

Running Head: Dual Credit Policies

The Influence of Statewide Policies on Community College Dual Credit Programs

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## Abstract

This study was developed out of a 15-case examination of current and promising practices at community colleges in six states (California, Florida, Illinois, New York, Texas, Washington). The purpose of this study was to understand the influence of state policies on dual credit programs at community colleges using case study design resulting in a description of themes. Secondary data was analyzed and included the review of over 230 transcripts from 13 community colleges and the review of state dual credit policies, legislation, and enrollment data. The data was reviewed and organized using the five levels of policy conceptualization, implementation, and evaluation of Easton's Political Systems Model. An inventory of K-14 collaborative activities at the community colleges and a compilation of state policies for the six states are included.

## Introduction

School college partnerships have wide appeal as a likely solution to strengthen the educational system at all levels, decrease the time to degree and costs of postsecondary education, and raise educational standards. Dual credit programs, a rapidly growing example of these partnerships, have entered into the mainstream, a trend that states have recognized and are monitoring. These programs allow secondary students to enroll in college credit classes and receive both high school and college-level credit (Andrews, 2001).<sup>1</sup> Dual credit programs may exist between any secondary and postsecondary institution; however, in most states, dual credit policies pertain primarily to partnerships between high schools and community colleges, increasing the role of community colleges in systemic reform efforts in education. With their reputation as open-access, learner-centered institutions, community colleges have been identified by policy makers in an increasing number of states as the sector best suited to bridge the perceived barriers between the K-12 and postsecondary educational systems (Boswell, 2001) and to prepare students for the more advanced technical skills that are required in today's workforce (Brown, 2001; Palmer, 2000; Pierce, 2002). The ability of community colleges to respond quickly to workforce and societal needs is often a rationale for their enhanced leadership role in developing and expanding dual credit programs.

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<sup>1</sup> Dual credit, dual enrollment, and concurrent enrollment are often used interchangeably, but as the literature has shown, can mean different things. For the purpose of this study, however, I will use the terms dual credit and dual enrollment as defined by Andrews (2001). According to Andrews, dual credit students are "secondary school students enrolled in college credit classes who receive both college credit and credit toward meeting secondary school requirements for graduation" (p. 5). The course may count as credit towards meeting the high school graduation requirement or as an elective towards graduation. Dually enrolled students are students who are enrolled in college-credit courses, but the course may not count as high school credit towards graduation (p. 5).

<sup>2</sup> The International Baccalaureate Diploma program, offered through the International Baccalaureate Organization (IBO), is an advanced level of high school courses that are designed to meet various International university admission standards. The College Level Examination Program (CLEP) allows students to test out of beginning level college courses.

## Proliferation of Dual Credit Programs

Although dual credit programs have existed for half a century, in the last decade enrollments in dual credit courses have burgeoned (Andrews, 2001). The features that make dual credit programs appealing are many:

- Increases curriculum opportunities for students;
- Reduces postsecondary costs to students and parents;
- Reduces costs for state spending on education;
- Reduces time to degree;
- Increases access to postsecondary opportunities for students from underrepresented groups;
- Increases geographic access to educational opportunities, particularly for students in rural schools;
- Eases overcrowding in colleges and high schools;
- Enhances college-credit options for technical education students;
- Addresses “senioritis” experienced by many students in their junior and senior years;
- Aids in the transition from high school to college; and,
- Increases choices for parents and students (for examples, see Andrews, 2001; Boswell, 2001; Bailey, Hughes, & Karp, 2002; Clark, 2002; McCarthy, 1999).

Evident from the features above, dual credit programs are seen as the means to address many educational problems, which have led to state-enacted dual credit policies and a proliferation of institutional involvement with dual credit programs. Toacerbate the problem, little is known about what is causing the rapid development of dual credit programs and what are the outcomes.

According to Clark (2001), “Dual credit is both loved and hated...Some have strong investments in its success; others have equally strong investments in its failure. There is very little neutral ground” (p. 5). Part of the strong animosity towards the programs may be attributed to the quick development of the programs without significant evidence to support individual and societal outcomes. In Illinois, the enrollment in dual credit courses has more than quadrupled in the last ten years, from 2,220 students in 1990 to 11,809 students in 2000 (Illinois State Board of Education, 2001). The state of Washington shows similar trends, with enrollments that have

tripled (from 3,350 students in 1992 to 13,699 in 2000) since the inception of the state's Running Start program in 1992 (Washington State Board for Community and Technical Colleges, 2001).

The increasing development of statewide dual credit policies is also prevalent. In some states, policies guarantee qualified students access to college courses, often at no cost to the student, while dually enrolled in the high school curriculum. An inventory of state policies conducted by Education Commission of the States (ECS) revealed that almost every state reported some kind of dual credit activity: 19 states have state policies (legislation) on dual credit/enrollment, 21 states have comprehensive programs, and 26 states have limited dual credit/enrollment programs (ECS, 2001). Boswell (2001) reported only two states with no policy or known dual credit program.

The increasing interest of state policy makers and educators in education reform as a system-wide effort (grades P-16 and beyond) has engendered numerous recent reform policies, ranging from new accountability measures to increased standards and innovative cost-sharing strategies. Some state agencies have assessed institutional compliance with state dual credit policies and student outcomes of statewide dual credit programs (Roesler, 1992, Windham, 1997). Burns and Lewis (2000) describe the environment that dual credit programs face. "States, community colleges, and high schools are more aware of fiscal accountability than ever before...Any program that does not have clearly articulated objectives, methods for reaching those objectives, and data to support progress is in jeopardy of being cut" (p. 1). Few studies have assessed the outcomes of dual credit programs (Herbert, 2001; Johnson, 1999) and minimal multi-state research studies on dual credit policies, such as the one by Clark (2001) have been conducted. To neglect to study this topic and its relationship with state policies and the educational environment, may put the future of these programs at risk.

## Political System Model

According to Easton (1965), political systems are interpreted as a set of processes through which inputs are converted into outputs (policies, decisions, and implementing actions). Easton's model consists of five components that define the adaptability of political systems to the environment: 1) the environment (societal components such as behavior, attitudes, ideas that interact with the political system); 2) inputs (external and internal demands and support units that are "the key indicators of the of the way in which environmental influences and conditions modify and shape" the system) (p. 27); 3) political systems (the model by which "values are authoritatively allocated for a society") (p. 21); 4) outputs ("the consequences flowing from the behavior of the members of the system") (p.29); and, 5) feedback (response and reaction on the part of system authorities). For the purposes of this study, outputs are regarded as institutionally based outcomes or responses (within the colleges or high schools). On the other hand, feedback refers to system responses and changes due to outputs received from institutions. Easton's political system model analyzes the impact of system adaptability that continually responds to the changing needs and demands of its environment by transforming its outputs, in this case policies. Easton's model is used to describe the relationship between state policies on community college sponsored dual credit programs.

## Purpose of the Study

The purpose of this study was to understand the influence of state policies on dual credit programs at community colleges using case study design resulting in a description of themes. Dual credit will be defined generally as secondary school students enrolled in college credit classes who receive both college credit and credit toward meeting secondary school requirements for graduation (Andrews, 2001).

## Research Design

This study was conducted in conjunction with data collected by the Community College Research Center (CCRC) at Teacher's College of Columbia. The CCRC study consisted of site visits to 15 community colleges in 6 different states (California, Florida, Illinois, New York, Texas, and Washington). This qualitative study used case study design to understand the influence of 6 state dual credit policies on dual credit programs at 13 community college. The data was reviewed and organized using the five levels of policy conceptualization, implementation, and evaluation in Easton's Political Systems Model.

## Research Questions

The research questions emerge from Easton's feedback model for policy analysis and impact. Specifically, answers to the following research questions were sought:

- 1) What are the local environmental factors that encourage and support the development or expansion of dual credit partnerships between high schools and community colleges?
- 2) What local inputs influence the creation or development of dual credit programs?
- 3) How have state policies driven or impeded the development and growth of dual credit/enrollment programs?
- 4) What are the outputs of state policies related or not related to the intent of the dual credit policies?
- 5) How are the outputs of state dual credit policies related or not related to the intent of the state policy?

## Literature Review

A review of the literature was conducted based on the first three components in Easton's framework (environment, inputs, and political systems). The last two components (outputs and

feedback) are evaluated in the results section of the study. The literature review first assessed the policy environment (issues) underlying dual credit and other accelerated learning programs. Secondly, the review examined external demands and supports for dual credit programs and state policies. Lastly, the review identified trends that have emerged from the design of dual credit programs.

### Environmental Factors Underlying Dual Credit<sup>2</sup> Programs

The phenomenon of dual credit is not a new one and has existed for more than a half-century through Advanced Placement (AP) courses and other institutionally based programs. While many claim that the College Entrance Examination's Board AP program is not technically a dual credit program—students receive only high school credit for their AP courses and may elect to take the AP exam—the program is known for its accelerated learning model that sparked the later development of other dual credit programs (McMannon, 2000). For the purpose of this study, the AP program and other similar models (i.e., International Baccalaureate, Clep Tests<sup>3</sup>) are considered dual credit programs. The AP program is used to trace the evolution of policy issues that contributed to the development of dual credit programs.

The policy issues underlying dual credit programs and the student populations targeted have changed significantly since the inception of AP programs in the 1950s. McMannon (2000) described the advent of the AP program in 1955, which was created by the College Board with the intent of providing “small, regional curricular enhancement for the academic (and social) elite” (p. 1). Through AP programs, academically able high school students were provided the opportunity to take college-level courses while in high school and receive college level credit upon passing the nationally administered exam (Boswell, 2001; Greenberg, 1989). While the

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courses were directed towards an academically skilled population, the ability to take the exam to receive the credit (costing today up to \$75 per test) “predicated accelerated (college) course enrollment on a family’s ability to pay tuition” (McCarthy, 1999, p. 24). Regardless, those who were able to participate in the program benefited by having the opportunity to take more advanced courses, as well as the ability to enter college with college credit.

However, the limited student population eligible for AP courses caused many educators to investigate other accelerated learning programs that reached a more inclusive population. The culture of state and national policies towards gifted students began to change to incorporate approaches more inclusive of underrepresented and at-risk students (American Association of State Colleges and Universities, 2002). The expanded constituency base was first seen through the Middle College High School model developed in 1974 at LaGuardia Community College in New York. Middle College High Schools, which are located on community college campuses, serve at-risk students who have the potential to go on to higher education or advanced training (Cunningham & Wagonlander, 2000). The model, which was based on peer mentoring, small classes, and strong academic and support services (Cunningham & Wagonlander, 2000; Pierce, 2002), provided students with access to high school and college-level courses, as well as strong counseling and emotional support (Greenberg, 1989). Presently, more than 25 middle college high schools have been created across the nation (Cunningham & Wagonlander, 2000), contributing to an expanding non-traditional pool of college-bound high school students.

Another dual credit program, Tech Prep, was developed in the mid-1980s, also with the intent of targeting non-traditionally college bound students (Bragg, 2000). Created in 1985 after the publication of Dale Parnell’s *The Neglected Majority*, Tech Prep was launched through the 1990 federal Carl D. Perkins Vocational and Applied Technology Education Act (Bragg, 2000;

Pierce, 2002). Parnell's plan was to create a four-year articulated curriculum that offered students "planned career pathways" between secondary classes and advanced technical postsecondary education training (Bailey et. al., 2002; Pierce, 2002). With the intent to seamlessly articulate the secondary and postsecondary vocational and academic curriculum, many Tech Prep programs allowed courses, mostly vocational, to count as either dual credit or credit in escrow, where students received the college-level credit once they enrolled in a postsecondary institution. The program became significant in the eyes of educators as a model for systemic reform that has led to other educational benefits, (e.g., professional development opportunities for high school teachers and community college faculty, curriculum development and updating of vocational classes, and more collaboration among secondary and postsecondary educators) (Bragg, 2000; Pierce, 2002).

In the last three decades, the policy intent of accelerated learning programs has shifted from a focus on gifted and advanced students to an inclusion of educational opportunities for all students. Relatively recently, another priority has developed regarding accelerated learning opportunities— access to high school based programs by students from underrepresented groups or under-funded districts. In 1999, a case filed by the American Civil Liberties Union (ACLU) brought a renewed interest in AP programs and their role in the educational system (Education Commission of the States, 2000). The case alleged the fact that AP programs still excluded students who could not afford the exam fee to take the class and receive college credit. Until very recently, the University of California campuses weighed AP courses higher than other courses in admission decisions, further limiting access for low-income students to the institutions.

The focus on underrepresented students has also been magnified by the impact of anti-affirmative action rulings (e.g. Hopwood vs. State of Texas), which have caused institutions to

consider other opportunities to increase access to postsecondary education. “The rollback of affirmative action in California and other states casts a spotlight on stark discrepancies in educational opportunities along income and racial lines” (Burdman, 2000, p. 15), further demonstrating the need for improved K-12 preparation and higher education outreach (Neville, 1999). Today, AP courses are available to a wider range of high school students with some programs specifically targeting lower achievers and special population students (Bailey et. al., 2002; McMannon, 2000; Rothschild, 1999). Due to the demand for AP courses in California secondary schools, Governor Gray Davis set a goal that by fall 2000, every high school would offer at least one AP class; with four offered by fall 2001 (Burdman, 2000). Many states have policies in place that expand financial incentives to districts to offer the programs and provide fee subsidies for students to take the nationally administered test. According to the ECS web site, in 2000, twelve states had policies in place that awarded financial incentives to districts and schools offering AP courses (ECS, 2000). Nine states had legislation offering fee subsidies to low-income students who take AP tests.

Studies questioning the usefulness of the last two years of high school have brought increased attention to the need to make the high school curriculum more rigorous and better aligned to the postsecondary admission standards and curriculum (Kirst & Venezia, 2002; National Commission of the High School Senior Year, 2001). Andrews (2001) claims that although dual credit courses have existed within community colleges for years, only recently has much public attention been paid to the phenomenon, and this attention has caused enrollments to proliferate. Dual credit programs are seen today as a benefit to students, to institutions, and to educational systems. Statewide, dual credit programs help increase the rigor of the high school curriculum (Bailey et. al, p. 9) and increase collaboration among secondary and postsecondary

institutions. A review of state dual credit policies and programs for the six selected states in the study was conducted through the review of state coordinating board web sites, state legislation, and phone conversations with state policy makers. To provide background information on the programs and policies existing within the states, Appendix A is included. It outlines programs and policies existing within the six selected states in the study. In addition, a review of the type of students served by the statewide dual credit programs and policies was conducted. A supplemental table (A-1) offers an overview of state programs according to type of student population served.

### Issues of Dual Credit Policies

#### Student Enrollment

Mounting enrollments in dual credit programs are prompting state officials to pay attention to the new trends in partnerships between postsecondary and secondary education institutions. An inventory of state policies conducted by ECS revealed that, currently, 19 states have state policies (legislation) on dual credit/enrollment, 21 states have comprehensive programs, and 26 states have limited dual credit programs (ECS, 2001). Boswell (2001) reported only 2 states with no policy or known dual credit program. The design of dual credit/enrollment policies varies considerably from state to state, ranging from state- or system- wide policies to more laissez faire, decentralized approaches.

Minnesota is credited with being the first state to institute a state-level program offering accelerated learning options for high school students (Clark, 2002). In 1985, the state created the Postsecondary Enrollment Options program to “promote rigorous academic pursuits and provide a variety of options” to high school juniors and seniors (Minnesota Statute Sec. 123.3514). Five years later, the state of Washington implemented the Running Start program, a program that

expands postsecondary opportunities for public school students. State policies in both Minnesota and Washington mandate the establishment of dual credit opportunities for high school students.

Funding policies also influence student enrollment in dual credit programs. In 1997, the state of Illinois changed its funding formula for dual credit allowing both the high school and the community college the opportunity to collect state funding for the student enrolled in a dual credit course. Andrews (2000) found that administrators in 77% of community colleges in Illinois indicated that dual credit courses at their institution had increased since the change in funding policy. Eighteen of the 48 colleges in the state did not previously offer dual credit programs, but all community colleges offered dual credit courses after new funding. Table 1 shows the state dual credit enrollments for the six selected states in the study, which were collected from each individual coordinating board. The table indicates the number of community colleges that have dual credit students (n), the average enrollment per student (the total enrollment divided by the number of institutions), and the type of policy in place in each state. According to the table, the states with the largest student participation in dual credit programs are California and Florida, even though Washington has the longest existing program of the states studied and Illinois offers financial vouchers for students to take dual credit courses.

Table 1  
Dual Credit Enrollment In Two-Year Colleges  
By Headcount

	CA	FL	IL	NY	TX	WA
2000-2001 Enrollment In Dual Credit Programs <sup>1</sup>	169,063 <sup>2</sup> (n=115)	29,710 <sup>3</sup> (n=28)	11,809 <sup>4</sup> (n=54)	N/A	17,370 <sup>5</sup> (n=49)	14,148 <sup>6</sup> (n=34)
Averaged Enrollment Per Institution	1470	1061	218	N/A	354	416

Type of Dual Credit Policy	State Policy	State Policy with Mandates <sup>7</sup>	Statewide Policy; Statewide Funding Program	State Policy; No Statewide Program <sup>8</sup>	State Policy	State Policy With Mandates <sup>7</sup>
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<sup>1</sup> 2000-2001 data collected from individual coordinating board offices. N is the number of institutions represented.

<sup>2</sup> Data retrieved from California Student Demographics site for fall 2000 (72,872 headcount) and spring 2001 (96,191 headcount) special admit (K-12) student data ([http://misweb.cccco.edu/mis/onlinestat/studdemo\\_coll.cfm](http://misweb.cccco.edu/mis/onlinestat/studdemo_coll.cfm)). Does not include unduplicated headcount; each student is counted only once, even if they have taken multiple dual credit courses.

<sup>3</sup> Includes students enrolled in courses that count towards an associate degree and courses that count toward vocational certificates (non-college credit). In addition to this number, there were 658 early admission students (656 in associate degree courses and 2 in vocational courses).

