

## **Career and Technology Education 2001-2002**

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The purpose of this report is to present findings about the progress made in Career and Technology Education (CATE) implemented in AISD by the Department of School to Career (STC). The report includes a brief description of the CATE program, its finances, and the distribution of programming across campuses. Anticipated program impacts on student achievement are examined. New initiatives implemented over the last year are highlighted. Finally, recommendations for the program are outlined.

### **INTRODUCTION**

Career and Technology Education describes a system of integrated school-based and work-based learning that integrates academic and occupational learning. The program is intended to prepare students for the dual roles of family member and worker, either directly after high school or after the completion of a post-secondary program.

Ideally, students in CATE programs will be qualified for high skilled, high demand entry-level jobs. On high school graduation, these students will be able to accept a job for full time employment or part time while pursuing additional schooling. While in secondary school, CATE students are expected to perform as well as or better than other students who are not in the program. If the program is successful, students who do not continue their educations beyond high school will be more likely to be employed and hold higher paying jobs. Students in college or technical schools will have increased ability to finance their own educations and will be better able to choose a rewarding course of study.

### **Middle School**

In middle school, CATE offers exploratory classes focusing on Technology Education, Family and Consumer Sciences and Business Education – Skills for Living. CATE courses become available beginning in 6<sup>th</sup> grade with exploratory classes in the range of career clusters. Beginning in 7<sup>th</sup> grade, skill-oriented courses are offered. In the 2001-2002 school year, 8,957 (54%) middle school students took at least one CATE course, some for high school credit.

Technology Education programming is available in all 17 middle schools, each equipped with modular learning laboratories. Four of the middle schools also use modular learning laboratories for Skills for Living classes. All the modular laboratories provide a computer assisted learning environment that does not take up space dedicated to other purposes. Modular Laboratories were initially authorized for installation in 1998. The Gear Up grant assisted by funding laboratories in schools supported by that grant. Together, the two programs supported delivery and installation of learning laboratories in all schools by August, 2002.

### **High School**

In high school, students are taught through a series of organized educational programs. These programs offer a sequence of courses that are designed to prepare students for careers and postsecondary education and training. Career and Technology Education students are grouped according to level of

- ! **CATE Coherent** - reflects student intention to complete a coherent sequence of course work, which is focused on developing occupational knowledge and skills within a career pathway; and

Table 2: Characteristics of High School Students b

PEIMS underreporting in the CATE program has been a very difficult problem to resolve. The wording of the TEA documents indicates that student intent drives the identification process. However, the schools most often recognize student intent only when it has been transformed into action. Staff in the department of School to Career made substantial inroads towards resolving the problem during the 2001-2002 school year. One staff member analyzed the course selections and Individual Academic Career Plan (IACP) of each high school student in the district to see how best to characterize the student's involvement with CATE. This analysis resulted in identification of 4 times as many Coherent program students and 6 times as many Tech Prep students as had previously been identified. AISD data now better reflect the reality of district services to students.

Efforts to improve the CATE identification process have not ended. STC staff members are providing training to school counselors as the 2002-03 school year begins in order to provide the counselors with the skills needed to identify CATE students. In the longer term, the IACP process needs to more clearly indicate student intent to pursue CATE. It is important that the IACP process become computerized both for CATE and also to better track graduation requirements. When the IACP process becomes computerized, students will be able to select their classes from pull-down menus that make their choices clearer. The student could then be prompted automatically to take the next course in the CATE sequence.

The IACP should also include a check box that allows the students to describe their intentions. These check boxes must have descriptors in language that the students will easily understand. For example, one box could be labeled, "I plan to take a sequence of at least three related courses in Career and Technology Education." A student checking this box who is enrolled in or has completed at least one course could be identified as CATE Coherent. Without staff knowledge of the students' intent, a student who has finished an introductory course and is not presently enrolled in a CATE course would have to be labeled as a non-participant in CATE.

### **CATE Planning Workgroup**

On November 27, 2000 the AISD Board of Trustees charged the Department of School to Career with revitalizing CATE programming. AISD staff assembled a workgroup, the CATE Planning Workgroup (CPW), comprising about 25 members and representing Austin area post-secondary education leadership, business leadership and the school district communities. The group met 5 times to identify issues and explore solutions to those issues facing the Career and Technology Education programs.

Meetings included presentations on a variety of relevant topics ranging from the history and current status of programs in the Department of School to Career to the current and future demographics of Austin's community and businesses, to best practices in CATE in AISD and across the country. In order to accomplish its tasks, the Workgroup organized itself into four work teams addressing Program Design, Resources, Student Support, and Marketing. These teams analyzed the programs, forming reports and recommendations that were summarized for the Trustees as follow<sup>1</sup>. According to the CPW, AISD should:

- ! Provide AISD students with career preparation programs that are academically rigorous and that support student learning at high levels, especially in math and science.
- ! Provide all students with access to post-secondary education and the encouragement and support they need to pursue it.

