during the 2003–2004 school year, an academic schedule was developed to facilitate the success of the academy so that common planning time is available during the school day and all students share this core group of teachers for all four years of high school. The successful recruitment of students for the academy is due to wide community and school support and the cultivation of positive relationships with HISD and local news media, which have published several articles on the academy.

Another component of the Automotive Technology Academy is the design of a parent support group/ booster organization, which will bring greater community involvement. Additionally, the Business and Education Council will continue as a collaborative decision-making group. The Automotive Technology Teacher Requirements include Texas teacher certification by the State Board for Educator Certification and Automotive Service Excellence (ASE) Certification in the areas that the instructor teaches. The Automotive Technology Program Requirements consists of National Automotive Technician Education Foundation (NATEF) Certification.

Westbury's AYES program has consistently placed its graduates in positions at area auto dealerships. These students have an opportunity for advancement in the automotive industry or as college preparatory experience. Students are required to take courses including Algebra I and II, Integrated Physics & Chemistry, Geometry, Introduction to Transportation Service Careers and Automotive Technician I, II, and III. Seniors are expected to work part-time in the repair shops of area automotive dealers. Graduates of the Automotive Technology Academy will either begin careers at auto motive repair facilities or continue in the discipline to earn postsecondary degrees. Partnerships include the following automotive dealerships: Allen Samuels Chevrolet, Allen Samuels Dodge, Bill Heard, Gillman Honda, Baker-Jackson Nissan, McKinzey Bond Isuzu-Kia, Mac Haik Chevrolet, Gillman Subarru, Gillman Mitsubishi, Davis Chevrolet, Russell & Smith Honda, Southwest Infiniti, Lawrence Marshall GMC, and Mike Calvert.

DeBakey's College Preparatory School

The **DeBakey's College Preparatory School** is a component of the Health Sciences Department of CTE. This program allows students at DeBakey High School for Health Professions to take four years of sequenced Health Science Classes. The Health Science Curriculum consists of the following sequenced classes: 9th Grade- Introduction to Health Science; 10th Grade- Health Science I – Anatomy and Physiology; 11th Grade- Health Science Rotations: Dental Science, Medical Laboratory, and Patient Care (Students visit the hospital) Rotations: 12th Grade- Health Science III- Preceptorship (Students are shadowing in the Texas Medical Center), Advanced Anatomy and Physiology and Rehabilitation Rotations and BCIS – Business Computer Information Systems. At the end of four years of completion of sequenced Health Science classes, students are awarded a Health Science Certificate. DeBakey's College Preparatory School allows students to receive a well-rounded CTE foundation along with core academic classes.

Reagan Computer Technology Magnet Program

The Reagan High School Program for Computer Technology offers students instruction through the Academy of Finance. The Academy of Finance is a four-year program that prepares students for the banking and finance industry, advanced preparation in a junior college program, or enrollment in a full baccalaureate program. It is a comprehensive program of study designed, specifically, to assist students in developing a knowledge and awareness of the global economy and the increasing role of technology in the world of business and finance. The Computer Electronics and Networking Technology is a four-year program leading to proficiency as an A+ certified computer technician, a CISCO certified networking technician, and/or to further training in a college or technical school. Four years of math and science are presented as well as basic electronics, solid-state devices and circuits, digital devices and circuits, microprocessor theory and interfacing, and computer maintenance and repair techniques. The Cisco Systems Networking Academy teaches the principles and practice of designing, build-

ing and maintaining networks capable of supporting national and global organizations and prepares students for the certified CISCO Networking Associated exam. Computer Programming is an intensive four-year college preparatory program with emphasis on math through calculus, science through physics, and computer science. Basic and advance programming techniques are taught in a number of different programming languages including C++, JAVA Script and HTML. The students gain experiences on the latest microcomputer equipment with access to networks and the internet.

Westbury High Schools Health Science Program

The Health Science Career Cluster encompasses more than 200 career specialties and/or occupations. The Health Science program at Westbury High School focuses on careers in planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development. The students at Westbury perform their clinical rotation duties at the Memorial-Hermann Hospital and the People's Clinic.

High School Students United with NASA to Create Hardware (HUNCH)

HUNCH is a teaming between a high school or intermediate school and NASA. The purpose of the teaming is to produce training hardware for the International Space Station Astronaut crewmembers or ground support personnel. A spin-off of this teaming is the inspiration of the next generation.

NASA provided the materials required to build the training hardware, along with drawings and other documents needed to fabricate the hardware. NASA required that each project has a label that has each student, teacher and school name involved with the fabrication of that training hardware, mounted to the hardware. NASA also provided a quality inspection oversight role during the fabrication of the hardware. NASA had the material shipped to the school; the school was responsible for the shipping of the final product from the school to NASA.

The schools provided technical direction to the students and provided a safe work environment. The schools also taught the students how to use the tools needed to fabricate the hardware. The schools also provided pictures of the process.

HISD schools that participated in this program were Austin High School, Barbara Jordan High School for Careers, and Fleming Middle School. HISD Board President Manuel Rodriguez assisted with awarding students with their certificates (http://www.houstonisd.org/CareerTech/docfiles/HUNCH.pdf).

Culinary Arts/Food Production, Management and Services Showcase Competition and Career Day

HISD Career and Technical Education Department (CTE) held its third annual Culinary Arts and Food Production, Management and Services Showcase Competition and Career Day on March 22, 2007 at Harper Alternative School. This event showcases the talents of students at Davis, Harper, Jordan, and Wheatley high schools. In addition, students participated in career sessions hosted by Houston Community College School of Culinary Arts, The Art Institute of Houston, Hospitality Pro Search, and the Texas Retailers Association. This event was made possible through generous donations from The Texas Retailers Association, Fiesta Mart, Kroger, The Houston Restaurant Association, Texas Food Group, Hospitality Pro Search, CiCi's Pizza, Chick- Fil- A, and Flowers Baking Company.

The Education Committee Scholarship Fund

Each year the Education Committee of Houston Community College (HCC) seeks to encourage community and corporate support of programs of education and manpower development. These programs should prepare students for participation in the world of work, effective living, and community leaderships. To enhance the goal of providing scholarship assistance to qualified students, the Board of Directors resolved to establish an interest-bearing account to assure a minimum of scholarships; awards are made from the interest earned. The combination of interest and banquet net proceeds ensure continued opportunities for the Education Committee awardees. The Fund was established with the assistance of significant contribution from

What was the number of CTE students enrolled in CTE courses during the 2005–2006 academic year. How do enrollment rates compare across HISD regions?

The enrollment numbers and rates of all CTE students in CTE courses are presented to provide evidence of student participation in the various CTE career concentration areas.