<sup>4</sup> This represents the number of unduplicated total of public high school students enrolled in dual credit courses. The data was retrieved from Illinois State Board of Education (2001, October), *2000-2001 Census of High School Students Enrolled in Community College Courses for High School Credit*. Springfield, IL.

<sup>5</sup> Data provided by Texas Higher Education Coordinating Board is by student headcount.

<sup>6</sup> Data includes enrollment for Running Start and College in the High School students reported in *Running Start: A Progress Report From the State Board for Community and Technical Colleges*, retrieved at: <http://www.sbctc.ctc.edu/oldweb/Leg/runstart.pdf>.

<sup>7</sup> Florida and Washington are the only two of the six states in which the state dual credit policy mandates that community colleges develop dual credit programs.

<sup>8</sup> New York's policy grants permission for individual postsecondary institutions to set guidelines for dual credit programs. Subsequently, the individual institution with no oversight from the state board is responsible for the development and monitoring of dual credit programs

### Eligibility

In addition to variation in enrollment trends, the literature reveals that states also differ significantly in requirements for participation. Clark (2001) reported that 15 states allow local determination of eligibility, while 35 states have established some criteria (such as age [junior or senior status], minimum GPA, recommendation by school personnel, etc.). The most common criterion used was high school standing, in most cases requiring the student to be a junior or senior (Clark, 2001). In nearly all states, students must meet college admission requirements in order to be eligible to take dual credit courses, which was most commonly measured by test

scores on the ACT or SAT or a certain score on the community college's placement tests.

Student eligibility sometimes also extends to students from charter schools, private high schools, and home schools.

### Instruction

By whom and where courses are taught has been a topic of discussion in dual credit debates (Reisberg, 1998). States may allow dual credit courses to be taught at the community college or at the high school (ECS, 2001; McCarthy, 1999). In the state of Washington, a differentiation is made between courses taught on the college campus (the Running Start program) and courses taught at the high school (the College in the High School program, which resulted from the inability of many high school students to leave the high school campus to attend classes at the community college). Both programs require that college faculty teach the course (Frazier, 2000). A review of state policies reveals that many other states allow dual credit courses to be taught on either the high school or college campus. However, critics of dual credit programs question whether students are having the same college-level experience if they enroll in dual credit courses on the high school campus (Clark, 2002).

The perceptions of students enrolled in dual credit courses have also been studied. Qualitative studies by Burns & Lewis (1999) and Johnson (1999) have looked at the perceptions of students who have taken dual credit courses and both found that students perceived dual-credit courses taught on the college campus to be of greater value and more rigorous than those taught on the high school campus. However, the small sample of students in these studies, 6 students in Burns & Lewis and 10 students in Johnson, questions the reliability of the data.

Who should teach dual credit courses has also been debated. Dual credit instructors can range from tenured faculty of a college to qualified high school teachers (Clark, 2001). While the

criticism was initially raised in relation to high school faculty teaching college-level work, one study found that courses by high school faculty produced higher student achievement. Herbert (2001) found higher student outcomes in dual credit courses taught by high school faculty when compared to those taught by college faculty.

Herbert's study examined the learning outcomes for students enrolled in dual credit math courses taught over a five-year period (one group contained subjects taught by community college instructors while the other group was taught by high school instructors). The results showed that students taught by high school teachers earned significantly better grades in subsequent mathematic courses. Based on the results, Herbert concluded many things, most interesting though was her reflection that college professors may see it as a demotion to teach high school students, while high school teachers consider it an honor and may do a better job as a result. This raises further issues of faculty perceptions of dual credit courses and their role of teaching the courses that warrant further research.

### Funding

Another issue that state policies address is funding of dual credit programs. Dual credit programs are funded primarily in two ways: 1) students pay tuition for the college credit courses or 2) the local district or state pays the tuition (McMannon, 2000). This too differs state by state. According to Boswell (2001), 15 states have statutes that require the state or the local school district to pay all or most of the tuition costs for students enrolled in dual credit programs (p. 10). The student is typically expected to cover the costs of books and transportation. In California, tuition is waived but a small enrollment fee is required (Boswell, 2001). In 9 states, local districts determine whether or not to subsidize student tuition costs for dual credit programs. In 3 states,



students pay a discounted rate. In 18 states, students are responsible for all tuition and fees, although community colleges may offer tuition waivers to the high school students.

The state of Illinois has a unique program that provides Accelerated College Enrollment (ACE) grants that reimburse community colleges for the costs of tuition and fees for students who have taken dual credit courses at the college (Chapman, 1999). Colleges are not allowed to charge the student for tuition or fees. Statewide funding programs like Illinois' ACE program resemble student voucher programs. The funding to take advanced courses follows the student, often short-changing the school district. Through many dual credit policies, "a student's decision to dually enroll ends the long-held practice that revenues allocated to a district automatically stay within the district. Now, a lack of accelerated courses (for 11<sup>th</sup> and 12<sup>th</sup> graders) could reduce rather than insure the continuation of revenue" (McCarthy, 1999, p. 28), which leads to another controversial aspect: how districts and colleges are allowed to count students.

Twenty-seven states allow both the K-12 school district and the community college to count the dually enrolled student as full-time equivalent (FTE) and average daily attendance (ADA). In the state of Washington, high schools lose the ADA on students who take courses at the postsecondary institution. The state does not fund both systems. Due to this, the program, which is already in its 12<sup>th</sup> year, continues to encounter resistance from high school administrators and teachers, even to the point of discouraging students from participating. "Districts often view dual enrollment as a loss of control over both budget and curricular decisions, and a potential loss of revenue: K-12 dollars, previously under their control, must now pay the student's higher education tuition fees" (McCarthy, 1999, p. 28).

Due to protests from high school administrators, Pierce (2002) states that "dual-credit programs work best in states where both the college and high school receive full state funding for

dual credit students. This policy removes much of the resistance to the program by high school teachers who fear losing both enrollment and state aid” (p. 5). Both legislators and taxpayers dislike the double dipping of funding both systems for one service (Bailey et. al., 2002; Clark, 2001; ECS, 2001; McCarthy, 1999). Hanson (2001) reported that in 2000-2001, the Running Start program in Washington saved students and families \$14.6 million in college tuition costs and, since the program is not dually funded by the state, taxpayers were also saved \$28.8 million. This money would not have been saved if both systems had been funded. Yet, as dual credit programs increase, state policy makers will have to address the problem of how to fund them equitably while making the most efficient use of public monies (Bailey et. al., 2002).

Regardless, the additional revenue that is brought in for community colleges (through student tuition, state grants, or other state aid) provides an incentive for community colleges to participate in dual credit programs. Whether funded through the state, the school district, or by the student, there are financial benefits for community colleges to provide dual credit classes (AASCU, 2002). As highlighted earlier, a good example of a state-sponsored funding incentive is Illinois’ ACE grants, which reimburse community colleges for high school students who take dual credit courses with the institution. In New York, high school students may be considered special population students and counted for discounted tuition. The colleges also receive county charge backs for enrolling high school students in college-level courses. “In coming years, these revenues could become more vital to public institutions as state funding continues to decline as a source of institutional support” (AASCU, n.p.). If demand for dual credit courses persists, state policies will continue to be developed that offer financial incentives to institutions.

Table 2 shows the funding mechanisms for dual credit for the six states participating in this study. However, the reporting of different variables from the source where the data was

retrieved makes it difficult to draw comparisons among funding structures. Nonetheless, the table shows the different approaches that are utilized by states in funding dual credit programs. Four of the 6 states provide some funding assistance to students to take dual credit courses, whereas in New York and Texas, students are responsible for covering tuition costs. Additionally, four of the six states fund both levels (secondary and postsecondary education) with only two states (Texas and Washington) funding the postsecondary level.

Table 2  
State Funding for Dual Credit Courses<sup>1</sup>

	CA	FL	IL	NY	TX	WA
Tuition and Fees	State or school district pays tuition; student pays enrollment fee	State pays for tuition and fees; district buys books	State awards tuition vouchers- (ACE grants)	Students responsible for tuition and fees	Students responsible for tuition and fees <sup>3</sup>	State or school district pays for tuition and fees
Level of funding	Funds both levels	Funds both levels	Funds both levels	Funds both levels	Only funds post-secondary	Only funds post-secondary

<sup>1</sup> Data for the table was collected from Boswell (2001) and ECS (2001).

<sup>2</sup> In Illinois, Accelerated College Enrollment (ACE) grants reimburse institutions for tuition charges, books and fees for students who take dual credit courses at a community college (Chapman, 1999). The grants cannot cover the tuition costs for all students taking dual credit courses, which requires colleges to decide whether to pay a greater proportion of the costs for fewer students or vice versa. The grants only cover the costs of two courses per semester, excluding the summer semester, and the courses cannot be offered at the high schools.

<sup>3</sup> Some community colleges in Texas offer tuition waivers to high school students who are enrolled in dual credit programs.

## Drivers of Dual Credit Programs

### Demand

Despite contradictory funding mechanisms, many advocates of dual credit programs are willing to overlook a few minor problems in exchange for the multiple benefits that result. Legislators, policy makers and parents find dual credit courses appealing because the courses help address concerns about the secondary school curriculum, the costs of higher education, and time-to-degree completion issues (Andrews, 2001; Bailey et. al., 2002; Boswell, 2001). Boswell (2001) cited policy makers' concerns over the need for a highly trained workforce as one the main drivers for the increased interest in providing a range of postsecondary enrollment options to high school students (p. 7), while Demaree (2001) emphasized legislators' concerns over the discontinuity of the educational continuum as incentive to promote a more seamless transition from high school to college. In addition to parents, legislators, and policy makers, institutional leaders are also driving the growth in dual credit programs. Community colleges and high schools benefit in many ways through the strategic partnerships: better access to student markets for community colleges (Brown, 1993; Orr, 2001); professional development opportunities for secondary and postsecondary teachers (Brown, 1993); greater curriculum collaboration between high school and college faculty members (Boswell, 2001); and closer connections between colleges and their communities (Boswell, 2001).

## Policy Trends

Several trends in dual-credit policy have emerged with the proliferation of programs, one of which is the increased role of higher education in educational reform efforts. Until the organization of school-college collaborations in the mid to late 1980s, higher education system-wide played little or no role in reform policy discussions (Haycock, 1994; Timpane, 1999). However, the problems generated by isolated systems (conflicting standards for students, placement exam inconsistency and intensive remediation, unequal opportunities for different groups of students) are expensive and problematic (Consortium for Policy Research in Education, 2000). Accordingly, the contributions that colleges and universities can make to educational reform efforts have been increasingly recognized. In this case, dual credit programs offer many features that address gaps and weaknesses in the continuum of education—high school and beyond.

However, in some cases the contributions of higher education in education reform efforts is occurring at the expense of secondary education. Dual credit funding policies in states such as Washington permit education funding to be allocated to higher education at the expense of K-12 education. In Washington, community colleges receive state funding for a student to take college courses. On the other hand, the secondary schools lose funding when a student leaves the high school campus to take a dual credit course (and subsequently cannot be counted for Average Daily Attendance (ADA)).

The question of how to fund statewide dual credit programs is being asked by state policymakers and legislators. According to Boswell (2001), some state policy makers are asking if statewide funding is needed in order to assure equity, including geographic equity, and what financial incentives should be provided to encourage participation in dual credit programs. In

most cases, this means either funding both systems, which some consider double dipping in taxpayer money, or funding one system at the expense of the other (Clark, 2000). However, the literature neglected to mention dual credit partnership programs (either statewide or locally) that share resources. In fact, if both systems are funded, or if one system is funded at the expense of the other, does the program qualify as a collaborative effort?

Lastly, McCarthy (1999) notes that dual credit policies have resulted in a shift in state and district funding towards gifted students. Consistent with trends in state financial aid policies, which have shifted from need-based aid to merit-based scholarships, state policies have been designed to reward gifted students to the detriment of the more needy student populations. Georgia led the merit-based aid movement with the creation of the Georgia HOPE scholarship and since its inception in Georgia, other states have designed similar state student aid programs (e.g., Florida, Kentucky). Merit based student aid programs award financial scholarships to students who meet certain academic criteria. While targeted students (minority, at-risk, rural, vocational) are included in the design of the specialized dual credit programs, they also must meet certain academic criteria.

Re-directing state funding to the nation's most academically promising students may come at the expense of neglecting more needy students. In some states, students who leave the high school to take courses at the community college means a loss of ADA funding that may have supported programs for at-risk and special need students. State dual credit policies with the intent to save costs may be impacting the access and equity of learning opportunities for other student populations. Policymakers should use caution to assure that the intent of state dual credit policies aligns with the population served and does not disadvantage other student populations.

## Gaps in the Research

Numerous articles have been written on dual credit, most of which either argue in favor of or against dual credit programs. McMannon (2000) classified the current literature into two categories: 1) descriptive (articles that describe dual credit programs) and 2) analytical (articles that make judgments about dual credit programs). However, “much of the writing that has been done on dual credit has been to promote a specific program, to report how a college created and nurtured its program, to advise parents of ‘gifted’ children of their options, or to complete government-required studies of state mandated programs... Very little has been written in refereed journals, and very little genuine evaluative work has been done” (Clark, 2001, p. 4). Like Clark, Ryan (2000) found a lack of research articles on the linkages among middle school, high school, and postsecondary education. He noted that “there are many descriptions and some evaluations of particular programs, as well as a wealth of advice about how partnering can best proceed [However, the literature does not include] “theoretical foundations, solid empirical evidence, or sufficient contextual information to allow one to understand why some programs work, for whom, and to what end” (pp. 3-4).

Clark (2001) conducted a multi-year, multi-state study that included five phases: a literature review; a 50-state review of state policies; a survey of over 200 admission officers at a variety of colleges (ranging from research universities to community colleges) in all 50 states; and a case study analysis of 16 dual credit partnerships in 14 states. The study also used a review panel that involved 24 educators and policy makers to examine the preliminary findings and offer suggestions for additional data needed. The study revealed that the enrollment nationwide in dual credit programs is increasing, which has also brought increased attention to dual credit and a growing number of state dual credit policies. The results found that although there are

differing designs and intents for dual credit policies, state components of evaluation of dual credit initiatives were infrequent. Accordingly, Clark recommended further study of dual credit programs and their impact is needed, as is further attention to the impact of dual credit programs on the high school curriculum and student attrition to postsecondary education.

Other studies examined dual credit policies on a statewide level. A survey by Andrews (2000) examined the influence of a change in a state funding dual credit policy on the offering of dual credit courses at community colleges. The change allowed both systems (secondary and postsecondary institutions) to be funded for dual credit courses. The results of the survey found that administrators at 77 percent of community colleges in Illinois indicated that dual credit courses at their institution had increased since the change in funding policy. Eighteen of the 48 colleges previously did not offer dual credit programs, but the study found that all community colleges now offer dual credit courses.

State studies, such as Windham (1997) have been conducted by state policy makers for the purpose of analyzing the state's dual credit policies. However, Windham's study (1997) was done in response to a report issued by the University of Florida (1993) that claimed the "vast majority of former dual enrollment (DE) students entering that institution had to retake the courses" and in such cases, the state funded the students twice (p. 2). Windham, then Director of Educational Effectiveness and Research for the State Board of Community College, found the contrary was true through the evaluation of two studies (one done by Pensacola Junior College (PJC) and another done by Tallahassee Community College) on the effectiveness of dual credit programs. In addition, statewide data was collected on the performance and course repetition of former dual credit students at the four-year university. Windham's study found that between



1992 and 1995, only 140 classes out of 51,382 courses taken as dual credit had to be retaken by student.

Knowing the background of Windham's research raises questions on the objectivity of the results. The results of Windham's study, as well as the studies conducted by PJC and TCC, reported positive results for community colleges and for dual credit; however, the biases of the research were made clear -- to refute the claims made in the University of Florida report. With the exception of Clark (2001) there has been no other objective, multi-state examination of dual credit policies. Even Clark's study is limited as it offers primarily an inventory of dual credit programs, but does not get into depth on the impact of the policies and institutional growth of dual credit programs. The literature and research has neglected to assess the impact of state-level policies on the expansion or development of dual credit programs. The critical question, 'What are the relationships between dual credit programs and state-level policy?' has not yet been asked. Clearly, there is a need for further research on state-level education policies and their impact on dual credit programs.

## Method

### Background for the study

This study developed out of a larger research initiative conducted by the Community College Research Center (CCRC) at Teachers College, Columbia University. Through the CCRC research project, 15 community colleges in 6 different states were examined to map the changing landscape of community college education by describing the external and internal pressures affecting the mission, organization, and operation of the community colleges. The states selected

were chosen because of their large community college systems and reputation for activity in the areas researched. The institutions were selected because of the locality and reputation for doing innovative activities in the areas of study.