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<sup>1</sup> CATE Planning Workgroup recommendations presented to the AISD Board of Trustees, February 11, 2002

- ! Provide all students with access to career training, including work-based learning opportunities and with the opportunities and support needed to qualify for them.
- ! Recruit, develop, and retain highly qualified teachers to instruct career preparation students.
- ! Increase the financial, business, and college resources available to AISD students by strengthening and stabilizing relationships with corporate, public and community sectors in Central Texas.
- ! Leverage available resources by reorganizing CATE programs and courses into a comprehensive district-wide plan based on equity, geography, student interest and community support.
- ! Develop and implement a comprehensive district-wide strategy to marke21.4995 677.2TT6 1 Tf0.0006 Tc 0.07

## FINANCIAL AND PERFORMANCE

### Budget and Expenditures

Austin ISD funds CATE programming through several sources. First, local revenues provided \$1,033,404 to the program. Local funds at the campuses for CATE teachers provided \$6,157,718. Another \$834,536.00 was derived from federal Perkins grant funds. The result was a total CATE budget of \$8,025,658. The vast majority of the funds are used to support classroom teachers at the middle and high schools. Teacher payroll costs account for 77% percent of the CATE budget. Table 3 indicates the disposition of all CATE funds in 2001-02.

Table 3: CATE Expenditures by Budget Category, 2001-2002

Budget Category	Amount Expended
Teacher Payroll Expense	\$6,157,718
Payroll for Non-Teaching Employees	\$1,033,404
Capital Expense	\$22,632
Supplies and Materials	\$559,765

## **Distribution of Programs at Campuses**

The AISD Department of School to Career (STC) offers programs in eight career clusters (a group of careers having similar characteristics and common skill requirements) designed around current and emerging occupational trends. Within the career clusters, AISD offers 19 different complete pathways. While not all pathways are available on each secondary campus, students may choose to transfer to a different campus in order to pursue a career interest. Student interest, teacher availability and equitable distribution of programs all contribute to the decision of where to locate pathways.

In many cases, only individual courses are available at a given campus. These have been known in AISD as “partial” pathways (henceforward “incomplete”). Four of the pathways in AISD are not complete on any campus. Incomplete pathways are problematic for the functioning of a strong CATE program. First, students interested in that pathway will have limited opportunity to complete the CATE sequence. Secondly, incomplete pathways sometimes have a single teacher responsible for all classes. If that teacher leaves the school, the program may be abandoned. Teachers in incomplete pathways have fewer opportunities for collaboration with others in their fields.

Between the 2000-2001 and the end of the 2001-2002 school years, the CATE program reduced, through pathway consolidation and elimination of under-enrolled courses, the number of incomplete pathways by 17 across the 11 high school campuses. The distribution of pathways among campuses also changed. Five campuses increased their numbers of complete pathways, while 3 saw losses and three were unchanged. Table 5 indicates the distribution of pathways among campuses and shows where incomplete pathways still exist.

Pathway completion provides students the opportunity to complete a coherent career program without requiring transfer to another high school. At the same time, there are costs to both students and AISD associated with consolidating complete pathways on a smaller number of campuses. When pathway courses are vacated at one school, students may be left with some difficult decisions about whether to transfer to another school (full or part time) in order to continue in a chosen pathway, change to a different pathway available on the current campus, or discontinue taking CATE classes. Transportation and schedule coordination between campuses are significant issues in making those decisions.

To some extent, pathway completion is both a program improvement and detriment. The district needs to continue to consider how best to minimize the negative impacts that accrue to students while also continuing to develop better programs. Continuing to develop complete pathways on all campuses, rather than eliminating single courses, would improve the program. At current CATE enrollments, this option may be prohibitively expensive. If, however, the program were to increase enrollments, it would be more efficient to provide more complete pathways at all campuses.

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### Graduation Rates

In 2001-2002, there were 4,118 students listed as 12<sup>th</sup> graders (defined as a student with 15 or more credits). Some of these students may have been retained before the 2001-2002 school year. Table 6 indicates how many of these 12<sup>th</sup> graders graduated during the year and how participation in CATE programming related to graduation rates. All groups of CATE students were more likely to graduate than were non-CATE students. Students labeled CATE Coherent were the most likely to graduate during their 12<sup>th</sup> grade year and non-CATE students were least likely to graduate.

Table 6: Graduation Rates by Level of CATE Participation, 2001-2002

Graduation Status	Non-CATE		CATE Elective		CATE Coherent		Tech Prep		TOTAL	
	#	%	#	%	#	%	#	%	#	%
Not Graduated	240	11.9	109	5.4	11	3.1	61	7.7	421	10.2
Graduated	1,778	88.1	843	94.6	343	96.9	733	92.3	3,797	89.8
<b>TOTAL</b>	<b>2,018</b>	<b>100.0</b>	<b>952</b>	<b>100.0</b>	<b>354</b>	<b>100.0</b>	<b>794</b>	<b>100.0</b>	<b>4,118</b>	<b>100.0</b>



## **SUMMARY AND RECOMMENDATIONS**

The Department of School to Career has made several important changes over the past y

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