Table 3: Enrollment in CTE Courses by Central Region Secondary Schools with Codes 2 and 3, 2005–2006

School	Total*	AG	% AG	BUS	% BUS	CCO	% CCO	FCS	% FCS	HST	% HST	MKT	% MKT
Debakey	853	0	0.0	141	16.5	0	0.0	0	0.0	712	83.5	0	0.0
Lamar	1472	131	8.9	825	56.0	0	0.0	75	5.1	33	2.2	101	6.9
Law Enforcement	835	0	0.0	433	51.9	60	7.2	0	0.0	0	0.0	0	0.0
Reagan	705	0	0.0	315	44.7	8	1.1	0	0.0	123	17.4	80	11.3
Scarborough	910	0	0.0	385	42.3	0	0.0	198	21.8	0	0.0	85	9.3
Waltrip	1654	0	0.0	704	42.6	0	0.0	234	14.1	156	9.4	301	18.2
Yates	316	12	3.8	108	34.2	1	0.3	0	0.0	0	0.0	15	4.7
Total* (includes TEC and TRD)	**6745***	**143**	**2.1**	**2911**	**43.2**	**69**	**1.0**	**507**	**7.5**	**1024**	**15.2**	**582**	**8.6**

AG = Agriculture; BUS = Business; CCO = Career Connections; FCS = Family & Consumer Science; HST = Health Sciences Technology; MKT = Marketing; TEC = Tech Ed. ; TRD= Trade and Industrial

Table 4: Enrollment in CTE Courses by East Region Secondary Schools with Codes 2 and 3, 2005–2006

School	Total*	AG	% AG	BUS	% BUS	CCO	% CCO	FCS	% FCS	HST	% HST	MKT
Austin	1754	179	10.2	722	41.2	0	0.0	127	7.2	11	0.6	179
Chavez	1164	63	5.4	449	38.6	0	0.0	76	6.5	140	12.0	48
Eastwood Academy	170	0	0.0	76	44.7	0	0.0	0	0.0	0	0.0	0
Furr	6	0	0.0	3	50.0	0	0.0	0	0.0	0	0.0	1
Milby	577	0	0.0	178	30.8	2	0.3	0	0.0	75	13.0	13
REACH	3	0	0.0	1	33.3	0	0.0	0	0.0	0	0.0	1
Total* (includes TEC and TRD)	**3674***	**242**	**6.6**	**1429**	**38.9**	**2**	**0.1**	**203**	**5.5**	**226**	**6.2**	**242**

All CTE Students (CTE Codes 2 or 3)

The results for all CTE students, with a CTE code of 2 or 3 can be found in **Tables 3** through **9**. It is apparent that the highest number of students in all regions, except the Alternative, is enrolled in Business courses. For the Central Region, the majority of students at Lamar and the High School for Law Enforcement and Criminal Justice were enrolled in Business courses (56.0% and 51.9%, respectively). At the same time, the majority of students at Yates were enrolled in Trade and Industrial. Jones had the highest enrollment rate in Business courses in the South Region (64.4%) compared to the total enrollment rate for the region, which was 27.1%. In the East Region, the majority of students at Eastwood Academy and Milby were enrolled in Trade and Industrial courses (55.3% and 51.0%, respectively), while Furr students were more likely to be enrolled in Business courses (50.0%). The South Region had more students enrolled in Trade and Industrial (See **Table 9**); whereas, Alternative had more students enrolled in Marketing.

Career Tech along with Trade and Industrial results by administrative regions can be found in Table 9. The Central had the highest number of students in Career Tech programs, followed by the East Region (496 and 412, respectively). In comparison, the North Region had

Table 5: Enrollment in CTE Courses by North Region Secondary Schools with Codes 2 and 3, 2005–2006

School	Total*	AG	% AG	BUS	% BUS	CCO	% CCO	FCS	% FCS	HST	% HST	MKT	% MKT
Davis	237	0	0.0	50	21.1	0	0.0	0	0.0	0	0.0	88	37.1
Houston	710	18	2.5	471	66.3	0	0.0	40	5.6	0	0.0	28	3.9
Jordan	1629	0	0.0	491	30.1	55	3.4	122	7.5	76	4.7	164	10.1
Wheatley	11	0	0.0	4	36.4	0	0.0	3	27.3	0	0.0	0	0.0
Kashmere	137	0	0.0	89	65.0	0	0.0	11	8.0	0	0.0	0	0.0
Washington	927	0	0.0	369	39.8	0	0.0	121	13.1	71	7.7	49	5.3
Total* (includes TEC and TRD)	**3651***	**18**	**0.5**	**1474**	**40.4**	**55**	**1.5**	**297**	**8.1**	**147**	**4.0**	**329**	**9.0**

Table 6: Enrollment in CTE Courses by South Region Secondary Schools with Codes 2 and 3, 2005–2006

School	Total	AG	% AG	BUS	% BUS	CCO	% CCO	FCS	% FCS	HST	% HST	MKT	% MKT
Jones	59	0	0.0	38	64.4	0	0.0	0	0.0	0	0.0	21	35.6
Madison	241	5	2.1	64	26.6	0	0.0	58	24.1	5	2.1	50	20.7
Sterling	489	0	0.0	112	22.9	0	0.0	77	15.7	0	0.0	36	7.4
Worthing	161	8	5.0	43	26.7	0	0.0	44	27.3	0	0.0	0	0.0
Total* (includes TEC and TRD)	**950**	**13**	**1.4**	**257**	**27.1**	**0**	**0.0**	**179**	**18.8**	**5**	**0.5**	**107**	**11.3**

Table 7: Enrollment in CTE Courses by the Alternative Region for Secondary Schools, Codes 2 and 3, 2005-2006

School	Total	AG	% AG	BUS	% BUS	CCO	% CCO	FCS	% FCS	HST	% HST	MKT	% MKT
Contemporary Learning Ctr.	16	0	0.0	6	37.5	0	0.0	0	0.0	0	0.0	7	43.8
Houston Night HS	1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0
Total* (includes TEC and TRD)	**17**	**0**	**0.0**	**6**	**35.3**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**8**	**47.1**

the highest number of students in Trade and Industrial programs, followed by Central (1038 and 1013, respectively).

CTE/LEP Enrollment

The enrollment rates of LEP students in CTE programs can be seen by region in **Tables 9** through **14**. It is apparent that the highest number of LEP students participated in Business courses in all regions. The East Region showed the highest number of students participating, which was 133, followed by the West Region, which was 102 students.

What was the TAKS performance of CTE students?