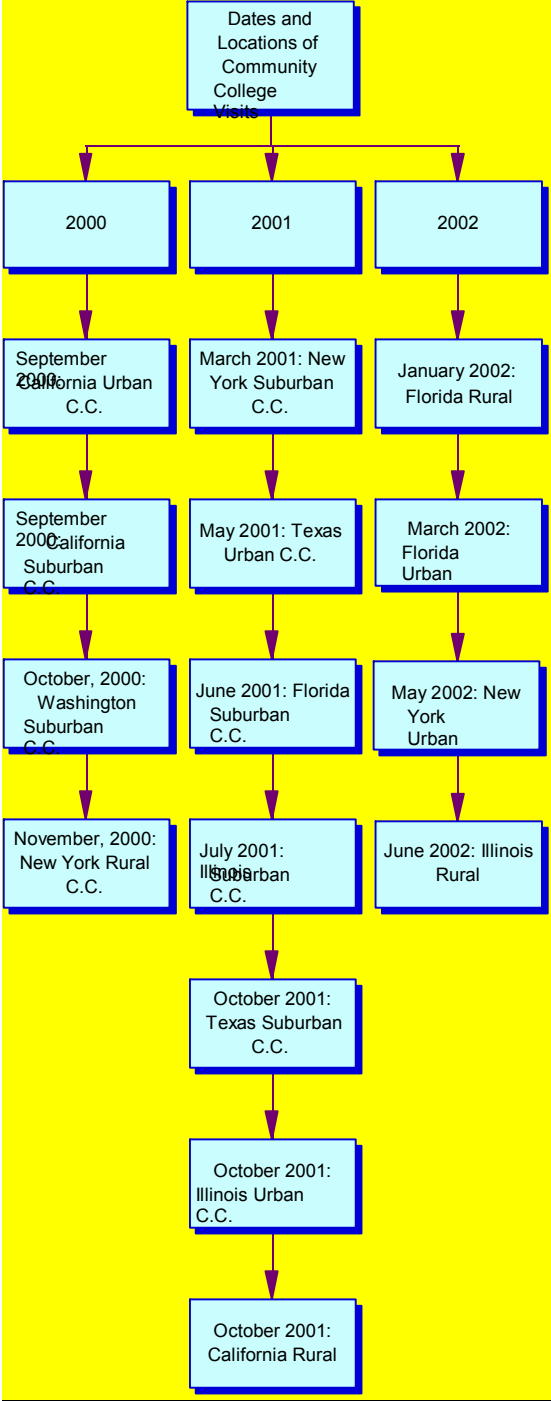
Researchers at CCRC utilized a variety of research methods, including interviews with senior administrators, instructors and students, focus groups, analysis of data provided by institutional researchers, surveys, and on-site observation. Specific areas studied in the project include: the mission of the community college; alternative pathways for students through postsecondary education; role in workforce development; connections between the high school and community college; the rise of new competitors; distance education; alternative skill certifications and skill standards; increasing state and federal demands for accountability and assessment; the rising demand for remediation; and the changing nature of guidance and counseling. This study utilized data gathered by the CCRC team of researchers to analyze programs and policies that were intended to foster connections between high schools and community colleges, with a particular focus on dual credit education.

### Sample

Thirteen institutions from six states (California, Florida, Illinois, New York, Texas, Washington) were selected by the CCRC research team for the larger research study. In four of the states, an urban, suburban, and rural institution was selected. In Texas, two institutions (urban and suburban) were selected, and one institution from Washington (suburban) was selected. From 2000 through 2002, the site visits were conducted with the last site visit conducted in summer 2002. The diagram below shows the time period in which interviews were conducted. Due to the recent completion of the project with the last case studies conducted in March, May, and June, some transcriptions of site visits were not completed. The data from two

of the institutions (New York's urban college Florida's urban college) was not available;  
therefore, they were omitted from the study.

Diagram 1  
 Time Table of Case Study Dates and Locations



## Research Design

Case study design was used to understand the influence of 6 state dual credit policies on dual credit programs at 13 community colleges. In analyzing the data, the study did not look at state policies individually, but rather looked for themes existing across the 6 states. The data was reviewed and organized using the five levels of policy conceptualization, implementation, and evaluation in Easton's Political Systems Model.

## Method of Data Collection

Secondary data analysis was conducted with over 230 transcripts from the 13 community colleges. Table 3 shows the number of interview transcripts that I read for each college. In order to narrow the information provided in the interviews, I separated the interviews into those useful to the study and those not useful. Of the 237 transcripts, 138 were useful to this study: 49 of the transcripts related generally to dual credit programs and policies; 9 related specifically to Tech Prep programs; 39 briefly mentioned dual credit programs or policies, but did not provide substantial data; and, 11 transcripts were semi-related (e.g., described another policy that had an impact on dual credit program).

While reading the transcripts, I coded the data by highlighting all areas that were related to dual credit and labeled the data in red. Color coding the data allowed me to easily locate the data when I had to revisit the transcripts. Through labeling the data, I was able to identify themes. Accordingly, many themes were found from the data including: the mission of community colleges to partner with secondary education; the purposes of dual credit programs; drivers of dual credit programs; attitudes towards the benefits of dual credit programs; benefits of dual credit programs; barriers to developing dual credit programs; the influence of state policies on dual credit programs, and, incentives for community colleges to develop dual credit programs.

Easton's Political Systems model provided a framework for analyzing the results in an organized method.

Based on the identified themes, the results were further categorized according to the five components in Easton's model: environment (mission of community colleges, purposes and benefits of dual credit programs, incentives of community colleges), inputs (drivers of dual credit programs), political systems (state policies), outputs (barriers to developing programs, attitudes towards the benefits of dual credit programs), and feedback (influence of state policy on dual credit programs). Results of the interviews were compared with previous literature and research results on dual credit programs and policies. After reading the transcripts, I also compared my interpretation of the data with end-of-visit summaries compiled by the research team. Summaries were available for 7 of the 13 institutions.

Table 3  
Number of Interview Transcripts Read Per Institution By Type

State	Location	Number
California	Rural	12 <sup>1</sup>
	Suburban	33
	Urban	30
Florida	Rural	7 <sup>1</sup>
	Suburban	21
	Urban	--- <sup>2</sup>
Illinois	Rural	--- <sup>3</sup>
	Suburban	24
	Urban	14
New York	Rural	25
	Suburban	25
	Urban	--- <sup>4</sup>
Texas	Rural	--- <sup>5</sup>
	Suburban	14
	Urban	24
Washington	Rural	--- <sup>5</sup>
	Suburban	27
	Urban	--- <sup>5</sup>
	Total	237

<sup>1</sup> Due to the unavailability of transcripts for these institutions, a low number were analyzed. Time constraints prevented me from waiting until the transcripts were complete.

<sup>2</sup> Upon my discretion, this institution was omitted from the study.

<sup>3</sup> Data was collected through interview participation.

<sup>4</sup> Due to the unavailability of transcripts and because of time constraints, I could not include this institution in the study.

<sup>5</sup> The study did not include a rural institution in Texas or a rural and urban institution in Washington.

### Methods of Triangulation

To ensure reliability with data interpretation, multiple methods were used to collect and analyze the data.

#### i. on-site interviews

At one community college, I was able to participate with site interviews. My participation included conducting interviews with the CCRC research team for two days at the rural Illinois

college. Participating with the interviews allowed me to become grounded in the research project and to familiarize myself more with the research questions asked by the CCRC research team at each of the sites. By being able to observe participants responses and listen to tone inflections, I was able to get more rich data than I felt I could collect by reading the transcripts. In addition, I collected documents (brochures, course books, marketing materials, articles published) at the rural Illinois site that were not accessed with the other 12 cases.

ii. document analysis

Documents were collected off of the Internet and used to validate the information that was given during the campus interviews and also to collect statewide documents that helped me to understand the programs occurring at the community colleges into a broader context. In collecting documents, I reviewed web sites for each of the 6 state coordinating boards, which included collecting state dual credit policies and legislation, quantitative data (when available), and program information. In addition to a review of state web sites, the web sites for each of the 13 community colleges was reviewed to collect further information on programs mentioned during the interviews, to validate that the programs mentioned still existed and that there did not exist any programs not mentioned or newly developed.

From the transcripts and the summaries completed, an inventory was compiled of all of the K-14 collaborative activities. The purpose of the inventory was to document distinctive programs or strategies unique to P-16 initiatives (that which involved partnerships between the community colleges and their secondary education counterparts). In compiling the inventory, I looked for innovative programs or initiatives that were unique to only one or a few institutions. With this in mind, I did not include programs such as the federal TRIO programs. I found that all of the 13 community colleges had some type of dual credit program in place. In addition, all but



one college (California's rural college) had a Tech Prep program. Although each institution had these programs in place, I highlighted the distinctive characters of the programs in the inventory. The inventory categories were created from the transcript data and also from end-of-visit summaries. I reviewed each institution's website to validate information that was given during the site visit interviews and to assure that there did not exist programs that were not mentioned during the site visit.

In addition, a compilation of state policies was completed after a review of state legislation and agency policies. The data were collected based on a review of state coordinating board web sites and information received in the interviews (see Appendix A).

### Limitations

#### i. Limitations with the data

The strengths of the research design cannot be overviewed without also mentioning its weaknesses. The review of secondary data presented some challenges. First of all, the study was constrained by the use of data collected by other researchers, which limited the ability to observe participants and the environment of each case study. Participating with one institutional visit allowed me to find data specific to the purpose of this research study and to ask follow up questions when the answers provided were not clear. Also, the limited knowledge of some individuals of the research team on dual credit issues resulted in lost opportunities to get into more depth during interviews when dual credit was mentioned. Due to my understanding and background in dual credit and P-16 education, I was able to delve deeper into the research questions during the interviews in which I participated.

Secondly, with the exception of one state, interviews with state level officials were not conducted. State-level data was collected through web-based research and phone conversations,

which limited access to the data and understanding of each state culture and environment.

Without information on the state level, I found myself asking questions-- such as 'Is the state policy still meeting the needs of the targeted student population it was intended to meet?' and 'What was the original intent behind this state policy?'-- that could not be answered through the scope of the study.

Lastly, inconsistencies in the method of data collection were found due to the rotation of different researchers conducting the interviews. Each case study involved a team of 3-4 researchers who were not all able to participate in each site visit. This required the rotation of researchers, all with different backgrounds, interview styles, and perspectives on community colleges. Although assurances were made to collect uniform data through the design of interview protocols and common research questions, these features nonetheless impacted the interview results.

## ii. Researcher's Experience and Perspective

In all research, we bring our perspectives and past experiences into the research design and the data analysis. The background of the researcher should be considered when interpreting the analysis of the study. My research interests are in areas of P-16 education reform, including issues such as dual credit and teacher education, and governance and policy. My experiences involve previous work in state government in Illinois at both the Governor's Office and at the state coordinating board for higher education, as well as administrative experience at a state university in Illinois. At the state university, I was responsible for conceptualization and oversight for a P-16 education project and from that experience realized many of the challenges and benefits to developing and sustaining educational partnerships. These experiences have shaped my interest in systemic reform policies.

## Results

Results show that community colleges are engaged in partnerships with K-12 schools in many ways. Appendix B includes an inventory of all the school/college collaborative programs found in the study. The inventory includes a categorization of programs existing at each of the participating community colleges. Despite the diversity of programs that exist at the colleges, there was some uniformity in programs. Each institution in the study was engaged in some way with dual credit, a prominent factor that supports the inference that community colleges nationwide are developing dual credit programs.

### Environmental Factors

The first question of the study asked, ‘What are the local environmental factors that encourage and support the development/expansion of dual credit partnerships between high schools and community colleges?’ Before looking into the factors that influence why community colleges engage in dual credit programs, I thought it was important to first pull from the transcripts what interviewees thought was the role of community colleges in partnering with secondary education. Mentioned in a few occasions was the origin of community colleges as part of the secondary school system (e.g., Texas, Illinois), which has made community colleges reluctant to partner with secondary schools. According to the President of the suburban college in Illinois,

“Part of that was community colleges, for the most part, came out of the public school environment and quickly tried to separate themselves as to create their own identity. And unfortunately we’re, in retrospect we’re too successful in that separation that they felt that the further they can get from the public schools the better off they would be. And the closer they align with the university the better off they would be. Now, I think, maybe because we have enough confidence in our image in the community, or maybe even have a sense of lets do the right thing, we are looking for opportunities to partner.”

Within other community colleges, top-level administrators at the colleges came from the secondary sector, such as the president and dean at Illinois' rural college and the provost at Florida's rural college, so collaborative activities were natural and prevalent. The Provost at Florida's rural college talked about the connection to the school district,

“This was a natural transition because I worked well and knew everybody at the school board office. It worked well before I came here. The provost, her husband was a superintendent and she was an employee of the school system for probably at least 15 years. So it worked out, there's always been a very positive working relationship.”

Regardless of the governance connection between secondary schools and community colleges, the community service mission of community colleges was noted. According to the director of K-12 collaborations at New York's suburban college,

“I think that they (P-14 partnerships) are community initiatives that are a very big part of our mission of community service. Always bottom line, it's revenue generation and trying to make money for the college but I think overall it's a community service kind of thing.”

The director of Advancement at Illinois' suburban institution further explained the role of community colleges as the bridge between secondary schools and four-year institutions.

“Community colleges are really positioned to be on one level a convener. We are the link or bridge between the high schools and the four-year institutions... We are very interested in developing partnerships to improve the quality of [the] student who comes to the college, and we are very interested in producing quality students who perform well once they get into a four-year institution.”

Consistent with the literature, the results of this study showed that a variety of factors have influenced why community colleges engage in dual credit programs with secondary institutions. At all institutions studied, programs were designed to provide accelerated opportunities to gifted and talented secondary students. However, many other reasons were cited by community college administrators and faculty, which included: to ease the transition from high school to college (mentioned in 20 interviews); to create postsecondary opportunities for

not-traditionally college bound students (14 interviews); for recruitment purposes (13 interviews); to raise the reputation of the community college within the community and the state (8 interviews); to decrease high school dropout rates (6 interviews); to provide college level opportunities despite geographic limitations (particularly in rural areas) (5 interviews); for the sharing of institutional resources (4 interviews); and, to save parents postsecondary costs (3 interviews).

Most mentioned, many educators saw dual credit programs as a means of which to provide a more seamless transition from secondary to postsecondary education. In addition, the programs were seen as a viable means to extend postsecondary opportunities for non-traditionally bound students that was most evident at institutions that had active Tech Prep programs or Middle colleges. One institution in Illinois offered vocational programs for students with disabilities as part of their Tech Prep program. The intent to help decrease high school student dropout rates was alluded to by administrators at the two community colleges that had Middle colleges on their campuses. In addition, institutions, particularly those in rural areas and in New York, where distance education was actively used, saw their role as providing accelerated learning to students despite geographic limitations. The sharing of institutional resources between postsecondary and secondary institutions was another reason why many dual credit programs were developed. An administrator at Illinois' urban institution mentioned that the original intent behind creation of dual credit programs was to share resources for vocational courses. Surprisingly, administrators reported that engaging in dual credit courses helped to improve the image of the community college within the community and the state. Lastly, administrators saw the opportunity to help save parents and students from paying postsecondary tuition by offering dual credit courses.

Another prominent factor in the creation and expansion of dual credit programs at each of the thirteen institutions was to increase enrollment (and FTE funding). This finding is important because the financial incentive to offer dual credit courses to generate more FTE funding was not highlighted in the literature. In fact, only one article (AASCU, 2002) mentioned enrollment and funding as an incentive. However, results of this study showed that financial incentives were a major driver in the creation of dual credit programs, and state funding policies that permit (or encourage) community colleges to increase enrollments appear to be drivers of the proliferation of dual credit programs. In Florida, one administrator even referred to the dual credit program as a “cash cow”. An administrator at an urban institution in Texas commented that dual credit programs have “grown to the point now that four-year colleges and universities are wanting to get in on the game, and (Texas) has legislation pending now saying we should be able to go into the high schools and offer college credit courses as well. They [four-year colleges and universities] were never interested in it until it became big business.”

In other examples, community colleges saw dual credit programs as a means to replenish enrollment losses due to decreased community college enrollments during the strong economy of the late 1990s and because of budget cuts to certain state-funded programs. In two states, New York and Illinois, educational programs at local prisons were eliminated, which impacted the community colleges as they relied on those programs to generate FTE funding. According to a staff member in the Institutional Research office at New York’s rural college,

“Ten or fifteen years ago, we were active in five local prisons [and] that was 10% of our FTE. It was driven by financial aid funding. The federal government decided to withdraw Pell, and then TAP [Tuition Assistance Program] funding was withdrawn. That knocked us for a loop. We were beginning to become more active in the local high schools in what we call the Advanced Studies program. This program pretty much replaced the 10% of FTE's provided by the prison program.”

The same effect has occurred at New York's suburban institution. According to an administrator at New York's suburban college, "It was his [the former president's] feeling that we could generate substantial revenue and perhaps pick up enrollment by getting into that [dual credit] market so he started from the top and got it going." The administrator admitted that the program did make up for lost revenue, "Probably in the last two years, the college has made its budget because of this program [dual credit program] and the growth in it because our enrollment has decreased." Both perspectives align with the financial philosophy of the director of Institutional Research at one of the Texas institutions. According to him, "enrollment is what drive dollars, both through tuition revenues and state funding, and so you see institutions putting a lot of emphasis to making sure that enrollment stays up."

Adding weight to this statement, New York community colleges are provided monetary incentives to increase enrollment, both by the state and by local government. One of the interviewers with the study commented on the funding incentives to offer dual credit courses in New York. According to him,

"In New York, it's sort of a gold mine [to offer dual credit courses]. It doesn't cost them anything, very little. They don't have to have a classroom. It's all done in the high school. A lot of times the high school teachers, many times high school teachers have masters degrees so that they actually certify the high school teacher as a community college professor, taught in the high school classroom by the high school teachers, they get state and local reimbursement (county charge pay backs) and of course the high school continues to get whatever funding they've raised".

Accordingly, both the state and the county reimburse community colleges for FTE. County charge back rates are computed by formula, and though every community college has the same formula, the reimbursement rates of each county are different, providing an incentive for community colleges to offer distance-based dual credit courses in counties with higher pay back rates. According to the director of dual credit at the suburban institution, for distance education

courses, students are charged, “a subsidized tuition rate at \$25 a credit hour. Normally it's \$98 a credit hour. That's what the student pays. The rest of the money that generates revenue comes from state aid and out of county charge backs. That's why we [the college] make more money outside of [the] county.”

Florida’s suburban institution was working to counter the trend of increasing enrollments for the sake of generating more funding. A faculty member at the suburban institution in Florida described the shift in FTE growth. According to him,

“We're really shifting from an FTE growth pattern to a real quality performance-based pattern, and it's a shift in philosophy really. The legislature now is looking at performance-based measures, but it's not real clear yet whether that's impacting us in a really meaningful way. But we have made it meaningful and when the president of about two years now, he's really focused on planned growth, limited growth really, because where we are, we really do not have to go beat the bushes for students... But we're just really as an institution, getting brave enough to say that, to say yes, we turned away some warm bodies because we felt it was the learning-centered thing to do for that pupil.”

Learning-centered initiatives were the core of the institution’s strategic plan. To recruit and enroll more students for the sake of generating more FTE revenue was not aligned with the college’s strategic vision and core values, even though open access is at the core of the mission of the community college. The data did not indicate what criterion was used to decide which students to turn away.

### Demands and Supports

In addition, to assessing the environment of dual credit programs, the study examined, ‘What demands or supports (inputs) influence community colleges to create or develop dual credit programs?’. The relevance of this question to Easton’s model is to look at external factors that push political systems to create policies or programs. The study found that the demands that have driven institutions to create dual credit programs can be classified into three themes: state



programs and incentives; business and industry; and competition.

The first demand was that incurred through state policies or incentives that encouraged, or in some cases mandated the development of dual credit programs. Although only two states in the study (Washington and Florida) had policies that mandated institutions to create dual credit programs, other states offered innovative incentives for student participation in dual credit programs. In Illinois, Accelerated College Enrollment (ACE) grants reimburse institutions for tuition charges, books and fees for students who take dual credit courses at a community college (Chapman, 1999). The community colleges cannot charge students tuition. According to the admissions director at Illinois' suburban institution, the college received \$82,000 that year (2001) to pay for dual credit courses. California offered incentive grants to secondary and postsecondary institutions to develop innovative programs for gifted students, such as AP programs, middle college high schools, and dual credit programs.

Another critical driver of dual credit programs was business and industry. Results revealed that industry was driving many articulated dual credit programs (2+2+2), particularly in fields with shortages such as nursing, engineering, and teacher education. A vocational dean at Texas' urban institution reported a career preparatory program in a high tech field. According to him, "because our region is in the high tech area, they are screaming for entry-level technicians, and the pipeline is not large enough. There aren't enough adults ready to go to work in these jobs... [The] pipeline needs to expand to the high school level and start bringing more kids through." Florida's rural institution had a dual enrollment health science program that was taught by full-time hospital employees who are employed by the college part-time. An institution in California reported the initial planning stages for an articulated teacher education program to recruit prospective students in high school, provide dual credit opportunities at the community

college, and then matriculate the students to the local four-year institution. Florida's suburban institution also established a teacher education partnership between K-12 teachers, faculty at the community college, and faculty at a local university to create a baccalaureate program in elementary education targeted towards children of school district employees.

A third key driver of the development of programs was competition. In one New York institution, an administrator mentioned that if they did not create dual credit programs, another institution would, thus invading their student enrollment pool. Competition in New York was very prominent, especially since community colleges were not the only higher education institution to offer dual credit programs. Community colleges saw public and private four-year institutions as threats. Moreover, by offering dual credit courses through distance education (as is popular in the state), institutions could tap into markets outside of their district and normal clientele. As a result, distance-based accelerated learning programs emerged in the state of New York. Both suburban and rural institutions in the state had the capacity to offer dual credit courses to the high schools through the utilization of interactive television and fiber optic cable lines.

Competition seemed more eminent in areas where multiple higher education institutions were offering the same services. Illinois' city public secondary school system pays the tuition for students to take dual credit courses, regardless of where the courses are taken and how much the courses cost. According to the Dean of Instruction,

“we have a tremendous amount of competition downtown. We've got, like, thirteen schools within a mile radius of us. Now, we are the best price in town, and we actually have a very good reputation with students at some schools...with the College Excel [the name of the dual credit program] stuff, they're actually letting students go to Robert Morris College, which has no standards whatsoever, from what I can tell. It's a proprietary school...their tuition is exorbitant. We're charging them, you know, whatever it is, a \$150 for a three-hour course. And Robert Morris might be charging them \$2,500 or \$5,000, and they're still paying

them.”

The inability of the school system to differentiate how much will be paid for dual credit courses and where dual credit courses may be taken is questioned by the administrator at this public college.

In addition, there was evidence of competition among sectors, particularly in states where both sectors (secondary and postsecondary) were not funded. Resistance among secondary officials to keep students at the school and not enrolled in dual credit courses was described by the director of dual credit programs at the Washington Community College as “passive-aggressive”.

“They just don't circulate the info as much as they should. They don't promote it to parents as much as we think they should. For parents, there's a tremendous cost-savings, having their children already have two years of college done, especially if they're going to a private school out of state. The state would've been smarter to have some sort of revenue sharing thing where they let the high schools keep some of the money, realizing how much money the state is saving.”

In Florida, there was mention of the competition between secondary and postsecondary institutions for the same pot of state funds, something that one community college is trying to dissolve. The president of Florida's suburban community college described the culture of community colleges and high schools in the state.

“The systems have just been traditionally siloed. They were competitors for money in the legislature. In some cases they were competitors for students... But for the most part, their relationships at the senior levels, at the strategic levels, have been siloed. At best they were uneasiness neighbors. At worst they were enemies.”

The result of systems paired against each other is evidently a negative result of some state dual credit policies. Policies in which the intent is to save taxpayers' money (by only funding postsecondary education) may instead create more inefficiencies by fostering competition among the levels, which could result in further widening the gap of

communication and cooperation among other ventures (curriculum planning, resource sharing).

### The Political System

In assessing the educational system, the study asked, ‘How have state policies driven or impeded the development and growth of dual credit programs?’. The results revealed that state policies influenced dual credit programs offered by community colleges.

#### i. State policies

With the exception of New York, each of the states had a state policy for dual credit courses. While each state showed dual credit activity among its community colleges, the environment and the intent of dual credit policies differed state by state. In Washington and Florida, policy makers and legislators were advocating the dual credit programs to save state money and to provide more students and parent choice among accelerated learning opportunities. According to a faculty member at the Washington community college in the study, “The state really likes Running Start programs because if they transfer to the University of Washington or Wash U, then these are courses that transfer over nicely to four-year schools, and the state only has to pay the support for a student once.” A state report is published every year that shows how much money is saved through both student tuition and taxpayer funding (Hansen, 2001). According to the report, in 2000-2001 the Running Start program saved \$14.6 million in college tuition costs taxpayers were saved \$28.8 million.

Described by the director of dual credit at Florida’s suburban institution, “The intent of the [dual credit] legislation is not to provide a college experience for these students. They’ll have a college experience when they get to college. The intent is to provide them with the content of the college course, because they’re ready for it. We’re not having fraternities and sororities. We

have a calculus class.” However, faculty members at Florida’s suburban institution also mentioned the incentives for some high schools to have dual credit programs. According, some high schools are using dual enrollment as leverage to encourage students to attend, which is applicable to the 18 Florida counties that allow inter-district school choice. If a high school does not have programs that let students work towards a college degree while they are in high school, the school becomes a less attractive institution to students and parents.

Although the Running Start program is popular with multiple interest groups-- legislators, parents, students-- because of its cost-saving and choice-providing options, the director of Tech Prep at the Washington community college described the state’s Running Start program as a “middle class phenomena”, in part because students had to have a car to drive to the community colleges to take dual credit courses and the students who own cars are middle to upper income students. However, changes in the state dual credit programs also include a College in the High School Program that allow students to take dual credit courses at the high school.

At institutions in California, the initiative and innovation to create dual credit courses was up to the discretion of the institution, and in many cases was actively pursued by individual departments and instructors rather than collectively by institutional administration. In the institutional summary of California’s urban institution, interviewees noted, “There seems to be several centers of activity. There appear to be a lot of little activities with high schools, where individual instructors will talk with students and teachers about programs at [that particular institution].” For example, dual credit is offered through the child development program, architecture, graphic design, technical illustration, and engineering. A dean of the suburban college in California described the decentralized nature of initiating dual credit programs at that institution, ”What I just described to you. That was an innovative idea again that came from this

faculty member who is working on enrollment management. He came up with the idea [for the dual credit course] and he and I are working on it.”

In New York, the influence of the two systems of higher education was often stronger than that of the state coordinating board, as dual credit policy and programs existed more within the state systems (CUNY and SUNY) rather than at a state-level. A state dual credit policy (Commissioner’s Regulations 52.1) exists that states that postsecondary institutions strictly control enrollment of secondary students in postsecondary courses, and such courses can be taken for dual credit. By the statute, postsecondary institutions are given the autonomy to develop and monitor dual credit programs. No state policy outlining the guidelines for dual credit programs or monitoring accountability was evident in searching through state documents and legislation on the state’s web site. Nonetheless, the nation’s first nationally recognized dual credit program, Project Advance, originated out of the state of New York. College Now, a dual credit program at Kingsborough Community College, has been incorporated as a system-wide initiative at the CUNY colleges.

Illinois’ policy allows both systems to be funded through dual credit programs (through ADA and ACE funding), thus awarding expanded accelerated learning opportunities funded by taxpayers. In 1997, the state of Illinois changed its funding formula for dual credit allowing both the high school and the community college the opportunity to collect state funding for the student enrolled in a dual credit course. Andrews (2000) found that administrators at 77% of community colleges in Illinois indicated that dual credit courses at their institution had increased since the change in funding policy. Eighteen of the 48 colleges previously did not offer dual credit programs, but the study found that all community colleges offer dual credit courses after the passage of the policy. During the site visit, the president of Illinois’ rural college noted the

resistance of many high schools towards dual credit courses when funding was allocated only to community colleges.

The environment of dual credit programs in Texas was not frequently discussed. A dean at the urban community college in Texas described that, because the state spends a lot on higher education, legislators feel the need to increase regulation, particularly with issues of time to degree and cost savings to the state. The state's dual credit policy currently only allows community and technical colleges to offer dual credit programs, although one Texas administrator mentioned that recently four-year colleges and universities have been trying to receive legal permission to offer the programs, now that it has become "big business". A bill passed in 2001 allows dual credit courses to be taken by students at private high schools, expanding the student clientele eligible to take the courses. However, the state of Texas appeared to be the least established of the six states with its dual credit programs and policies. The institutional research director at Texas' urban institution commented that the state legislature meets only every two years (on a bi-annual schedule), which makes it possible to learn from other states' mistakes. A new idea will take time to make it through the Texas legislature. In that time period, lessons learned from other states will be available.

## ii. System Policies

System policies played a large part in the development and administration of dual credit programs, particularly in states with multiple higher education systems. In Illinois, where there exists a citywide system of community college, the two dual credit programs implemented at Illinois' urban institution were part of an overarching initiative for all of the city college system. The College Bridge and College Excel dual credit programs are housed at all of the urban city campuses. The city public school district pays the cost of tuition, registration/lab fees, books, and

provides bus passes for students to commute to and from any of the college campuses. In addition, the model of College Now, a dual credit program at Kingsborough Community College in the CUNY system, had been incorporated as a system-wide initiative at all CUNY colleges. Consequently, this showed the impact that other local and system policies have on state policy, either enhancing or impeding state efforts.

### iii. Institutional Level

At the institutional level, dual credit policies pertained to organizational and administrative factors. Several organizational or programmatic issues were revealed as a result of the implementation of dual credit programs. The most noted institutional problem concerning dual credit programs was the resistance among faculty. Resistance among faculty was an acknowledged barrier at almost all of the institutions studied. Job security and territorial issues were two of the issues most often attributed to the resistance. According to a Vice President at an institution in New York, “The union has been trying to bury the high school program ever since we started it. You are taking students out of seats. You are taking work away from faculty by shifting it to another area”. At the rural college in Illinois, problems centered primarily on transfer faculty members. A high level administrator at the college noted that technical and career preparation faculty have been more open to the expansion and development of dual credit courses because of their involvement with Tech Prep. It was the transfer faculty members were those largely opposed to the programs.

Despite resistance, administrators at Illinois’ rural college had been successful at putting language into the union contract about dual credit courses. While the contract language is brief, it states that “specific policies and procedures for dual credit at [the college] shall be reviewed annually by representatives of the faculty and the administration” and “dual credit courses shall



not be used for the purpose of reducing the number of, consolidating, or eliminating bargaining unit positions at the College”. A suburban institution in Florida had to offer financial incentives to get college faculty to teach courses at the high schools. While faculty at an urban California institution were generally in favor of the dual credit courses, they were skeptical about a newly developed Middle college on campus, which some faculty referenced as the “third college”. The inclusion of the Middle college made faculty suspicious of why administrators were seeking out dual credit opportunities.

#### iv. organizational structures

The differing organizational structures among sectors (schedule of day and semester) also impeded on the development of the dual credit programs. A Dean at California’s urban institution described the different cultures among high school students and college students. “The college had its normal 17-week structure, and we discovered that many times, that school was successful at football, so the students were not allowed to come to school because they had to go to a pep rally. Or teachers had some in-service, so the students had the day off...it was gumming up the system. We'd have to make up classes because the students were being taken out of class and we have to meet a minimum number of Carnegie hours.” An administrator at a Texas institution reported that faculty “had to get grades out every six weeks unlike the college. It was a hassle. They are grading on a high school basis, maintaining the high school hours and holidays, which wasn’t consistent with ours and was a lot of extra effort”.

Despite the lack of consistency between the high school and college schedules, the results showed that institutions learned to be flexible in adapting their schedule to that of the secondary schools. One institution in Illinois created block scheduling classes to match the schedule at the high schools. An institution in Florida shifted its calendar to match that of the local schools to

make dual enrollment easier. The accommodation of making scheduling changes to better align the structural barriers existing between secondary and postsecondary institutions is significant at the system level and evidence of more systemic change efforts that resulted from the partnerships forged between secondary and postsecondary education.

The results of the study also showed differing opinions of who should teach (high school teachers or college faculty), which required institutional policies to delegate duties. Table 3 shows characteristics of dual credit programs studied, particularly who teaches the courses and where. In most cases, teaching the courses at the high school was the least expensive route for the college and for students. However, according to one administrator, “the faculty don't really want to go [to the high schools]...you're the lowest one on the totem pole if you go out to the high schools and teach. They're [college faculty] not used to discipline, they're not used to interruptions and announcements.” While teaching dual credit courses may seem a demotion to some faculty members, one administrator noted that high school teachers see it as a promotion and because of this may do a better job of teaching the course. Perceptions of who is best qualified to teach the courses differed by institution and were determined through institutional policy at each community college.

Table 3  
Characteristics of Dual Credit Programs

	CA-S	CA-U	CA-R	FL-S	FL-R	IL-S	IL-U	IL-R	NY-S	NY-R	TX-S	TX-U	WA-S
Where Taught	HS	CC	Both	Both	Both	Both	CC	Both	Both	Both	CC	Both	Both
By Whom	HS Fac	CC Fac	CC Fac	Both	Both	CC Fac	CC Fac	Both	Both	Both	CC Fac	Both	CC Fac
Middle College	Yes	Yes	No	No	No	No	No	No	No	No	No	No	Yes

1. S=Suburban; U=Urban; R=Rural
2. HS=High School; CC=Community College

The majority of dual credit programs hosted by the community colleges (9 out of 13 colleges) allowed for dual credit courses to be taught both at the high school and at the community college. Six of the community colleges required courses to be taught by community college professors only and six community colleges allowed for the courses to be taught by either a community college or a high school faculty member. Only one community college—California’s suburban institution—had only high school faculty teaching dual credit courses. Middle colleges did exist at the community college (in which the students take all of the courses on the college campus), but only were present at two of California’s community colleges.

### Outputs

The fourth question of the study asks, ‘How are the outputs from state policies related or not related to the intent of the dual credit policies?’. The study revealed outputs of dual credit programs that presented challenges with developing and offering dual credit programs, as well as, outputs (systemic reform measures) that developed unrelated to the intent of the state dual credit policy.

#### i. resistance from secondary schools

As indicated in the literature, competition for funding between K-12 and higher education was a prominent problem addressed by administrators and faculty who participated in the study. According to the director of the dual credit program at Washington’s community college, “The Running Start students are the brightest students that the high schools have that we are snatching. Not only the students, but the money also follows the Running Start students.” The President at Florida’s suburban institution admitted that performing well on statewide measures has helped community colleges as a whole acquire more state monies. According to him, “What has happened over the last two or three years is the community college as a system has dragged

money... from the K-12 system because we've 'out performed' them using the statewide measures.” Accordingly, fears of lost revenue and weakening control may have influenced secondary schools to resist dual credit programs. Due to this resistance, an amendment was added to Florida’s dual credit policy requiring schools to educate students and parents about dual credit opportunities. Resistance among secondary school administrators also caused policy makers in Illinois to change the way that dual credit programs are funded. The president of the rural community college in Illinois mentioned the problems faced in the state until they decided to fund both systems, to which he seemed to be in favor.

ii. turf issues

The implementation of dual credit programs also resulted in turf issues among the different sectors. In Illinois and New York, where there exists regional vocational centers, some centers welcomed the programs, particularly Tech Prep programs, while others saw them as a viable threat. An associate dean at a rural college in Illinois talked about territorial issues over Tech Prep funding that could possibly result in the dividing up of state and federal money. In Illinois, federal Tech Prep funding is matched by state dollars, with both allocated to the community college to distribute among the Tech Prep consortium. However, according to this individual, many community colleges in the state have not equally allocated the money, which has led regional systems to lobby to get control of the state funding while the community colleges maintained control of federal dollars.

In addition to competition and lack of cooperation among sectors, in some states, dual credit programs were taking away enrollment from other accelerated learning programs. The Vice President for Academic Affairs at New York’s suburban institution reported that students were taking dual credit courses instead of AP courses or taking AP courses and not taking the AP

exam, which caused the school to implement a policy that allows students to count an AP course as a dual credit course if they decide not to take the AP exam. The policy also alleviated the animosity felt by many teachers when students opted out of enrolling in an AP course to instead take a dual credit course. The administrator described the animosity among high school teachers, who get “very upset when you try to put a college level class (dual credit class) in because why would a student take an advanced placement math and may or may not do well on the test, when they can take a college course and get guaranteed college credit for it. They are losing students in the AP courses.” The director of Tech Prep at an institution in Texas also reported that many high schools did not want dual credit courses in subjects that would compete with AP courses already in place, such as economics, English.