The TAKS performance of all CTE students from spring 2004 to spring 2006 is presented in **Figure 8** by subtest. As shown in Figure 8, there has been a steady decrease in the passing rate of all CTE students on the mathematics, science, and social studies subtests. The decrease was 6.8 percentage points in mathematics and 9.1 percentage points in science and social studies. In contrast, the performance of all CTE students on the reading/ELA subtest increase over the three-year period by 1.8 percentage points.

All CTE Students

The TAKS performance of all CTE students compared to students districtwide can be found in **Figure 9**. According to Figure 9, the performance of all CTE students in spring 2006 exceeded the performance of students districtwide on the reading/ELA subtest (77% vs. 79%) as well as the social studies subtest (79% vs. 83%). At the same time, there was a gap in the performance of all CTE students and students districtwide in favor of the district on the mathematics and science subtests. The districtwide performance exceeded all CTE students' performance by 6 percentage points on the mathematics and the science subtests.

CTE/LEP TAKS

The TAKS performance of CTE students identified as LEP is revealed in Figure 10. It is evident that

Table 8: Enrollment in CTE Courses by West Region Secondary Schools with Codes 2 and 3, 2005–2006

School	Total	AG	% AG	BUS	% BUS	CCO	% CCO	FCS	% FCS	HST	% HST	MKT	% MKT
Bellaire	72	4	5.6	44	61.1	0	0.0	9	12.5	0	0.0	6	8.3
Lee	710	0	0.0	356	50.1	0	0.0	63	8.9	52	7.3	0	0.0
Sharpstown	42	0	0.0	9	21.4	0	0.0	19	45.2	8	19.0	0	0.0
Westbury	364	0	0.0	111	30.5	0	0.0	42	11.5	64	17.6	40	11.0
Westside	608	0	0.0	378	62.2	0	0.0	0	0.0	98	16.1	18	3.0
Total* (includes TEC and TRD)	**1796**	**4**	**0.2**	**898**	**50.0**	**0**	**0.0**	**133**	**7.4**	**222**	**12.4**	**64**	**3.6**

Table 9: Enrollment in CTE Courses by Region and Schools, All CTE and CTE/LEP Students, 2005–2006

Region	School	All CTE				CTE/LEP			
		TEC	% TEC	TRD	% TRD	TEC	% TEC	TRD	% TRD
Central	Debakey	0	0.0	0	0.0	0	0.0	0	0.0
	International	0	0.0	0	0.0	0	0.0	0	0.0
	Lamar	199	13.5	108	7.3	3	25.0	0	0.0
	Law Enforcement	0	0.0	342	41.0	0	0.0	0	0.0
	Reagan	0	0.0	179	25.4	0	0.0	11	33.3
	Scarborough	102	11.2	140	15.4	8	17.8	2	4.4
	Waltrip	187	11.3	72	4.4	18	26.9	4	6.0
	Yates	8	2.5	172	54.4	0	0.0	0	0.0
	Total	**496**	**7.4**	**1013**	**15.0**	**29**	**18.5**	**17**	**10.8**
East	Austin	169	9.6	367	20.9	18	8.1	48	21.5
	Chavez	228	19.6	160	13.7	12	16.0	10	13.3
	East Early College	0	0.0	0	0.0	0	0.0	0	0.0
	Eastwood	0	0.0	94	55.3	0	0.0	0	0.0
	Furr	0	0.0	2	33.3	0	0.0	1	100.0
	Milby	15	2.6	294	51.0	1	4.3	15	65.2
	REACH	0	0.0	1	33.3	0	0.0	0	0.0
	Total	**412**	**11.2**	**918**	**25.0**	**31**	**9.6**	**74**	**22.9**
North	Davis	16	6.8	83	35.0	0	0.0	6	66.7
	Houston	0	0.0	153	21.5	0	0.0	6	14.3
	Jordan	175	10.7	546	33.5	4	14.8	10	37.0
	Kashmere	4	36.4	0	0.0	0	0.0	0	0.0
	Washington	3	2.2	34	24.8	0	0.0	0	0.0
	Wheatley	95	10.2	222	23.9	4	7.3	11	20.0
	Total	**293**	**8.0**	**1038**	**28.4**	**8**	**6.0**	**33**	**24.8**
South	Jones	0	0.0	0	0.0	0	0.0	0	0.0
	Madison	11	4.6	48	19.9	0	0.0	1	33.3
	Sterling	54	11.0	210	42.9	1	16.7	3	50.0
	Worthing	0	0.0	66	41.0	0	0.0	0	0.0
	Total	**65**	**6.8**	**324**	**34.1**	**1**	**8.3**	**4**	**33.3**
West	Bellaire	0	0.0	9	12.5	0	0.0	0	0.0
	Challenge	0	0.0	0	0.0	0	0.0	0	0.0
	Lee	0	0.0	239	33.7	0	0.0	46	29.3
	Newcomer	0	0.0	0	0.0	0	0.0	0	0.0
	Sharpstown	3	7.1	3	7.1	0	0.0	1	33.3
	Westbury	16	4.4	91	25.0	0	0.0	5	55.6
	Westside	42	6.9	72	11.8	0	0.0	2	11.1
	Total	**61**	**3.4**	**414**	**23.1**	**0**	**0.0**	**54**	**28.7**
Altern.	Contemporary Learning Ctr.	3	18.8	0	0.0	0	0.0	0	0.0
	Nigh HS	0	0.0	0	0.0	**0**	**0.0**	**0**	**0.0**
	Total	**3**	**17.6**	**0**	**0.0**	0	0.0	0	0.0

there was a substantial decrease in the passing rates on the mathematics, reading/ELA, science, and social studies TAKS tests. The most significant decrease in the passing rate was on the reading/ELA subtest, which was down by 25.2 percentage points over the three-year period. Performance on the social studies test by CTE/LEP students also showed a dramatic decrease of 22.4 percentage points from 2004 to 2006.

What were the graduation and dropout rates of CTE students?