### iii. targeted student populations

Conclusive to the literature, the study revealed that dual credit programs are in place that target different student populations. Two institutions in California had middle colleges on their campus reaching out to the at-risk and unwanted kids in the secondary schools. According to the President of one of the colleges in California, “There have been some places where the high schools were so desperate that they were really happy to have the community college to bring in additional resources, a different kind of atmosphere from the ones that their traditional high schools have.” However, the inclusion of high school students at the college campus of the urban institution in California received mixed results from faculty. According to a developmental math instructor, “earlier this semester I had to break up a fight outside of the class. And that's something I haven't had, the first time I've had to do that. You know, I don't know whether that's something I'm looking forward to doing again.” So, while in a sense, the middle college provided

an opportunity for students to participate academically in a more independent classroom setting, collaborative efforts also brought the high school culture into the college setting.

In addition to Tech Prep programs, which were present at each of the institutions, many colleges also established dual credit programs for industry-specific or vocational reasons. At one California community college, articulated programs had been developed for finance and engineering, some of which offer dual credit. In addition, the study showed that many of the institutions had in place articulated Cisco programs. Cisco is the Internet networking program that allows students to receive industry credentials by level. Entry-level credentials are usually taught at the high school, while both entry and advanced levels are taught by community colleges. Articulated programs among high schools and colleges allow students to build upon training at more advanced stages. Dual credit programs at the Illinois urban institution were developed by the former CEO of the public schools to allow students to take their vocational courses at the college. According to a Dean at the college, “I think he [the former school superintendent] had the mistaken impression that he was going to save all this money. He was planning on firing all his vocational teachers and was going to have this great cost savings.” However, dean noted that the superintendent’s plan fell through because of students’ low scores on placement tests and because vocational teachers could not be fired due to their union contract.

Now under a different superintendent, dual credit courses were offered as college-level academic courses. However, student placement scores still pose a threat to the programs’ successes. One administrator at the urban institution in Illinois noted that one of the problems with the dual credit programs at that institution were the lack of students who were eligible to take the courses. According to the Dean, “Anybody who's read about the [city] public schools knows that the test scores are abysmal. In order to give them college credit, they have to be

qualified to take college level classes... We might placement test a 106 students and get 12 who place into it. It's a lot of effort for a very small return. But we still try and do it.”

#### iv. maintaining standards

Accordingly, the main objective of dual credit programs is to provide enhanced opportunities for academically qualified students, although this was not always the case. A study evaluating the dual credit program at one of the Florida institutions in the study reported that standards were not being adhered to. Because the college is an open-admission institution, there was nobody at the institution hired to check the eligibility credentials of students participating in the dual credit courses. Anybody could just sign up and “the result was that there were students with 1.6, 1.8 GPA taking dual enrollment courses”, according to the current dual credit director. “There were students whose test scores indicated they should be in remedial math taking calculus and high school faculty teaching the courses in high schools who didn't have the credentials to teach college courses.” However, unless state mandates are in place that enforces some type of accountability on institutions, the institution has the primary responsibility for assuring that the courses follow state guidelines.

#### v. negative stigma

If the courses were not perceived as college-level that added another obstacle that the community colleges had to overcome. The primary obstacle reported by community colleges was overcoming its own reputations. Administrators in Washington, New York, and Florida reported trouble with getting counselors to recommend students to take classes at the community college. When a four-year institution offered dual credit courses, as they are in New York, this added another obstacle for the institution to overcome. According to many officials at the suburban community college in New York, based on the advice of high school counselors, students were

more likely to take a dual credit course from a four-year university than a community college. The Vice President for External Relations at one of New York's colleges commented, "We are still fighting the uphill battle with the stereotype of the community college as thirteenth grade for students who couldn't get into a four-year school. And guidance counselors look at their acceptance rate to four-year schools as a gauge on how well they do. I also think that the people that know us think very highly of us. But the general stereotype in the general community is still there." Administrators at the rural institution in New York referenced the reputation of their community college as the "high school on the hill".

This stigma has caused administrators at community colleges in Texas to assure that dual credit courses are high quality courses. According to an administrator at a Texas rural college,

"We're trying to raise our image in the community, but to many people a community college is a second class college. That's just the way it is. And it seems logical to the extent to say that if you're teaching in the high school it makes you even seem more like a high school or 10th grade rather than a higher education institution. So in concurrent education classes, we're trying very hard to hire college instructors and even full-timers to go out and teach these concurrent classes, so the students have a clear separation of this is high school and this is college, because there's a whole different set of expectations."

The negative stigma associated with "old vocational" programs also another obstacle. An administrator at the Texas urban institution commented,

"I think there's a bias of the old industrial tech where they think back to when they were in school and the "dumb kids" were put in shop classes. And they think Tech Prep is shop and vocational in nature, and it's not. Tech Prep is typically computer information systems, SMT, engineering, graphics. It is also automotive tech, welding technology, but those fields are very different than they were when most adults or their parents were in school. So there's still this stereotypical thinking that really is not the way it is. But those stereotypes, as you know, any stereotype is hard to break."

The President of one of the community college campuses in California commented, "Their [superintendents] real preference is that students would be able to somehow at the end of



the day come to the college campus because they feel that that's a big incentive for students to actually get on the college campus. And you know, it may be a college course, if it's offered in the same high school facility, the students just don't see it as being a real college course.” In this case, special efforts are made to assure that dual credit courses emulate the culture of college courses by using college faculty to teach the courses and offering the courses only on the college’s campus.

#### iv. systemic reform

In addition to challenges that were discovered, the results showed that many systemic benefits (affecting both secondary and postsecondary levels) developed from the dual credit programs, which included improved communication and collaboration among secondary and postsecondary institutions and closer curriculum alignment between the secondary and postsecondary curriculums. Credible testimony that larger non-programmatic benefits were occurring between secondary and postsecondary institutions was found in the transcripts.

One benefit that resulted from the implementation of dual credit programs was a more concentrated effort to early identify students who have low basic skills. In order to be eligible to take dual credit courses, students must take and receive a certain score on a college placement test. Administrators at numerous colleges reported programs that worked with the students who did not score high enough on the college placement tests. In fact, community colleges in Florida and Illinois both revealed that officials administered the college placement tests in the high school to early identify students needing developmental preparation. In Florida, remedial testing in high school is mandated by the state. According to an admissions officer at Florida’s rural college, “by legislative mandate...community colleges, as early as the tenth grade, must provide an entry level testing placement program to identify early on if there are any weaknesses in the

basic skills area (of the student) and to give the high schools an opportunity to remediate that student.” Despite the state mandate, testing for eligibility for dual credit courses, while also testing for students who require additional academic preparation, is a good way to accomplish two goals with one task. With an increasing number of students who need remedial courses in postsecondary education, administration of a college placement test early in students’ high school curriculum gives students a second chance (or an early warning) to be adequately prepared for postsecondary work.

Another noted benefit of dual credit programs are concentrated efforts among secondary and postsecondary faculty to better align subject matter or curriculum. Examples of efforts to do this were demonstrated at institutions in all of the states in the study, however, I will give examples from two institutions in two states. At an institution in Florida, community college faculty trained high school instructors on how to teach a computerized course in math that aligns with the college’s math standards. In addition, the college has worked to help high school teachers understand the expectations at differing levels of postsecondary education. Faculty at Illinois’ suburban institution reported working with high school teachers on the alignment of math standards in the high school and at the college level, while at Illinois’ urban college, administrators in the district office had created an aligned curriculum among the city public schools and the city colleges to reduce the number of students who graduate from the city’s public schools with remedial needs.

Other programs promoting curriculum alignment (e.g., career academies) were in place in California’s and Florida’s colleges. Both the suburban institution in Florida and the suburban institution in California were in the process of implementing career academies in the high schools that aligned with the college’s curriculum. Career academies, which are learning

communities within the high school, include college-prep classes built around a career theme. In most cases, career academies do not include dual credit classes (Pierce, 2002); however, many high schools and community colleges are forming partnerships within career academies programs to allow for easier matriculation from high school to college in a particular field of study.

The widespread of activity in more systemic, P-16 types of reform support that similar longstanding benefits of dual credit programs may develop, and similar to the same benefits that have been seen from the Tech Prep program, such as professional development opportunities for high school and college faculty and sharing of information and resources among high school and college faculty. According to the director of Tech Prep at Washington's college,

“When I started this program [Tech Prep] ten years ago, people in the high schools teaching marketing [had] not talked to the people in community colleges teaching marketing in 20 years even though there were in the same town. [With the implementation of Tech Prep] we had all these teachers talking to each other and sharing curriculum. I think that although we couldn't prove it...I think we laid the groundwork of a better relationship between the two systems.”

With a strengthening of state dual credit policies that addresses concerns in the literature (eligibility, enrollment, funding) and weaknesses identified in this study (quality assurance, program incentives), community colleges may continue the opportunity to create sustainable relationships with secondary institutions.

### Feedback

Last, the study asked the question, ‘How have outputs (outcomes) of dual credit programs provided feedback on state policies?’. The results showed gaps in state dual credit policies as well as other factors that had a tangential influence on dual credit programs offered at the community colleges.

## Gaps in policies

### i. monitoring and accountability

Despite what institutions were doing to address developing problems and maintain good relationships with the schools, it was apparent that in a number of situations discussed in the transcripts, dual credit courses were not monitored to assure that the students taking the courses fit the eligibility requirements, that qualified faculty (college or high school) taught the courses, and that college level content was taught. The occurrence of these situations raises concern for the reputation of dual credit programs.

An example of where a college claimed to monitor the dual credit courses, yet was not doing so in a systematic fashion was found at Illinois' rural college. In an article promoting the dual credit program at Illinois' rural college, the article claimed that administrators at the college monitored dual credit courses<sup>3</sup>. However, the coordinator of the program admitted that though they hired the teacher (a high school teacher with the appropriate credentials) and reviewed the course syllabus, the coordinator did not observe the dual credit courses to assure that what was stated in the syllabus was taught in the classroom. There is no requirement of passage of a proficiency test to receive college credit (as is required for AP and IBO courses); therefore, student competency gained during a dual credit course is assumed to be reflective of the student's grade. That is, assuming that a qualified instructor is teaching the course and is teaching it at a college level.

In another example, the faculty association president at New York's suburban institution cited a situation in New York where a student teacher was teaching a dual credit course in the high school. According to him, his son was in a high school Calculus class when "two weeks later a student teacher walks in that's going to take over the course for six weeks. A student

teacher who's still in college? I don't think the school even knew that was going on. So of course we [the faculty association at the college] bring it up and it becomes a policy [at the college], 'No student teachers will be teaching'."

One institution in Florida had a college policy in place that required the dual credit director to observe faculty who teach dual enrollment once a year. However, the policy was put into place when the new director was hired. Before then, there was no oversight on dual credit students. The new director of the dual enrollment program admitted that before hand,

"There were students with 1.6, 1.8 GPA taking dual enrollment. There were students whose test scores indicated they should be in remedial math [rather than] taking calculus. There were teachers teaching it in high schools who didn't have the credentials to teach college courses. It was really shocking. There were no controls because there wasn't a person doing it [monitoring the dual credit courses]."

In Washington, a high school teacher negotiated with the community college to have his A/P calculus class count also as a college credit course. According to one of the students in his class, "My teacher talked to people here. He somehow worked it and since college credit transfer is a lot better than AP credit that anyway I just took the college credit. So when I ended up going here I was just already right on track and I could just go right into [math] 126."

Provided here are only three examples of negative stories associated with dual credit programs and more examples were given in the transcripts. Antidotal stories can very effectively be used to support or oppose dual credit programs. The faculty association at New York's suburban school used the story of the student teacher taking the class to make amendments to the college's dual credit policy. Several individuals at that same institution also relayed information that the college's dual credit program was created as a pet project at the school in which the children of a senior Vice President at the college were enrolled. With few studies on the

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<sup>3</sup> In order to preserve the confidentiality of the college, the article is not cited.

outcomes of dual credit courses on student achievement, faculty professional development, and other areas, testimonials may serve as the primary source for administrators, policymakers, and legislators to judge the value of dual credit programs.

ii. Non-transferability

Community colleges practitioners in more than one state mentioned the reluctance of some four-year institutions to accept the dual credit courses. According to the admissions director at Illinois' suburban college, "The University of Illinois in Champaign is our flagship state university and they are very picky about courses that students would take in high school at a community college. And what they frown upon are courses that are held at the high school, taught by high school faculty with high school students as the classroom population." However, Washington legislation allows some four-year colleges offer dual credit programs, depending on their locality, especially if another community college is not nearby. One of the four-year institutions, University of Washington, runs a program in the high school and hires master-level high school teachers to teach the courses, showing some level of buy-in from the four-year institutions, including the state's flagship. Without this buy-in, community colleges may be in a quagmire. If students have to re-take the dual credit courses at a four-year institution, then they are not saving time or money. To counter concerns students may have about non-transferability, the research found that New York's rural institution listed four-year institutions that accept dual credit courses on its dual credit web site.

iii. influence of local policies

The results also showed that local policies also effect institutional decisions to partner with secondary schools. In Florida, eighteen counties are allowed to offer inter-district school choice. According to a faculty member at one of the colleges in Florida, some high schools are

using dual enrollment for leverage to encourage students to attend. A variety of accelerated learning opportunities make their high school more attractive to students and parents. Even in Washington, where many high school teachers and counselors are against the programs because it the funding for the students follows the student to the community college, many high school administrators realize that they have to offer the courses or lose the middle-to-upper class students who will instead select to go to the private high school. According to an administrator at the Washington college in this study, “They [high school administrators] are afraid the parents will be drawn off to private schools, so they have to try very hard to keep the bright, wealthy parents' kids enrolled in school by giving them what they want.”

#### iv. influence of other state policies

Easton described two parts of a system’s environment: the intra-societal and the extra-societal (p. 21). The results from the study focus primarily on the intra-societal (the segments of dual credit policy that effect dual credit programs). However, as was evident from the research there are also extra-societal factors (other state, system, and local policies) that also effect dual credit programs. In Florida, an unexpected high number of students who qualify and utilize the state’s merit-based scholarship influenced state legislators to push for programs and policies that allow students to matriculate college credit in high school. According to the director of dual credit at a Florida institution, “Everybody in Florida qualifies. If you have the 3.0, you get the scholarship and it's like everybody's gotten it. [Policy makers found that] Ninety-seven percent of the students in the University of Florida's freshman class were there on the Bright Futures scholarship.” A new provision in the scholarship requires that if someone qualifies for a Bright Future scholarship, they must take five Clep exams and try to test out of those five subjects the first semester of college. The college is expected to “foot the bill” for the tests. The same

qualifies for dual credit courses. By encouraging students to take dual credit courses in high school, the state is saving money on shorter time to degree that it takes students to graduate.

In New York, policy that allows public four-year institutions to control tuition costs and to keep all tuition revenue encourages institutions to maximize enrollments. The President at one community college in New York commented on a shift in funding that occurred in 1999.

“Last year [1999] they changed a whole philosophy of funding and state operating. In the past, if a state operated institution exceeded the numbers it was budgeted for they paid a double penalty. If you had 200 students more than you were funded for, you had to handle those 200 students without any funding. Starting last year, they get to keep the tuition. So now, even though people talk about increasing their quality, and SUNY will say nobody will take students who don't qualify because they are trying to raise the quality of the student body, the fact is that if they take 200 more students in tuition that might be \$600,000-\$700,000 thousand dollars. And it's very tempting, I would think, to reach down... If a four-year college takes students, they increase by 200, but community colleges are worried that their enrollments will drop by 200. There's really a relationship between these colleges that is something to watch”.

Another example of the indirect impact of state policy is in Texas. Statewide in Texas, a common coding system, Workforce Education Course Manual (WECM), was created to help ease the transferability of courses among Texas' two-year and four-year institutions, has actually hurt Tech Prep programs. Advisors at one college in Texas reported “the original purpose of WECUM was to standardize courses to assure transferability to the four-year institutions, but instead what it did was red flag them all as “vocational” courses”. As a consequence, courses that were once accepted at four-year universities in the state no longer are. Policies, such as this, if not passed with careful consideration, can impact student matriculation, particularly if credits acquired in escrow through a Tech Prep program will not articulate onto four-year colleges and universities.

Lastly, increased state standards have impacted dual credit programs, again particularly Tech Prep courses. According to the director of Tech Prep at rural community college in New



York, new state standards have made it harder for students to participate in programs like Tech Prep. New Regent standards require students to complete twenty-one required courses for graduation, of which only two are elective courses. According to the director, “Students are required to take so many Regents courses now and by 2005 everybody has to have a Regent's diploma. It does put a little pressure on schools and students and how they're going to fit in a 2+2 program that focuses on a technical career with all the other things they have to take.”

Illinois also tried to pass a more rigorous core curriculum for high school students that would be required of all students that failed in legislature this spring. However, admittedly “new vocationalism” courses require career and technical students to take advanced math and science courses, and the problem is finding a way for students to be able to fit the new curriculum, or find rigorous Tech Prep courses that can satisfy these requirements. This will require more coordination among secondary and postsecondary levels.

Evidently, other educational policies will require changes to be made to existing dual credit policies and attention to dual credit policies brought on different constituency groups, such as taxpayers, parents, educational leaders, resulting in some state policy changes. Resistance among secondary schools required Illinois to add a provision that allowed the funding of both systems. Florida added an amendment requiring the communication of dual credit opportunities to students. Texas passed a bill that extended student eligibility to students at private secondary schools. As state dual credit programs mature and allow time for more system assessment, more changes to state policies are likely to occur.

#### v. Economy

Another factor is the influence of the economy on the proliferation of dual credit programs. Although an assessment of the impact of the economy was not within the scope of the

study, the topic should not be disregarded for further research. The majority of interviews were conducted at the colleges before 2001 when the economy was still strong (see diagram 1 on page 28). Several interviews noted that in good economies, enrollment at community colleges drops, which could lead community colleges to develop other ways to generate enrollment and revenue. Other the other hand, budget deficits may result in the elimination of key revenue generating programs, such as education programs located at local prisons, at community college. At a rural New York institution, an administrator admitted that the advanced study program had grown so enormously that it is making up for the enrollment of what the old prison program generated. In California, the budget deficit influenced legislators decision to make cuts in its state dual credit funding. An article in the Chronicle of Higher Education (Evelyn, 2002) described how state budget cuts are forcing community colleges to turn away students interested in taking dual credit courses. Some districts in California have responded by limiting the number of students who can enroll in dual credit programs. It is unpredictable how other states will also respond. As the data from the study shows, each state design for dual credit policies is different is and will be the response of each state in assessing and reforming state dual credit policies.

### Conclusion

The discussion on dual credit raises brings up some long debated questions of higher education—questions on age specificity for postsecondary education (how old should one be to take college courses?); access to higher education (who should qualify and how and where should courses be offered?); and content design and mastery (what is a college-level class and what skills should students have when they enter and exit the class?), to name a few. While the answers to these questions were not found in the results of this research study, the study provided information to more carefully consider these questions.

The purpose of this study was to learn some of the foremost issues of dual credit and to understand the influence of state policies on dual credit programs at community colleges. The results showed that states were grappling with similar as well as different issues related to dual credit programs. In addition, it showed that states were at different stages in the policy formation, implementation or summation process of their dual credit policies. Through Easton's model, the study looked at the environment behind each state dual credit policy, the demands driving the policy, the design of the policy, outputs and results of the policy, and then finally areas for improvement. Easton's model also showed the tension that is created by the separateness of multi-level factors within a political system (p. 22). By looking at state dual credit policies through the political systems model, they appear as complex educational systems with multiple dynamics often pulling policy intent and policy results in different directions.

The most obvious question to ask after a six state case study is, 'which of these state policies for dual credit works best?'. While an important question, the answer is not simple since to look at the effectiveness of each state model requires analyzing the intent of each state policy with the outcomes produced, not accounting for the maturity of each state policy according the levels of Easton's model. The answer to this question, if achievable, would require more data to be collected at the state level. Instead, I will take the last part of this paper to elaborate on the results and to provide recommendations.

The analysis of the data raised questions as to how aligned the institutional purposes for implementing dual credit programs are with the overarching intent or purpose of that state's dual credit policy. The results draw on the conclusion that unconscious efforts to reform multiple educational issues have resulted in policy misalignment between state-level dual credit programs and other state, local or system policies. In one state, for example, this raises the question on

how well Washington's dual credit policy works, if the intent is to save costs and to increase educational choices yet secondary administrators resist opportunities to partner and share resources with postsecondary administrators and neglect or discourage secondary students from taking dual credit courses. One Florida community college administrator described the intent of Florida's policy was to provide students with the content of a college course for students who are academically ready for it. However, the influence of the state Bright Future's scholarship program suggests that state legislators may also think of dual credit as an avenue to award students college credit in high school to shorten time to degree at the postsecondary level, requiring less money to spent out off the Bright Scholarship fund. Questions such as these were raised for dual credit policies in each of the six states.

The recognition that dual credit programs address multiple state demands (costs, time to degree, access, choice) contributes to the proliferation of the programs. The transcripts revealed other factors, such as local policies and pressure from business and industry, also influenced the development of the programs. However, the most frequently mentioned variable attributing to the development of dual credit programs was due to its high revenue generating capacity: the programs were referred to as "cash cows" and "big business" for community colleges. The frequent mention of the revenue incentives to develop dual credit programs should not go unaddressed.

As evident in both the literature and the results, dual credit programs provide benefits to students (through saved postsecondary costs and time to degree), to both secondary and postsecondary institutions (through professional development opportunities to faculty and teachers and increased cooperation and resource sharing), and educational systems (through state savings for postsecondary costs and reduced remedial needs for postsecondary students). Yet

these benefits are only attained if the student does not have to repeat the dual credit course at a more advanced level (Hebert, 2001) and states do not have to pick up the costs for college courses that do not transfer. The skepticism of the quality of dual credit courses is evident by the four-year institutions that do not accept the dual credit courses, or only accept dual credit courses on specific conditions (for example, that the courses are taught by a college instructor on the college campus, thus diminishing its benefits). These results warrant the need for an accountability system that assures eligible students are taking the courses and eligible faculty are teaching, as well as that more systemic reform measures are occurring.

The focus of integrating an accountability mechanism for dual credit courses should not be as simple as designing and mandating proficiency exams, such as the exams required for AP courses. Rather, policymakers should consider dual credit programs as P-16 reform mechanisms and use the foundation of P-16 education reform when designing tools for measuring student and system outcomes. The foundation of P-16 reform is two-fold: 1) the awareness that problems exist within both systems: K-12 education and higher education; and, 2) the awareness that systemic reform strategies must span across the education continuum (Brown, 1994). Under the design of a P-16 reform model, student learning is interchangeable-- what a student learns at one level impacts and builds what the student learns at the next.

In this sense, state policymakers should promote collaborations that promote seamless curriculum sequencing from secondary to postsecondary education should be encouraged. The study showed examples of high school and community college faculty working together to align the standards between curriculums. State dual credit policies must create an environment that supports this collaboration rather than diminishes it. State policies that pin secondary and

postsecondary sectors against one another, whether it is over funding or turf issues, do not as naturally allow systemic benefits to occur.

Dual credit, although a promising mechanism for advancing systemic reform efforts of the P-16 education movement, also fuels the debate on some long-standing, controversial issues. Many factors highlighted in this study--lack of monitoring, monetary incentives to develop programs-- may also cause some people to question the benefits of dual credit. The lack of studies that test the outcomes of dual credit programs leaves dual credit programs even more susceptible to criticism and sustainability. Without more objective studies to test the outcomes of dual credit programs on student achievement, faculty morale, sustainable education partnerships, and other related factors, testimonials rather than research will be used to guide the decisions of policy makers and lawmakers. In such cases, “cash cow” and “big business” will be the metaphors used in the demise of statewide support for dual credit programs. To avoid this scenario, coordinated efforts are needed that assess that dual credit programs, offered only to eligible students and by qualified instructors, meet high quality, college-level standards. State coordination and oversight, coupled with increased objective research on the outcomes of dual credit programs (at the state, institution, and student level), will help to sustain the longevity and effectiveness of dual credit programs.

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## Appendix A

### Dual Credit Enrollment Overview of Policies and Programs for Six Selected States

Dual credit/enrollment has become a widespread practice in secondary and postsecondary institutions across the nation- a trend that states have recognized and are monitoring. According to Education Commission of the States<sup>1</sup>, 19 states have passed state policies (legislation) on dual credit/enrollment, 21 states have comprehensive programs, and 26 states have limited, though some dual credit/enrollment programs.

The design of the dual credit/enrollment policies varies considerably from state to state, ranging from state or system based policies to more *laissez-faire*, decentralized approaches. In addition to the variance in design, the criteria for dual credit/enrollment programs, including who is eligible to enroll, who is qualified to teach, and who pays for the courses, also differ from state to state.

The following report overviews dual credit/enrollment policies and programs in seven selected states. Included in each state overview is a description of state or institutional programs and policies, their key components, and a list of supplemental resources. Appendix A charts the targeted student audience for each state policy and program.

#### State of California

Dual enrollment in the state of California is defined differently than in many other states. Dual enrollment in this case pertains specifically to the articulation process among postsecondary institutions. If a student is dually enrolled, he or she is admitted jointly to a two-year and four-year institution and does not have to apply to the four-year institution after he/she completes a specified set of courses. On the other hand, concurrent enrollment refers to enrollment at both a secondary and postsecondary institution. A concurrently enrolled student is enrolled in a postsecondary institution while still in high school (Education Commission of the States, 2001<sup>4</sup>).

The authority of concurrent enrollment oversight lies within the domain of school district administrators. According to California Education Code (48800-48802), administrators in the school district may set the policy for allowing students to take and receive dual credit for classes taken at the community college. Tuition at the community colleges is waived but the student is required to pay a small enrollment fee.

Accelerated learning programs in the state of California include:

**Gifted and Talented Education (GATE) Program:** Enacted in 1980, the GATE program provides funding for districts to start and maintain challenging programs for gifted and talented students (i.e., to start Advanced Placement (AP), honors, or International Baccalaureate (IB)

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<sup>4</sup> Education Commission of the States Center for Community College Policy (July 2001). Postsecondary options: dual/concurrent enrollment. Retrieved from <http://www.ecs.org/ecsmain.asp?page=/html/issues.asp>

programs). One example of a GATE funded program is Stanford University's EPGY-Education Program for Gifted Youth, which offers college level courses on CD-ROM to middle and high-school age youth.

**Advanced Placement Courses:** The Advanced Placement program allows students to take college-level courses in high school while also preparing them to take the nationally administered Advanced Placement test. The University of California campuses weigh AP courses higher than other courses. Accordingly, California students take one sixth of all AP exams (Burdman, 2000). In response to the increasing demand, Governor Gray Davis set a goal that by fall 2000, every high school would offer at least one AP class; four by fall 2001. Subject to funding availability, the California Department of Education reimburses districts for specified costs of AP test fees paid to the College Board on behalf of eligible students. In addition, Advanced Placement Challenge Grants award funding to districts with low college preparation rates and few to no AP course offerings.

**The International Baccalaureate (IB) Diploma Program:** The International Baccalaureate Diploma program, offered through the International Baccalaureate Organization (IBO), is an advanced level of high school courses that are designed to meet various international university admission standards. Assembly Bill 2363 (Chapter 794, Statutes of 1998) provides state funding of up to \$15,000 to support the start-up of new IB Programs, and up to \$25,000 to offset costs for professional development for current IB Diploma Programs in public secondary schools.

Other state policies include:

Assembly Bill 1287: University of California Dual Admission Program. This legislation, signed by the Governor last year, allows eligible students to be admitted to a University of California campus after completion of the requisite criteria for transfer from a community college. Specifically stated in the bill, the intent of the legislation is “aimed at improving the chances for pupils with a wide diversity of backgrounds to become eligible for the University of California.”

#### Supplemental Resources

California Education Code (Section 48800-48802)

<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=edc&group=48001-49000&file=48800-48802>

Gifted and Talented Education (GATE) web site

<http://www.cde.ca.gov/cilbranch/gate/facts.html>

Assembly Bill 2313, GATE program legislation

<http://www.cde.ca.gov/cilbranch/Gate/ab2313.html>

Web site for Advanced Placement Program

<http://www.cde.ca.gov/fiscal/categorical/program29.htm>

Advanced Placement Challenge Grants  
<http://www.cde.ca.gov/pr/ap/grantawards.html>

International Baccalaureate Program web site  
<http://www.cde.ca.gov/pr/ibacc/app.html>

Assembly Bill 1287, Dual Admission to University of California  
[http://www.leginfo.ca.gov/pub/bill/asm/ab\\_1251-1300/ab\\_1287\\_bill\\_20011007\\_chaptered.pdf](http://www.leginfo.ca.gov/pub/bill/asm/ab_1251-1300/ab_1287_bill_20011007_chaptered.pdf)

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### **State of Florida**

As defined in the state of Florida, dual enrollment refers to a high school student enrolled in postsecondary courses for both high school and college credit<sup>1</sup>. Dual enrollment is the most common form of accelerated learning and is widely supported in the state; 28 colleges participate in dual enrollment (ECS, 2001). Florida law (FS240.116) allows high school students the option of many acceleration mechanisms, such as dual enrollment, early admission, the International Baccalaureate program, credit by examination, and advanced placement courses. Students are permitted to enroll in dual credit courses during school hours, after school and during the summer. The state pays tuition and fees for dual credit classes. Books are paid for by the school district.

**Dual Enrollment:** The dual enrollment program allows for the enrollment of an eligible secondary student<sup>5</sup> in a post-secondary course creditable toward a vocational certificate or an associate or baccalaureate degree. Vocational dual enrollment allows secondary students to earn a series of elective credits towards a degree or certificate from a job-preparatory program. All Florida public community colleges and several state universities have dual enrollment agreements with school districts within their district. The validity and comparability of dual enrollment credit is granted through the oversight of the Articulation Coordinating Committee.

**Early Admission:** Early admission is a form of dual enrollment where eligible secondary students may enroll in post-secondary courses full-time that are creditable toward the high school diploma and the vocational, associate or baccalaureate degree. To qualify, a student must have completed a minimum of six semesters of high school. Early admission students are considered college students and are not eligible to participate in high school activities.

**International Baccalaureate:** The International Baccalaureate Diploma program, offered through the International Baccalaureate Organization (IBO), is an advanced level of high school courses that are designed to meet various international university admission standards. Credit is awarded based on scores achieved through exams designed by the IBO and the transferability of

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<sup>5</sup> To qualify for college credit dual enrollment courses, the student must have a 3.0 grade point average or a 2.0 grade point average for the vocational dual enrollment program.

the credits in Florida is mandatory. The Florida Department of Education sets the cutoff scores and the number of credits that students may receive.

**Credit By Examination:** Through the credit by examination program, secondary and post-secondary students who receive a specified minimum score on nationally standardized general or subject-area examinations may receive college credit. The examinations and scores required for awarding credit are defined by the Florida State Board of Education, though community colleges and universities may also award credit based on performance on examinations developed within its institution.

**Advanced Placement:** The Advanced Placement program allows students to take college-level courses in high school while also preparing them to take the nationally administered Advanced Placement test. To receive college credit for the course, students must score a minimum of three, on a five-point scale, on the corresponding Advanced Placement Examination.

Other state policies:

Other policies include:

**Bright Future State Scholarship:** The Florida Bright Futures Scholarship Program is a lottery-funded merit-based scholarship program that awards three levels of scholarships for high school seniors at attend a public or private four or two year institution. Florida Bright Futures Scholarship disbursements were over \$164 million and funded over 92,000 students (new freshmen plus prior recipients) for the 2000-2001 academic school year, according to the Florida Department of Education. Due to the large number of students eligible for the scholarship program, legislators have passed provisions to encourage students to complete their post secondary education as quickly and inexpensively as possible. In 2001, the Florida legislature created the Florida Bright Futures Scholarship Testing Program that provides greater acceleration options for scholarship recipients. The program mandates that 2002 Academic and Medallion Scholars must satisfy five attempts at earning college credit through one or more of the following acceleration options: AP examinations, IB examinations, dual credit courses, or CLEP examinations. Public universities, community colleges, and school districts cannot charge students for the cost of the exams.

### Supplemental Resources

A+ Plan for Education, a plan designed to increase school funding and accountability  
[http://www.myflorida.com/myflorida/education/learn/aplusplan/Fact%20Sheets/acceleration\\_mechanisms.htm](http://www.myflorida.com/myflorida/education/learn/aplusplan/Fact%20Sheets/acceleration_mechanisms.htm)

Section 240.1163, Florida Statutes—Joint dual enrollment and advanced placement instruction  
<http://www.leg.state.fl.us/statutes/index.cfm>

Section 240.116, Florida Statutes—Articulated acceleration  
<http://www.leg.state.fl.us/statutes/index.cfm>



House Bill 2105, dual enrollment amendments  
[http://election.dos.state.fl.us/laws/00laws/Ch\\_2000-225.pdf](http://election.dos.state.fl.us/laws/00laws/Ch_2000-225.pdf)

Florida Bright Futures Scholarship Web Site  
<http://www.firn.edu/doe/brfutures>

### **State of Illinois**

In the state of Illinois, dual credit programs have been in existence since 1984 when the first dual credit program began at Olney Central College (Andrews and Barnett, 2001). Rapid growth with dual credit programs in the last decade caused changes to be made to state policies governing dual credit. In 1996, the Illinois Community College Board changed its policy to permit both school districts and colleges to claim dually enrolled students for funding based on average daily attendance (schools) and full time enrollment (colleges) (Andrews and Barnett, 2001). In 2001, the Accelerated College Enrollment (ACE) grant program was created, which awards tuition vouchers to students to cover the costs of tuition and fees for dual credit courses taken at the community college. Since fiscal year 2001, ICCB has granted \$2.5 million to the Accelerated College Enrollment (ACE) grants. Even though the state provides financial incentives, the decision of who should pay the tuition costs (the student or the school district) is a local, not a state decision (ECS, 2001).

In addition to the state policies regarding dual enrollment, the state also has many state and local initiatives, which include:

**Tech Prep:** Tech Prep is a program of study that begins in high school, continues at a postsecondary institution, and ends with an associate of applied science degree, two-year certificate, or two-year in a select number of areas. While each state has a state-administered, federally funded Tech Prep program, Illinois is the only one to match federal funds with state funds.

**Advanced Placement:** The Advanced Placement program allows students to take college-level courses in high school while also preparing them to take the nationally administered Advanced Placement test. Through a federally funded program administered through the Illinois State Board of Education, high school students who meet the financial need requirements are eligible to have the subject area exams fees reduced for both the College Board Advanced Placement Exams and the International Baccalaureate subject area exams.

**The International Baccalaureate (IB) Diploma Program:** The International Baccalaureate Diploma program, offered through the International Baccalaureate Organization (IBO), is an advanced level of high school courses that are designed to meet various international university admission standards.

**Project Excel and Project Bridge:** Project Excel and Project Bridge are two concurrent enrollment initiatives partnered by the Chicago public schools and the City Colleges of Chicago.

Project Excel allows public school students to take concurrent courses on the campuses of the City Colleges of Chicago, while Project Bridge offers concurrent courses at the Chicago public high schools.