The number of CTE graduates and the graduation rates of CTE students have been compiled to show the degree to which students have successfully exited the program. Data have been provided for 2001–2002 through 2004–2005. These data can be found in

Table 10: Enrollment in CTE/LEP Courses by Central Region Secondary Schools, 2005–2006

School	Total*	AG	% AG	BUS	% BUS	CCO	% CCO	FCS	% FCS	HST	% HST	MKT	% MKT
Debakey	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
International	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lamar	12	0	0.0	9	75.0	0	0.0	0	0.0	0	0.0	0	0.0
Law Enforcement	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Reagan	33	0	0.0	16	48.5	0	0.0	0	0.0	6	18.2	0	0.0
Scarborough	45	0	0.0	25	55.6	0	0.0	7	15.6	0	0.0	3	6.7
Waltrip	67	0	0.0	20	29.9	0	0.0	12	17.9	4	6.0	9	13.4
Yates	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total* (includes TEC & TRD)	**157***	**0**	**0.0**	**70**	**44.6**	**0**	**0.0**	**19**	**12.1**	**10**	**6.4**	**12**	**7.6**

AG = Agriculture; BUS = Business; CCO = Career Connections; FCS = Family & Consumer Science; HST = Health Sciences Technology; MKT = Marketing; TEC = Tech Ed. ; TRD= Trade and Industrial

Table 11: Enrollment in CTE/LEP Courses by East Region Secondary Schools, 2005–2006

School	Total*	AG	% AG	BUS	% BUS	CCO	% CCO	FCS	% FCS	HST	% HST	MKT	% MKT
Austin	223	24	10.8	90	40.4	0	0.0	16	7.2	0	0.0	27	12.1
Chavez	75	0	0.0	37	49.3	0	0.0	4	5.3	11	14.7	1	1.3
East Early College	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Eastwood Academy	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Furr	1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Milby	23	0	0.0	5	21.7	0	0.0	0	0.0	2	8.7	0	0.0
REACH	1	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0
Total* (includes TEC & TRD)	**323***	**24**	**7.4**	**133**	**41.2**	**0**	**0.0**	**20**	**6.2**	**13**	**4.0**	**28**	**8.7**

Table 12: Enrollment in CTE/LEP Courses by North Region Secondary Schools, 2005–2006

School	Total*	AG	% AG	BUS	% BUS	CCO	% CCO	FCS	% FCS	HST	% HST	MKT	% MKT
Davis	9	0	0.0	1	11.1	0	0.0	0	0.0	0	0.0	2	22.2
Houston	42	1	2.4	33	78.6	0	0.0	2	4.8	0	0.0	0	0.0
Jordan	27	0	0.0	7	25.9	2	7.4	2	7.4	0	0.0	2	7.4
Wheatley	55	0	0.0	22	40.0	0	0.0	12	21.8	4	7.3	2	3.6
Kashmere	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Washington	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total* (includes TEC & TRD)	**133***	**1**	**0.8**	**63**	**47.4**	**2**	**1.5**	**16**	**12.0**	**4**	**3.0**	**6**	**4.5**

Table 13: Enrollment in CTE/LEP Courses by South Region Secondary Schools, 2005–2006

School	Total*	AG	% AG	BUS	% BUS	CCO	% CCO	FCS	% FCS	HST	% HST	MKT	% MKT
Jones	3	0	0.0	3	100.0	0	0.0	0	0.0	0	0.0	0	0.0
Madison	3	0	0.0	0	0.0	0	0.0	1	33.3	0	0.0	1	33.3
Sterling	6	0	0.0	2	33.3	0	0.0	0	0.0	0	0.0	0	0.0
Worthing	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total* (includes TEC & TRD)	**12***	**0**	**0.0**	**5**	**41.7**	**0**	**0.0**	**1**	**8.3**	**0**	**0.0**	**1**	**8.3**

Table 14: Enrollment in CTE/LEP Courses by West Region Secondary Schools, 2005–2006

School	Total*	AG	% AG	BUS	% BUS	CCO	% CCO	FCS	% FCS	HST	% HST	MKT	% MKT
Bellaire	1	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0
Challenge	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lee	157	0	0.0	81	51.6	0	0.0	14	8.9	16	10.2	0	0.0
Newcomer	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Sharpstown	3	0	0.0	0	0.0	0	0.0	1	33.3	1	33.3	0	0.0
Westbury	9	0	0.0	4	44.4	0	0.0	0	0.0	0	0.0	0	0.0
Westside	18	0	0.0	16	88.9	0	0.0	0	0.0	0	0.0	0	0.0
Total* (include TEC & TRD)	**188***	**0**	**0.0**	**102**	**54.3**	**0**	**0.0**	**15**	**8.0**	**17**	**9.0**	**0**	**0.0**

Figures 11 and **12**, respectively. The data have been disaggregated by CTE codes 1, 2, or 3 as well as total results. It is reflected in Figure 11 that there was a increase in the number of CTE graduates over the four-year period for students coded CTE 2 and all CTE students. Figure 12 reveals that the percent of CTE graduates coded 2 and 3 among all HISD graduates remained steady from 2002–2003 to 2004–2005. At the same time, there was a slight flucuation in the percent of all CTE graduates among HISD graduates over the same time period.

Table 15 reveals the graduation rates of CTE students in 2002–2003 by ethnicity and diploma type for 2002–2003. A higher proportion of African American and Hispanic students coded CTE 2 attained a Recommended High School diploma compared to White students (76.5% vs. 68.8%). At the same time, 86.7% of Asian students graduated in the Recommended High School program. Fairly comparable findings were revealed among CTE students coded 3. Specifically, 86.7% of African Americans and 78.3% of Hispanic students graduated with a Recommended diploma compared to a lower percentage of White students (75.0%).

Table 16 displays the graduation rates of CTE students in 2003–2004 by ethnicity and diploma type. It is apparent that the majority of African American, Hispanic, and White students coded CTE 2 and 3 graduated in the Recommended High School Program. However, a higher proportion of White CTE students attained a Recommended diploma compared to African American and Hispanic students. The findings for CTE students ranged from 75.5% to 77.0% for Hispanic and African American students, respectively, compared to 85.7% for White students coded CTE 2. The results ranged from 79.8% to 86.1% for African American and Hispanic students coded CTE 3 compared to 100.0% of White students in the same subgroup.

Table 17 reveals the graduation rates of CTE students in 2004–2005 by ethnicity and diploma type. In contrast to previous years, a higher percentage of Hispanic students coded CTE 2 attained a Recommended diploma than African American and White students (87.7% compared to 84.9% and 84.1%, respectively).

What were the perceptions of middle and high school guidance counselors concerning enrollment of students in CTE programs?

A survey was administered to determine the perceptions of middle and high school counselors concerning their training needs relative to placement and coding of students in CTE courses. Additionally, counselors were probed to identify areas of improvement and interventions in CTE programs. The findings are presented according to whether or not the item related to general placement, CTE/LEP, and CTE/special education placement issues.

General Placement Issues (***Table 18***)

- Fifty percent of the respondents indicated that the practice of ensuring CTE students had a four year plan is being fully implemented on campuses.
- About 34.2% of the respondents considered the practice of CTE staff and teachers determining appropriate placement of students is fully operational.
- About 29% of the respondents stated that appropriate indicator codes for students are fully accomplished.
- Twenty percent of the respondents indicated that counselors, clerks, and registrars work together to identify CTE placements is fully operational.
- Nearly 11% of middle and high school counselors revealed that collaboration is practiced 100% of the time.