### Supplemental Resources

The Illinois Community College Board's rules on concurrent enrollment (see page 62)  
<http://www.iccb.state.il.us/HTML/pdf/manuals/sysrules.pdf>

Web site for Illinois Tech Prep  
<http://www.isbe.state.il.us/techprep/>

Web site for Advanced Placement Fee Reduction  
<http://www.isbe.net/secondaryed/Advanced%20Placement.htm>

Chicago Public Schools Helping Students Map Out Careers web site  
[http://www.cps.k12.il.us/Instruction/feature\\_archive/Careers/careers.html](http://www.cps.k12.il.us/Instruction/feature_archive/Careers/careers.html)

Advisory Committee, Illinois State Board of Education and the Illinois Community College Board (1996). Beyond Tradition: Fostering Secondary/Postsecondary Linkages to Expand Educational Choices Available to Illinois Youth.

Andrews, H. A. & Barnett, E. (2001). Dual credit/enrollment in Illinois: A status report.  
<http://occr1.ed.uiuc.edu/art/Brief-Summer-02.doc>

Illinois State Board of Education Office: Research and Policy Division (September 1999). 1998-99 Census of Public High School Students Enrolled in Community College Courses for High School Credit.

### State of New York

In the State of New York, dual credit policy (Commissioner's Regulations 52.1) regulate that postsecondary institutions strictly control enrollment of secondary students in postsecondary courses. According to the state policy, such courses can be taken for dual credit. Initially the student pays for the dual credit course, though reimbursement of \$100 is awarded to students who earn an "A" or "B" and \$50 for students who earn a "C" (ECS, 2001). In addition to the state policy, the nation's first dual enrollment program, Project Advance, originated out of the state of New York. Also, College Now, a dual credit program at Kingsborough Community College, has been incorporated as a system-wide initiative at the CUNY colleges.

**Project Advance:** Project Advance was created in 1973 in partnership between Syracuse University and seven local high schools. Its mission to offer qualified high school seniors the opportunity to enroll in challenging Syracuse University courses set the trend for many dual credit enrollment projects across the country. Project Advance also provides other services to the high schools: in-service training for high school instructors; a forum for communication between educators from high school and university settings; and, a research partnership on how to systematically improve instruction.

**College Now:** The College Now program, which began at Kingsborough College in 1984, was designed to take moderate achieving high school students and place them in a new educational environment. With the support of CUNY Chancellor, Matthew Goldstein and the interim schools Chancellor, Harold Levy, College Now has expanded to all 17 CUNY colleges. Through a system sponsored grant program, colleges are invited to apply for funds for programs that fit into four identified categories

**Advanced Program Examination Fee Waivers:** Under the U. S. Department of Education Advanced Placement Incentive Program, New York State received a grant to provide partial fee waivers for low income students who take the College Board Advanced Placement and International Baccalaureate examinations.

Some additional state policies include:

New State Standards for a Regents Diploma or a Regents Advanced Diploma: The philosophy behind the new state standards is that high school graduation and college preparation are one and the same and no student should graduate from a public high school unprepared for college level work. According to the director of a Tech Prep program at a New York community college, “Students are required to take so many Regents courses now and by 2005 everybody has to have a Regent's diploma”. The new course requirements allow only two elective courses to be taken by the student, therefore, impacting students interested in Tech Prep courses. Students entering high school in 2001 and thereafter are required to completed the state’s new learning standards, which require completion of twenty-two units of credit and five New York State assessments. The units are as follows:

- a) English, four units of credit and the Regents comprehensive examination in English.
- b) Social studies, four units of credit including one unit of credit in American history, the Regents examinations in United States history and government, and global history and geography.
- c) Mathematics, three units of credit and the Regents examinations in mathematics.
- d) Science, three units of credit and the Regents examinations in science. In order to qualify to take a Regents examination in the sciences, a student must complete 1200 minutes of hands-on (not simulated) laboratory experience with satisfactory documented laboratory reports.
- e) The Arts (including visual arts, music, dance and theatre), one unit of credit.
- f) Health, one half unit of credit.

g) Languages other than English, one unit of commencement-level credit which can be earned

by passing the State second language proficiency examination.

h) Physical Education, two units of credit.

i) Additional units in English language arts, mathematics, social studies, science, the arts, languages other than English, career and technical education, or any other subject area approved by the commissioner to a total of twenty-two units of credit.

To qualify for a Regents diploma with advanced designation, a student must score at least a 90 per cent in all Regents examinations.

### Supplemental Resources

Commissioner's Regulation 52.1

<http://www.highered.nysed.gov/ocue/Part52.htm#Registration of curricula in teacher education>

Web site for College Now at Kingsborough Community College

[http://www.kbcc.cuny.edu/CNL\\_WEB/index.html](http://www.kbcc.cuny.edu/CNL_WEB/index.html)

Syracuse University Project Advance

<http://supa.syr.edu>

New standards for Regents Diploma and Regents Advanced Diploma

<http://www.emsc.nysed.gov/part100/pages/1005b.html#Regents diploma>

### State of Texas

In 1999, Senate Bill 1352 permitted the development of dual credit courses offered between a school district and a community college (ECS, 2001). According to state statute, a school district may adopt a policy that allows a student to be awarded credit toward high school graduation for completing a college-level course. The course must be provided only by an institution of higher education that is accredited by a regional accrediting association. To be eligible, a student must have the approval of the high school principal or counselor. A bill passed in 2001 (Senate Bill 82) allows private school students to also take dual credit courses. Currently, only community and technical colleges are allowed to offer the collaborative programs, however, one Texas administrator mentioned that recently four-year colleges and universities have been trying to receive legal permission to also offer the programs, now that it has become "big business".

**Advanced Placement and International Baccalaureate Incentive Program:** The state offers an advanced placement incentive program that rewards students, teachers, and schools. Schools participating in the program are eligible to receive a one-time, \$3,000 equipment grant for providing an Advanced Placement (AP) or International Baccalaureate (IB) course in their school and \$100 for each student who receives a score of three or better on the AP or IB test. Teachers are eligible for a subsidy for teacher training for the AP or IB courses and a share of the

teacher bonus pool proportional to the number of courses taught by the teacher's school. Students who receive a score of 3 or better on the AP or IB tests may receive a reimbursement of the fee.

**Innovative Courses and Programs:** State statute allows schools to create a course that although it does not fall within any of the subject areas listed in the school's curriculum, is academically rigorous and addresses documented student needs.

Other policies include:

The Workforce Education Course Manual (WECM): WECM is a state inventory of workforce education courses for public two-year colleges that contains course descriptions and specific information for each course (e.g., semester credit hours, minimum learning outcomes). The purpose of the WECM is to contribute to the quality and consistency of workforce courses and improve the transferability of credits for students. The manual is updated annually.

### Supplemental Resources

Texas Administrative Code

<http://www.tea.state.tx.us/rules/tac/index.html>

74.25. High School Credit for College Courses.

<http://www.tea.state.tx.us/rules/tac/chapter074/ch074c.html>

74.29. Texas Advanced Placement Incentive Program.

<http://www.tea.state.tx.us/rules/tac/chapter074/ch074c.html>

74.24. Credit by Examination

<http://www.tea.state.tx.us/rules/tac/chapter074/ch074c.html>

74.44. Distinguished Achievement High School Program--Advanced High School Program

<http://www.tea.state.tx.us/rules/tac/chapter074/ch074d.html>

Senate Bill 1352, Legislation Creating Dual Credit Program

[http://web.lexis-nexis.com/stcapuniv/document?\\_m=d374e17018619fcb4abbe5bdac117c15&\\_docnum=1&wchp=dGLbVzz-ISIkA&\\_md5=f1e3679b364abc033e341b36befc7324](http://web.lexis-nexis.com/stcapuniv/document?_m=d374e17018619fcb4abbe5bdac117c15&_docnum=1&wchp=dGLbVzz-ISIkA&_md5=f1e3679b364abc033e341b36befc7324)

Senate Bill 82

[http://web.lexis-nexis.com/stcapuniv/document?\\_m=cbc58fb3526647d12b79bc30fa296b77&\\_docnum=1&wchp=dGLbVzz-ISIkA&\\_md5=4ea9abfc868504de100c05eeefa3bf57](http://web.lexis-nexis.com/stcapuniv/document?_m=cbc58fb3526647d12b79bc30fa296b77&_docnum=1&wchp=dGLbVzz-ISIkA&_md5=4ea9abfc868504de100c05eeefa3bf57)

Guidelines for the Workforce Education Course Manual (WECM)

<http://www.theccb.state.tx.us/reports/HTML/0324/0324ch4.htm>

## State of Washington

In the state of Washington, a dually enrolled student is a high school student who is enrolled in a postsecondary institution, while a concurrently enrolled student is enrolled at two or more community colleges at the same time (ECS, 2001). Dual and concurrent enrollment exists through four main statewide programs: Running Start, College in the High School, International Baccalaureate, and Advanced Placement Courses.

**Running Start:** In 1990, the Washington state legislature created the Running Start program as part of the Parent and Student Choice Act (Washington State Statute: Chapters 393-169: Running Start Program), a program designed to expand the educational opportunities for high school students. The Running Start program allows 11<sup>th</sup> and 12<sup>th</sup> grade students to take college-level courses, tuition-free at Washington's 34 community and technical colleges and at Central and Eastern Washington Universities and Washington State Universities<sup>6</sup>. Tuition is paid for by the local school district, though students must purchase books and supplies and provide their own transportation. Although the state mandates that schools allow students to participate in dual credit opportunities, the determination of how the credit is counted is left to local school boards (AASCU, 2002).

**College in the High School:** Noting that many high school students are unable to leave the high school campus to participate in post-secondary classes, two and four year colleges in Washington have developed College in the High School programs, which provide college-level courses taught by college faculty in high school locations to 11<sup>th</sup> and 12<sup>th</sup> grade students. In order to assure the transferability of the courses, guidelines for the development of the programs have been established (see <http://www.hecb.wa.gov/college/collegehs.html>).

**International Baccalaureate:** The International Baccalaureate Diploma program, offered through the International Baccalaureate Organization (IBO), is an advanced level of high school courses that are designed to meet various international university admission standards. In Utah, International Baccalaureate (IB) courses may be considered for credit and/or placement on a subject-by-subject basis. However, in some cases, a full year of university credit is awarded to IB Diploma holders.

**Advanced Placement Courses:** The Advanced Placement program allows students to take college-level courses while in high school while also preparing them to take the nationally administered Advanced Placement test. In an effort to increase the participation of minority and low-income student participation in AP courses, the Board of Education awards grants to schools and school districts through the Placement Incentive Grant Program (see <http://www.k12.wa.us/Press/APgrants-2ndround-FINAL.asp>).

## Supplemental Resources

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<sup>6</sup> In 1994, the Washington legislature agreed to allow Central, Eastern, and Washington State Universities to participate in the program due to the lack of access to community and technical colleges in certain regions of the state.

Getting Into College: College Opportunities in High School  
<http://www.hecb.wa.gov/college/collegehs.html>

Running Start: 2000-01 Annual Progress Report  
[http://www.sbctc.ctc.edu/Pub/runstart\\_a01.doc](http://www.sbctc.ctc.edu/Pub/runstart_a01.doc)

Running Start: A Progress Report from the State Board for Community and Technical Colleges  
<http://www.sbctc.ctc.edu/Leg/runstart.pdf>

Web site for International Baccalaureate program  
<http://www.ibo.org/ibo/index.cfm?ObjectID=C6463F11-140A-4418-84053E942FCACAE2&language=EN>

American Association of State Colleges and Universities (AASCU) State Policy Briefing on Dual Credit Programs  
[http://www.aascu.org/state\\_policy\\_briefing/default.htm](http://www.aascu.org/state_policy_briefing/default.htm)

## Appendix B

### CCRC Dual Credit Study Inventory of P-16 Education Activities<sup>1</sup>

This study developed out of a larger research initiative conducted by the Community College Research Center (CCRC) at Teachers College, Columbia University. Through the CCRC research project, 15 community colleges in 6 different states (California, Florida, Illinois, New York, Texas, Washington) were examined to map the changing landscape of community colleges by describing the external and internal pressures affecting the mission, organization, and operation of the community colleges. The states selected were chosen because of their large community college systems and reputation for activity in the areas researched. The institutions were selected because of the locality and reputation for doing innovative activities in the areas of study.

Thirteen institutions from six states were selected by the CCRC research team for the research study. In four of the states, an urban, suburban, and rural institution was selected. In Texas, two institutions (urban and suburban) were selected, and one institution from Washington (suburban) was selected. From 2000 through 2002, the site visits were conducted with the last site visit conducted in summer 2002. Due to the recent completion of the project (with the last case studies conducted in March, May, and June), some transcriptions of site visits were not completed. The data from two of the institutions (New York's urban college and Florida's urban college) was not available; therefore, they were omitted from the study.

From the transcripts and the summaries completed, an inventory was compiled of all the P-16 collaborative activities. The purpose of the inventory was to document distinctive programs or strategies unique to P-16 initiatives (that which involved partnerships between the community colleges and their secondary education counterparts). In compiling the inventory, I looked for innovative programs or initiatives that were unique to only one or a few institutions. With this in mind, I did not include programs such as the federal TRIO programs. I found that all of the 13 community colleges had some type of dual credit program in place. In addition, all but one college (California's rural college) had a Tech Prep program. Although each institution had these programs in place, I highlighted the distinctive characters of the programs in the inventory.

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<sup>1</sup> While many of the institutions had well-established TRIO programs, they were not included in this list of programs. The inventory highlights programs unique to the institutions in the study.



## California

### Suburban Institution

Dual Credit Courses: Dual credit college-level courses are offered at the high school during the late afternoon or evening by master-certified high school teachers. Funding by a grant, the college also has a program that started in fall 2000. The program allows the college to offer dual credit courses on its campus for students from three K-12 districts. The classes mix students from the different schools.

Middle College: The Middle College is a high school that is set up on the college's campus and is targeted at gifted students not doing well in the high school setting (gifted and at risk). The high school draws students from three different school districts, though one school district serves as the fiscal agent and collects the ADA funding generated. The students take high school and college-level classes. While the high school classes count only for high school credit, the college-level classes count for both high school and college credit. The classes are taught by master-certified high school teachers on the college's campus following its course schedule. The high school classes are taught three days a week and the college-level classes are taught on the student's off day.

Teacher Education Program: Administrators at the college are working on the establishment of a 2+2+2 teacher education and preparation program that will identify potential students in high school, offer dual credit courses at the community college, and transfer the students to a four-year university. At the end of the program, students will have a degree and certification in an education-related field.

Career Academies: Within the college exist many 2+2 programs linking already established business, health science, and media arts learning academies in the high schools with learning institutes at the college. The purpose of the academies is to introduce students to specialized technical fields that do not require a four-year degree.

Career Center: A career center is located at an area high school that allows for career counseling by staff at the community college.

Joint Facility: The College is building a facility to share with two local school districts in which the school districts will set up an alternative school during the day hours and the college will use for instruction in the evening. Discussion has also occurred on establishing a joint-use facility on the college's campus.

### Urban Institution

Dual credit programs: The college has many dual credit programs, some of which also lead to articulated enrollment at a four-year institution. The programs are administered through the Center for Education and Technology as high school diploma classes, courses that allow students to complete their high school diploma while earning college credits.

Dual credit courses are also offered through individual departments and programs. The courses are offered on the college campus and are taught by college instructors.

Tech Prep: The college has a Tech Prep program designed to move students out of a high school sequence of courses directly into a community college program, either through a certification or a degree program. The college credit is awarded to students upon graduation from high school. The college is also working on linking high school courses with industry-recognized certifications. A Summer Career Institute is also in place as part of the Tech Prep program. The Institute is an eight-week educational program for students that combines academic instruction at the community college with a six-week paid internship.

Academy of Finance: An Academy of Finance program at one of the local high schools developed as a result of the Tech Prep program. The three-year program includes built-in paid summer internships. Students receive college credit upon submission of the Tech Prep Articulation packet, which includes the Tech Prep application and a signed articulation certification form by the high school instructor.

Mecomtronics Program: The college offers a dual credit mecomtronics program (Mechanics + Computers + Telecommunications + Electronics) funded through a National Science Foundation grant. The program offers students a balance of academic proficiency and technological skills through hands-on projects and team work. As a result of the program, many high schools are developing engineering strands, or career paths, that link to the community college. The development of the program is the result of a large push by local industry representatives due to shortages in the field. The college also collaborates with a local charter school developed to address the shortage of engineers.

Middle college: A Middle college is located on the edge of the college's campus. The school is a continuation high school with a highly non-standard curriculum that includes a contract for each student. As part of the curriculum, students are required to take 5 high school courses, most of which are life skills courses that count for both high school and college credit.

High schools honors program: A high school honors program, taught at the high school, is offered through one of the branch campuses. Students can take the classes towards honors college credit and graduation credit. The college offers the courses due to the lack of funding for honors programs in the K-12 schools.

### Rural Institution

Dual credit programs: The college offers a dual enrollment program with the high schools and expects the program to expand with the completion of a new branch campus, which will allow the college to offer dual credit courses on campus. The college offers dual credit courses in subject areas that the school districts cannot afford to teach, but also

courses that meet the general education requirements (e.g., psychology, sociology, advanced history, and advanced math). The courses are taught by the college faculty. The enrollment fee and tuition is waived for high school students that take dual credit classes.

Dual Admission: The college has a dual admission agreement with the local four-year university that accepts all credits that the student earns towards their lower division requirements. The purpose of the dual admission program is to provide a seamless transfer for student matriculating on to the Bachelor's degree.

Tech Prep: The college does not have a Tech Prep program and was the only institution of the thirteen colleges in the study that did not have a program.

K-16 Consortium: A consortium has been developed with the purpose of forging better relationships among officials at all levels of the education system. The consortium includes representatives from the K-12 schools, local community colleges, and local four-year universities in the California State and University of California systems.