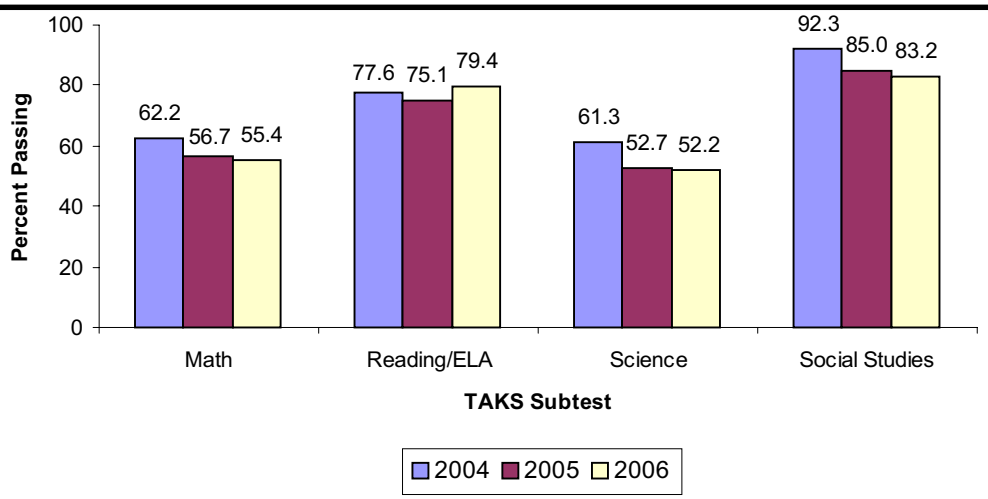

Figure 8: TAKS Performance of ALL CTE Students, English TAKS, Spring 2004–2006

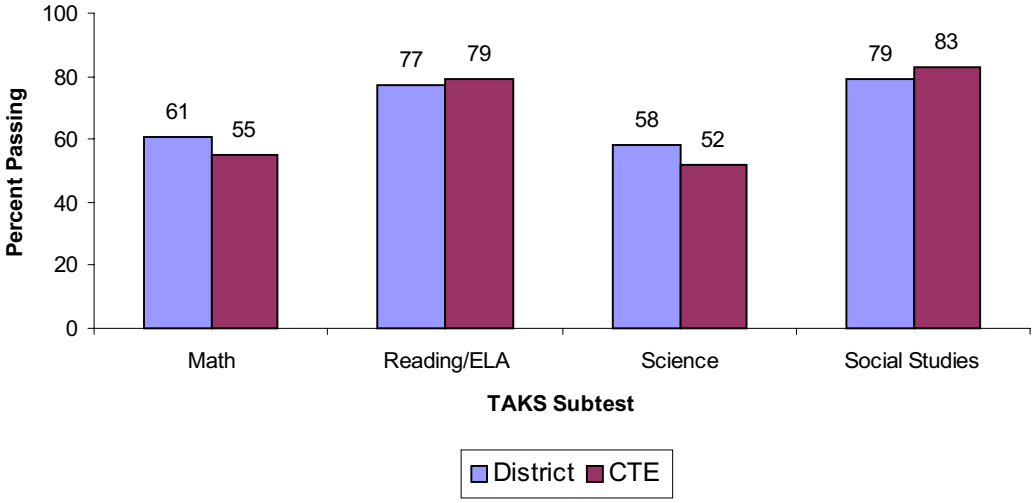

Figure 9: TAKS Performance of All CTE Students Compared to Students Districtwide, English TAKS, Spring 2006

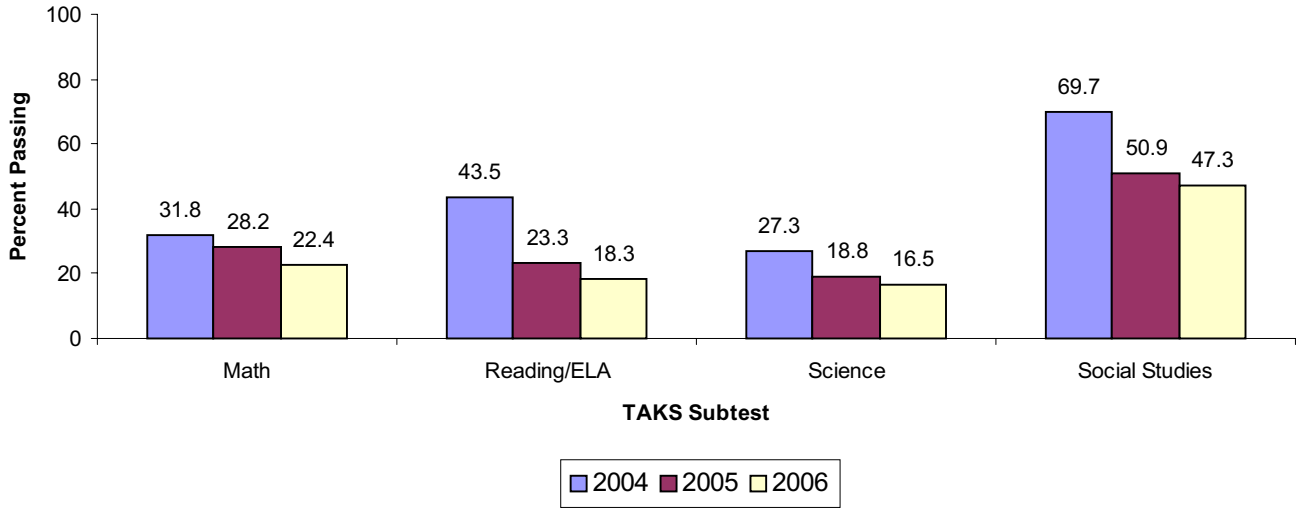

Figure 10: TAKS Performance of CTE/LEP Students, English TAKS, 2004–2006

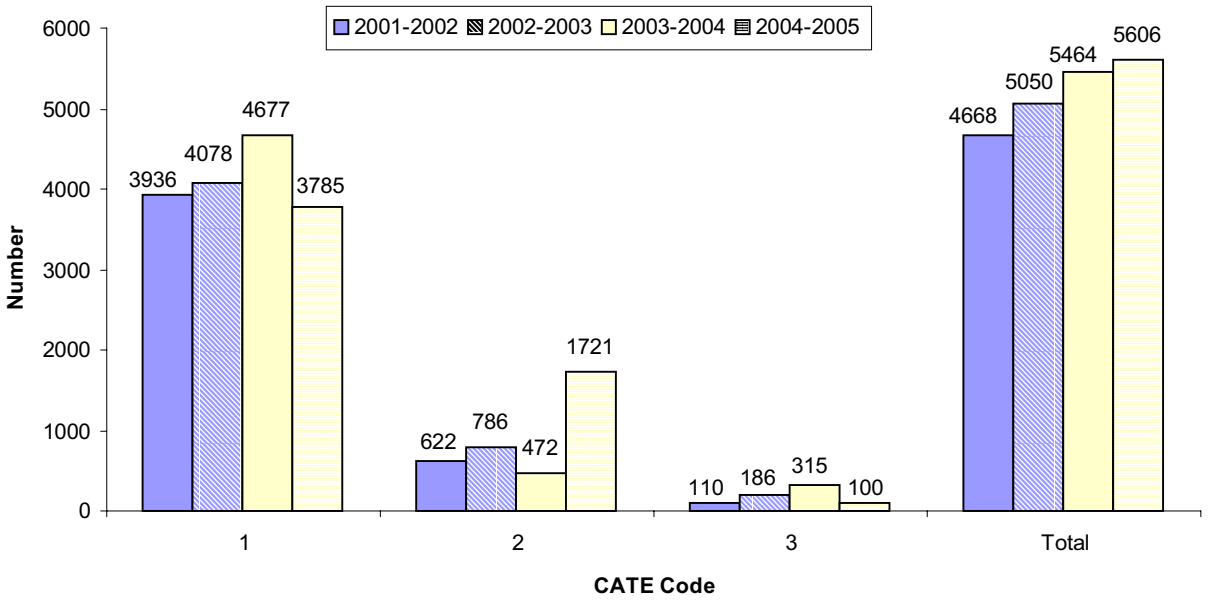

Figure 11: Number of CTE Graduates, 2001–2002 through 2004–2005

CTE/LEP Issues (***Table 19***)

Middle and high school counselors were asked to present issues that are encountered during placement of CTE/LEP students in courses. The following represents comments provided by respondents.

- About 22% of respondents indicated that CTE staff and teachers fully participated in LPACs.
- About 15% of counselors felt that the practice of providing technical assistance to CTE teachers to support instruction and to ensure the academic achievement of LEP students after placement was fully implemented.
- Full implementation of the LEP level being taken into consideration for placement was revealed by 18.7% of respondents.
- Overall, 49.3% of the counselors felt that they were

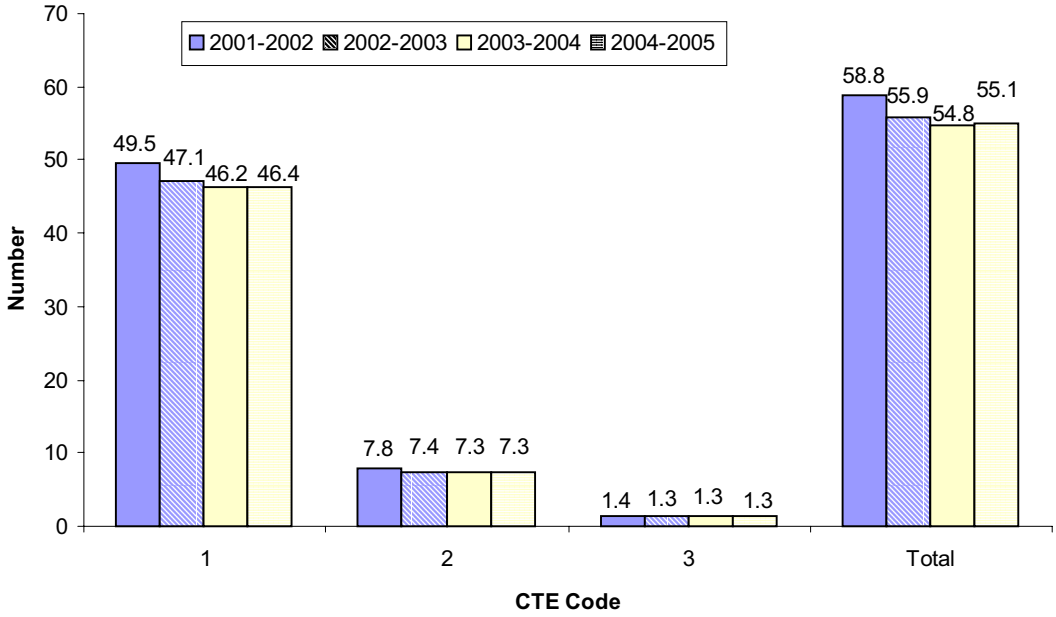

Figure 12: Percentage of CTE Graduates Among All HISD Graduates, 2001–2002 through 2004–2005

Table 15: CTE Graduation Rates by Ethnicity and Diploma Type, 2002–2003

CTE Code	Type of Diploma	Native American		Asian		African American		Hispanic		White		Total
		N	%	N	%	N	%	N	%	N	%	N
1	Completion of Indiv. Ed. Plan					6	.4	26	1.3	2	.3	34
	Distinguished Achievement			19	10.3	14	1.0	16	.8	17	3.0	66
	Recommended			148	80.0	1,054	76.7	1,474	75.9	470	81.7	3,146
	Regular/Minimum	1	100.0	18	9.7	301	21.9	426	21.9	86	15.0	832
	Total	1		185		1,375		1,942		575		4,078
2	Completion of Indiv. Ed. Plan					12	3.2	9	2.6			21
	Recommended			13	86.7	287	76.5	266	76.4	33	68.8	599
	Regular/Minimum			2	13.3	76	20.3	73	21.0	15	31.3	166
	Total			15		375		348		48		786
3	Completion of Indiv. Ed. Plan					3	2.5	1	1.7			4
	Recommended					104	86.7	47	78.3	3	75.0	154
	Regular/Minimum			2	100.0	13	10.8	12	20.0	1	25.0	28
	Total			2		120		60		4		186
Total	Completion of Indiv. Ed. Plan					21	1.1	36	1.5	2	.3	59
	Distinguished Achievement			19	9.4	14	.7	16	.7	17	2.7	66
	Recommended			161	79.7	1,445	77.3	1,787	76.0	506	80.7	3,899
	Regular/Minimum	1	100.0	22	10.9	390	20.9	511	21.7	102	16.3	1,026
	Total	1		202		1,870		2,350		627		5,050

knowledgeable and apply placement criteria when enrolling LEP students in CTE programs at least 75% of the time.

Best Practices for CTE/LEP Students

Middle and high school counselors were asked to indicate best practices for providing services to CTE students identified as LEP. The following represents comments provided by respondents.

- Linguistic accommodations – most provide almost no additional supports but could/should. Student interests should drive placement, not test scores, etc.
- Better communication between LPAC committee and teachers.
- Appropriate testing of language and comprehension skills which allow for proper placement.
- Have a representative from the CTE program or LEP program actually sit on the ARD or LEP committee, and have actual input into the ARD process. I know what the rule is but it does not happen on my campus.
- LPAC meeting.
- More CTE classes that students enjoy and will impact their skills.
- Provide a variety of effective communication to LEP students and parents.
- I am not sure if any of this is in alignment with junior high school.
- Collaboration is ongoing.
- A program for 6th grade males – male initiative.
- Monitoring (every 6 weeks).
- Be considerate of LEP students and work with them.

Table 16: CTE Graduation Rates by Ethnicity and Diploma Type, 2003–2004

CTE Code	Type of Diploma	Native American		Asian		African American		Hispanic		White		Total
		N	%	N	%	N	%	N	%	N	%	N
1	Completion of Indiv. Ed. Plan			2	1.1	82	5.8	86	3.5	16	2.5	186
	Distinguished Achievement			16	9.0	20	1.4	17	.7	30	4.7	83
	Recommended	3	75.0	152	85.4	1,058	74.2	1,979	81.6	502	78.1	3,694
	Regular/Minimum	1	25.0	8	4.5	266	18.7	344	14.2	95	14.8	714
	Total	4		178		1,426		2,426		643		4,677
2	Completion of Indiv. Ed. Plan					21	7.6	13	8.6			34
	Recommended	1	100.0	14	100.0	214	77.0	114	75.5	24	85.7	367
	Regular/Minimum					43	15.5	24	15.9	4	14.3	71
	Total	1		14		278		151		28		472
3	Completion of Indiv. Ed. Plan					9	4.3	4	4.0			13
	Distinguished Achievement					2	1.0					2
	Recommended					180	86.1	79	79.8	7	100.0	266
	Regular/Minimum					18	8.6	16	16.2			34
	Total					209		99		7		315
Total	Completion of Indiv. Ed. Plan			2	1.0	112	5.9	103	3.8	16	2.4	233
	Distinguished Achievement			16	8.3	22	1.2	17	.6	30	4.4	85
	Recommended	4	80.0	166	86.5	1,452	75.9	2,172	81.2	533	78.6	4,327
	Regular/Minimum	1	20.0	8	4.2	327	17.1	384	14.3	99	14.6	819
	Total	5		192		1,913		2,676		678		5,464

CTE/Special Education Issues (***Table 20***)

Middle and high school counselors were asked to present issues that are encountered during placement of CTE/special education students in courses. The following represents comments provided by respondents.

- Nearly 60% of the respondents considered the practice of the ARD committee determining appropriate CTE classes was fully implemented.
- About 32.5% of respondents indicated that the practice of CTE staff participation in ARDs is fully implemented.
- At least 75% of the time, 56.7% of the guidance counselors indicated that they were knowledgeable and apply placement criteria when enrolling special education students in CTE programs.

Best Practices for CTE/Special Education Students

Middle and high school counselors were asked to indicate best practices for providing services to CTE students that require special education programs. The following represents comments provided by respondents.

- Allow full access based on providing supports, not requiring skilled entry.
- The ARD committee needs to really listen to the CTE staff when determining placement.
- Review grades, testing, and interests when con-

Table 17: CTE Graduation Rates by Ethnicity and Diploma Type, 2004–2005

CTE Code	Type of Diploma	Native American		Asian		African American		Hispanic		White		Total
		N	%	N	%	N	%	N	%	N	%	N
1	Completion of Indiv. Ed. Plan			3	2.0	106	8.5	82	4.2	26	5.7	217
	Distinguished Achievement			25	16.7	19	1.5	13	.7	25	5.5	82
	Recommended	3	100.0	118	78.7	925	74.5	1618	83.7	373	81.8	3,037
	Regular/Minimum			4	2.7	192	15.5	221	11.4	32	7.0	449
	Total	3		150		1242		1934		456		3,785
2	Completion of Indiv. Ed. Plan			1	2.4	41	6.8	40	4.3	5	3.4	87
	Distinguished Achievement							2	.2	1	.7	3
	Recommended			40	95.2	513	84.9	816	87.7	122	84.1	1,491
	Regular/Minimum			1	2.4	50	8.3	72	7.7	17	11.7	140
	Total			42		604		930		145		1,721
3	Completion of Indiv. Ed. Plan					3	4.1			2	100.0	5
	Recommended			2	100.0	58	79.5	23	100.0			83
	Regular/Minimum					12	16.4					12
	Total			2		73		23		2		100
Total	Completion of Indiv. Ed. Plan			4	2.1	150	7.8	122	4.2	33	5.5	309
	Distinguished Achievement			25	12.9	19	1.0	15	.5	26	4.3	85
	Recommended	3	100.0	160	82.5	1496	78.0	2457	85.1	495	82.1	4,611
	Regular/Minimum			5	2.6	254	13.2	293	10.1	49	8.1	601
	Total	3		194		1,919		2,887		603		5,606

sidering placement.

- Better communication (professional development) between ARD committee and CTE teachers.
- Appropriate special education evaluations with proper placements of the students and ongoing monitoring of the students' achievement.
- Have a CTE teacher or counselor to sit in on actual ARD.
- Special education students should be taught in the same manner as the regular students. However, students in the secondary grades functioning at the K-3 level cannot function in these classes.
- ARD meeting.
- Allow Special Education students to participate in regular classes and connect their education to their lives post high school.
- Placement of students in CTE classes with communication with CTE counselor or CTE staff.
- Students are encouraged to participate in the CTE programs.
- Follow modifications if provided and strive to work at best with them.

Finally, middle and high school guidance counselors were probed concerning best practices that will contribute to CTE/special education and LEP students mastering TAKS. The responses are provided below.

Table 18: Perceptions of Middle and High School Guidance Counselors Concerning CTE Training Needs Related to General Issues, 2006–2007.

Survey Items	100% Fully	> 75%	51% – 75%	25% – 50%	< 25%	0% Not At All	Not Aware
CTE students have a Four Year Plan.	50.0	13.5	5.4	2.7	2.7	4.1	21.6
CTE staff and/or teachers determine appropriate placement of students in CTE programs.	34.2	17.1	10.5	7.9	2.6	11.8	15.8
Training has been provided in CTE compliance by CTE Central administration or Federal and State Compliance staff (e.g., placement, coding).	24.3	16.2	5.4	8.1	1.4	9.5	35.1
The CTE Indicator Code Decision Chart is used to assign students' CTE status.	37.3	12.0	6.7	2.7	1.3	5.3	34.7
CTE staff and/or teachers determine appropriate CTE Indicator codes for students.	29.3	12.0	9.3	2.7	0.0	20.0	26.7
Academic monitoring of CTE students is done on a regular basis.	23.7	17.1	9.2	7.9	11.8	7.9	22.4
Placement follow-up of CTE students is done on a regular basis.	22.4	14.5	11.8	15.8	6.6	9.2	19.7
Counselors work together with data clerks and registrars to identify CTE placements.	20.0	18.7	1.3	6.7	1.3	12.0	20.0
Collaboration between middle and high school counselors is practiced to ensure the transition of students and proper placement.	10.7	22.7	13.3	5.3	12.0	22.7	13.3

Best Practices for CTE/Special Education and LEP Students Mastering TAKS

- Reinforcement of core academics in "electives" especially the optional ones which are selected by students based on interests.
- Double exposure to core classes.
- If possible, place students in the field in which they are interested.
- Provide adequate support to the student to promote confidence in what they do know and continue to implement the process of gradually increasing their information so their growth with mastering the needed information continues.
- The students need to be able to function in regular classes before they enter middle school. LEP students need an immersion course to learn/ acquire the necessary English skills.
- Tutorials to ensure additional support in core academic areas.
- These "special population" students should be given peer-buddies to help these students embrace excellence in education.
- Placement, academic monitoring, teachers determine appropriate CTE indicator codes for students, ARDs and CTE programs.

Overall, the results of the survey revealed that in-depth training is needed on local and state guidelines relative to placement of students in CTE programs. In addition, counselors indicated best practices for placement, such as consistently involving CTE staff on LEP and Admission, Review, and Dismissal (ARD) committees, adequately utilizing assessment instruments, and effectively preparing LEP and special education students for the instructional rigor of high school.

Table 19: Perceptions of Middle and High School Guidance Counselors Concerning CTE Training Needs Related to LEP Students, 2006–2007.

Survey Items	100% Fully	> 75%	51% – 75%	25% – 50%	< 25%	0% Not At All	Not Aware
Language assessment tools are utilized to determine placement of LEP students in CTE programs.	29.3	10.7	9.3	10.7	5.3	13.3	21.3
In general, LEP students are encouraged to participate in the appropriate coherent sequence of courses based on their abilities.	48.0	12.0	14.7	4.0	4.0	5.3	12.0
Collaboration is ongoing between CTE and ESL/Bilingual staff at the campus level.	23.7	11.8	14.5	7.9	2.6	13.2	26.3
CTE staff and/or teachers participate in LPACs prior to students being placed in CTE programs.	22.4	13.2	2.6	11.8	7.9	21.1	21.1
Technical assistance is provided to CTE teachers to support instructional practices and offer strategies to ensure the academic achievement of LEP students after placement.	14.9	12.2	13.5	9.5	5.4	14.9	29.7
Students' LEP levels are taken in consideration when placing students in CTE programs.	18.7	24.0	17.3	8.0	0.0	10.7	21.3
Overall, I am knowledgeable and apply placement criteria when enrolling LEP students in CTE programs.	21.3	28.0	10.7	4.0	6.7	12.0	17.3

Table 20: Perceptions of Middle and High School Guidance Counselors Concerning CTE Training Needs Related to Special Education Students, 2006-07.

Survey Items	100% Fully	> 75%	51% – 75%	25% – 50%	< 25%	0% Not At All	Not Aware
Collaboration is ongoing between CTE and the Special Education Department staff at the campus level.	22.7	20.0	8.0	8.0	2.7	10.7	28.0
The Admission, Review, and Dismissal (ARD) committee determines which CTE classes are appropriate for special education students annually.	59.7	13.0	6.5	3.9	3.9	7.8	5.2
CTE staff and/or teachers participate in ARDs prior to students being placed in CTE programs.	32.5	14.3	9.1	10.4	7.8	11.7	14.3
Overall, I am knowledgeable and apply placement criteria when enrolling Special Education students in CTE programs.	18.9	37.8	8.1	1.4	5.4	14.9	13.5

Discussion

The HISD Career and Technical Education Department has adopted a goal to offer a career concentration progam with a coherent sequence of courses for all students, including those with limited English and who have special disabilities. Many CTE programs promote self-esteem through competition, stimulate interest by providing a creative outlet, and foster parental involvement. However, findings from this evaluation revealed that course offerings vary throughout the district and primarily focus on business, rather than the sixteen career pathways. This limits the opportunities for students to fully participate in the wide range of courses outlined by the state as a comprehensive CTE program.

Activities offered at the school level in CTE programs provided hands-on opportunities for students to learn skills needed to sustain living and academic rigor through mathematics and science exposure to enter college. Although CTE students exceeded the performance of students district wide on the reading/ELA and social studies TAKS tests in 2006, they fell behind district wide students in mathematics and science. Morever, there has been a steady decline in the TAKS performance of all CTE/LEP students over the past three years on all TAKS subtests.

By adopting the state of Texas plan, the CTE program in the district must continue to commit to academic excellence as defined by law. The expectations of all stakeholders, including school administrators, departmental staff, school guidance counselors must continue to focus on establishing a seamless system that offers career and guidance counseling, business partnerships, as well as rigorous academic and technical curricula for all students, including those who are LEP and in special education programs. To that end, it is essential that professional development for CTE educators incorporates changing technologies and teaching strategies to ensure smooth integration of students into mainstream society following high school. Ongoing evaluation and monitoring of program implementation and student performance will help to ensure program effectiveness and compliance.

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APPENDIX A

Career and Technology Education
High School Perkins Fund Allocation

School Name	2004-2005 Allocations	2005-2006 Allocations
001 Austin	57,783	57,148
002 Bellaire	44,546	36,690
003 Davis	41,814	32,772
004 Furr	20,802	23,256
005 Houston	99,597	75,821
006 Jones	22,693	25,936
007 kashmere	18,070	41,979
008 Lamar	67,239	74,608
009 Lee	81,107	70,516
010 Madison	102,749	93,042
011 Milby	54,841	44,953
012 Reagan	57,783	47,073
014 Sterling	37,191	29,601
015 Waltrip	67,028	65,105
016 Washington	40,133	25,749
017 Westbury	48,748	46,394
018 Wheatley	28,787	28,734
019 Worthing	35,931	26,869
020 Yates	74,173	59,015
023 Sharpstown	53,581	37,676
024 Scarborough	40,763	33,825
025 HSPVA	2,942	3,359
026 DeBakey	38,662	32,706
027 Chavez	97,916	60,090
029 CLC	10,086	10,128
030 Kay On Going	3,362	2,985
032 Houston Night HS	210	1,306
033 Jordan	79,215	65,905
034 HS LECJ	46,647	35,012
036 Westside	23,534	23,883
038 Carter Career Center	3,152	2,410
084 Middle College TC	23,323	18,987
094 Harper Alternative	2,732	2,039
096 Ninth Grade Academy	5,253	
323 Challenge	2,311	
301 Eastwood		3,892