Year Round Youth Services: This program is a collaboration between the college and the federally administered Upward Bound program. Through the program, college staff work with 270 kids in the local high schools through motivational workshops, job coaching, and advising. The students are also provided with part-time jobs (19 hr/wk) funded by the city.

## **Florida**

### Suburban Institution

Dual credit programs: Dual credit courses (both academic and vocational) are offered both on campus and in the local high schools before, during and after high school hours as well as during the summer. Dual credit students are exempt from application, matriculation, and laboratory fees. Tuition and fees (including the application fee) are paid for by the state, while books are paid for by the school district. The state requires certain credentials to teach dual credit courses, which include a master's degree in 18 hours and graduate hours in the discipline being taught. Many high school teachers with master's degrees teach the courses at night at the community college. Students must have a 3.0 GPA to take the courses and must provide entry assessment scores (SAT, ACT or CPTs) in English, reading and mathematics. Students applying must complete the college's admission application and the dual credit application, and must include signatures of the student, his/ her counselor, and his/ her parent/ guardian.

Early Enrollment Program: The Early Enrollment Program is a form of dual enrollment that allows eligible high school seniors to enroll at Valencia in courses that are being taken for personal interest. Students taking Early Enrollment courses do receive high school credit for the courses and are

responsible for paying the application, tuition, and textbook fees. Participation in the early enrollment program is limited to students who have completed a minimum of 6 semesters of full-time enrollment in high school, have a minimum cumulative GPA of 3.0 on a 4.0 scale, and have appropriate assessment scores for math and English courses.

Tech Prep: The Tech Prep program is a cooperative effort of two school districts, the community college, and the National School to Work Center. Although Tech Prep programs are in place, the courses are not widely utilized. Efforts have been made to articulate tech prep credit among different community colleges in an effort to revitalize student interest in the programs. The college's foundation also offers a Tech Prep scholarship to students.

Teacher education partnership: A teacher education partnership has been developed between K-12 teachers, faculty at the community college, and faculty at a local university to create a baccalaureate program in elementary education targeted towards children of school district employees. Through providing student scholarships, the aim is to recruit a specific targeted population into the field of education.

Gear-Up Programs: The College has seven Gear-Up projects, the most of any institution in the country. The programs, ranging from college preparation and recruitment programs to career specific programs, draw elementary and secondary students on campus as well as bring faculty and administrators from the college into the local schools.

Pre-College Program: This program is an after-school program for Latino/a high school students that provides peer support to increase student success and motivation and to prepare for college attendance. The college staff and student volunteers work with community groups and four local high schools for this program.

College Reach Out Program (C.R.O.P.): The College Reach Out Program is composed of three programs aimed at increasing the academic and personal success of disadvantaged youth, beginning in grades 6<sup>th</sup> through 12<sup>th</sup>. The first program is a seven-week summer program for 6<sup>th</sup> to 8<sup>th</sup> grade students that takes place on the college's. The focus is on increasing student awareness of postsecondary education and exploring career options. The second program is a year-long program for 9<sup>th</sup> to 12<sup>th</sup> grade students that takes place on Saturdays on the college's campus. The focus of the program is on academic skills in English, mathematics and reading and on career exploration through presentations by local professionals. The last program is a seven-week summer transition program for recent high school graduates to enhance skills needed for academic success. Students receive a summer scholarship for course fees and books and can earn up to six college credits.

Remediation Reduction Efforts: Although not a specific program, partnerships with the high schools have resulted in college faculty working more with teachers at the schools to reduce the academic remediation needed by postsecondary students. In one example, faculty have trained high school faculty on how to teach a computerized course in math

that also aligns with the college's math standards. Organized efforts have also been made to help high school teachers understand the expectations at differing levels of postsecondary education.

**Career Academies:** The college is in the process of developing career academies in the high schools that align with the college's curriculum. High school teachers are taught in the subject matter by faculty at the college.

**CISCO Academies:** Cisco is the Internet networking program that allows students to receive industry credentials by level. Entry level CISCO dual credit courses are offered at the high school that articulate to the community college.

**Magnet Academy:** The district has developed a magnet academy for high school students from the district that allows them to graduate with both a high school diploma and an Associates of Art degree.

**College Seminars:** While almost every institution has some collaborative program of working with high school counselors to better recruit students, this institution holds counseling seminars that inform them of postsecondary policies and procedures for any Florida institution, not just this community college.

**Liaison Newsletter:** The college publishes a newsletter that is available for all high school counselors in two local counties. The newsletter provides updated information of courses and programs the college's campuses.

### Rural Institution

**Dual Credit Programs:** Dual credit courses are offered by the college at the high school or on the college's campus. Students may take the courses before, during or after school or during the summer. They are taught by college instructors and adjunct teachers hired by the college. Tuition and fees (including the application fee) are paid for by the state, while books are paid for by the school district. The state requires certain credentials to teach dual credit courses, which include a master's degree in 18 hours and graduate hours in the discipline being taught. Some home schooled students come to the campus to take courses during the day and some high school students take classes at night and on weekends. Students must take the admission test (either the college's assessment tests or the SAT) and must have a certain grade point average.

**Tech Prep:** The college offers a Tech Prep program in partnership with four surrounding school districts. Once students completes the sequential Tech Prep courses at their high school, they receive a Tech Prep Completer Certificate that entitles them to earn college credit towards an Associate in Science degree. The credits are held in escrow until the student completes 15 college credits at the college with at least a 2.0 GPA.

**Europe Program:** The Europe program is a federal program targeted towards middle school students that works to prepare the students for the competencies needed for

postsecondary work. The program is run by the school system, but the college is the fiscal agent.

Finance Academy: The high school runs a finance academy, which oversees its own bank. The bank, which is located at the high school, is open during the day and operates like a normal bank. Officials at the college serve on the advisory board to the bank. The bank, which spun-off of the Tech Prep program, has received national recognition.

## **Illinois**

### Suburban Institution

Dual Credit Program: Through the Accelerated College Enrollment (ACE) Grant provided by the state of Illinois, the college offers dual credit classes to students at 24 public high schools and 8 private high schools. The ACE grant covers in-state tuition for eligible high school students to take dual credit courses, but does not cover books or additional course fees. To qualify, a student must have a cumulative grade point average of 2.0 on a 4.0 scale and be concurrently enrolled in high school while taking the course at the college. Dual credit courses are taught both on the college and the high school campuses by community college faculty.

Tech Prep: The college has a Tech Prep program and uses the program to partner local high schools with community-based industries. Also as part of the Tech Prep program, the college is running vocational programs for students with learning disabilities at the high school.

Dual Enrollment: Students in grades 9-12 seeking academic enrichment or high school credit through their local high schools may register for summer courses at the college. The courses are dual enrollment, but not dual credit courses. High school students receive only high school credit for the courses and they are offered on the both the college and high school campuses. More than 8,800 high school students from three local counties have enrolled in this program since its inception in 1993.

Curriculum Partnerships: Faculty at the college have been working with high school teachers on the alignment of math standards in the high school and at the college level.

College Bound Program: The college runs a state-funded college bound program for Latino/a students in the local high schools. The program encourages students to complete high school and make a successful transition to college by providing academic, financial and personal assistance to Latino students. The college is trying to expand the program to African American students

Intergenerational Program: Funded by Ameri Tech, this program pairs high school students with older adults from the college's Older Adult Institute. One of the activities

students and adults participate in is an information technology literacy partnership where the high school students teach the older adults to use technology.

College Bound Middle School Program: The college is working with local middle and high school students to increase confidence and skills in science, math, reading, and technology. The program is a collaborative effort between the college, the area Occupational System, Regional Office of Education and the Workforce Investment Board Youth Council.

Work Based Learning Grant: The college received a work based learning grant from the state board of education to develop business partnerships through the local Chamber of Commerce. Through the partnership, over 25 chambers and approximately 10-12 schools are working collaboratively with Education-to-Careers funding.

### Urban Institution

Dual Credit Programs: The college offers two dual enrollment programs that are directed at vocational and transfer education. One dual credit program allows public school juniors and seniors to take college-level courses that count both towards high school graduation and college credit. High school credit is recorded as an Advanced Placement (AP) course and college credit is applied when the student enrolls at one of the district's colleges or at a four-year institution. You must be a junior or senior public high school student. To qualify, the student must have a 2.5 GPA, a 90% attendance rate, meet the college's admission criteria and have a recommendation from the high school counselor. The second program offers high school juniors and seniors the opportunity to enroll in the college's career programs while still in high school. Some of the courses provide basic industry certification. To be eligible, the student must be dually enrolled at the high school and college, must pass the college's entrance exam, and must be referred by a high school counselor. The programs are housed at all of the urban city campuses, though this college has higher standards for student eligibility. The city public school district pays the cost of tuition, registration/lab fees, books, and provides bus passes to commute to and from the college campus.

Tech Prep: The district offers a college Tech Prep program that provides a sequenced academic and technical curriculum from high school to the college. The college does not have any admission standards for student eligibility, however the student must be dually enrolled in the high school and the college and be referred by the high school counselor.

Curriculum Alignment: The district office is currently working to establish a seamless transition for students from city public schools to the city colleges by creating an aligned curriculum among the schools and the colleges. The goal is to reduce the number of students who graduate from the public schools with remedial needs. As part of this initiative, the college is reaching out to public, private, and alternative high schools in the downtown area.

Basic Skills Preparation: The college is working with the city public school system to raise the skill levels of teachers due to a high rate of public school teachers who have not pass a basic skills assessment. In response, the college and the public schools have established a partnership to remediate teachers who scored low on this test. These teachers have two years to get certified.

College Outreach Activities: The college participates in outreach programs with the K-12 counselors, one in which includes attending report card pickup day at high schools. When parents and students visit the high schools on those days, they have the opportunity to meet with the college's representatives. In addition, the college's Student Affairs Office organizes "Super Saturday" tutorials for juniors and seniors from the city public high schools to assist them with their academic progress in the city's Police and Fire Training Academy. The college also sponsored a leadership conference for over 85 public school high school students.

### Rural Institution

Dual Credit Programs: The college has dual credit agreements with the eleven high schools that participate in the Tech Prep consortium, demonstrating that the relationship of the high schools and the college regarding the Tech Prep program has resulted in the expansion of other opportunities. Dual credit courses began as a pilot study with the eleven high schools in which a college-level calculus course was offered. The dual credit/enrollment program exists through three venues:

- 1) Dual credit/enrollment classes offered at the high schools and delivered during the regular school day or at the college or at other off-campus sites during the day and the evening.
- 2) Tech Prep articulated courses, which are taught at the high school.
- 3) Advanced placement courses, which are taught at the high school but testing is administered by the college.

Tech Prep: The college has an extensive Tech Prep program made up of eleven local high schools organized through the local consortium. The state of Illinois is unique in that federal Tech Prep funds are matched by state funds. The federal Tech Prep funding is more restrictive and can only be used with the high school curriculum. The state grant, however, allows the college and high schools to recruit and market the programs in the middle schools. The Tech Prep consortium is taking advantage of both opportunities. A local high school has developed a recruitment program where high school teachers market the Tech Prep programs to eighth grade students and even help interested students set up their Individual Curriculum Programs (ICP) plans to include enrollment in Tech Prep courses. For high school teachers and administrators, practicums have been set up that allow high school teachers, counselors and even principals spend a week job shadowing in a local industry.

P-16 Alliance: The college is participating in a P-16 alliance made up of representatives from the local four-year university, K-12 school representatives, the Illinois Education



Association, and the college. The mission of the alliance is to promote learning initiatives in the southern belt of the state with the goal to improve teacher preparation and professional development. Administrators at the community college are in the beginning stages of developing a program where students can obtain an associates degree towards a teaching certificate, which would require not only a capstone experience but also require passage of the Basic Skills examination. Participants in the P-16 alliance also mentioned that there is some work occurring on how to better align the curriculum between grade levels.

## **New York**

### Suburban Institution

College in the High School Program: Dual credit courses are taught in the high school by high school teachers, however, the teachers must follow the college's outline and use the college's textbook. The Director of K-12 Partnerships holds an orientation reception for the teachers where distinctions are made clear on what is required for the college credit course. Some of the classes are mixed with advanced placement students, but in those cases additional work that is required for the college credit. The state subsidizes the tuition, which is normally \$98 a semester, costs the student only \$25 (when taken in the high school).

Early Admit Program: The college has an early admit program (a dual credit program) with students in their senior year of high school that are completing both their high school requirements and college credits. The courses are taken on campus and approximately 20-25 students participate each year in the early admit program. The dual credit program differs from the College in the High School Program in that dual credit courses are offered on campus. The program is especially appealing to small high schools in the region that do not have many honors or accelerated classes to offer.

Early Enrollment Program: Through the early enrollment program, high school students can take their senior year on campus as enrolled college students and transfer the credit back for high school requirements. Approximately 90 percent of the students who take credit courses at the college do not enroll at the college. Accordingly, the early enrollment program is an enrollment strategy to recruit prospective dual credit students who are willing to sacrifice the senior year of high school to begin college level work early.

Tech Prep: The Tech Prep program enrolls about 50 students and involves the state's regional vocational districts. However, unlike the College in the High School program, little interest has been shown in increasing the Tech Prep program.

Accelerated Learning Through Distance Education: Through a direct fiber optic connection, the college is able to offer dual credit courses to high school students. Another venue of offering the courses is through an interactive television. Partnering through distance education has helped equip the high schools better with technology. The

college equips the computer laboratory in high schools, by the connectivity to the high schools is funded through a corporate grant. Professional development programs for teachers are also offered through distance education.

**Character Education Program:** The state passed new legislation that mandates character education training for all teachers in the state. As a result, the college established an Academy of Character Education to provide a clearinghouse for character education programs for local school districts.

**Curriculum Alignment:** The college is working with high school teachers to better align the high school curriculum with college admission standards. As part of this effort, college officials are conducting testing in the high schools to identify students with remedial needs so that their skills can be sharpened before they enter a postsecondary institution. In addition, various faculty members serve on high school curriculum advisory committees.

**Technology Training:** A program established at the college awards funding for high school teachers to learn technology. Through this program, high schools and colleges receive money for high school teachers to attend local two and four-year colleges during the summer to learn technology in an attempt to return to their high schools and share what they learned.

### Rural Institution

**Advanced Studies Program:** Advanced studies is the overarching dual credit program that offers courses for accelerated high schools students at the high school campuses. The program, which began in 1990 with 300 students, now encompasses 43 schools in 10 districts and enrolls over 1,700 students (1999-2000 data). Due to the difficulty in providing advanced placement classes at these rural schools, the advanced studies classes are particularly appealing. The curriculum is focused on general education and dual credit is awarded.

**Accelerated Learning Through Distance Education:** The college offers fiber optic classroom connectivity with the local high schools. Advanced studies and advanced placement classes are offered through the utilization of interactive television and fiber optic cable lines.

**On-Campus Dual Enrollment Classes:** The college recently established a program whereas high school students can take classes on the college's main and extension campuses. The high school students take classes in dedicated classrooms, they are not mixed in college students. This is primarily for funding reasons. By placing the students together, they may be labeled a "targeted population," and the classes are discounted by SUNY. The students therefore pay only 40 percent of the tuition (about \$40/credit). These classes are potentially valuable to the college because there are no expenses—the

high schools provide the teachers, but the college gets the FTE from SUNY and charge-backs from the counties.

Tech-Prep: The college enrolls approximately 20-25 Tech-Prep students, but is in the process of restarting the Tech-Prep program. In renovating the program, the Tech-Prep director is planning to focus the program on curriculum development. To this end, they have established four areas (health careers, information technology, business, and engineering) that will each receive a year of attention in the next four consecutive years. Down the road, however they plans to link this with the Advanced Studies program and through this linkage to develop programs in popular areas such as Biotechnology and EMT training.

First Year Experience: This course is offered at the high school for advanced placement credit. The course, which is taught by high school instructors, teaches the students some of the things they might encounter as a first year college student. Part of the curriculum addresses time and stress management, financial aid, and scholarships. Some schools actually take students on field trips to different colleges, career colleges, and four-year colleges. Discussion has also occurred about setting up a community college office in the high schools (with representation from the other neighboring community colleges) where remedial assessments can be done prior to the student enrolling in a postsecondary institution.

High School Summer Program: The college has developed a new pilot program that will be held over the next three summers and will allow students in their junior year of high school to take two integrated career and academic courses and complete a Capstone project. The Institute requires five weeks of individual preparation followed by five weeks of residency at the college. Students who participate in the program will receive six college credits.

Professional Development Program for Teachers: The college has a U.S. Department of Education funded program for math and science instruction techniques for elementary and middle school teachers. Through the grant, a summer institute is run every year that brings about fifty teachers on campus to learn new science and math techniques from the areas best science and math faculty.

## **Texas**

### Suburban Institution

Dual Credit: The dual credit allows academically gifted high school juniors and seniors to take courses that count for both high school and college level credit. Juniors may take one college course per semester, while seniors are permitted to take two courses per semester. High school counselors decide which college courses are accepted and whether or not the courses may be taken for dual credit. The courses are taught by on the college campus by

college instructors or high school instructors who are already hired as adjunct faculty by the college. The college makes a dedicated effort to assure that students have a clear separation of the difference between high school and college level work and expectations.

**Dual Admissions:** The community college has dual admission agreements with other state public institutions where students are concurrently admitted to both institutions if they meet the entrance requirements for the university.

**Tech Prep:** The Tech Prep program offers students a chance to earn college credits while in high school, however, students must petition for the Tech Prep credits after leaving high school. In 2001, Tech Prep Consortium received funding from the Texas Higher Education Coordinating Board to implement a student tracking and registration software. Through the software, college advisors can verify tech prep programs, courses, and student participation. Graduating seniors who have participated in the tech prep program will be issued an identification card that will contain information regarding tech prep courses taken during high school, college course equivalents and eligible tech prep credits at the college.

**CISCO Academies:** Cisco is the internet networking program that allows students to receive industry credentials by level. Entry level credentials are usually taught at the high school, while both entry and advanced levels are taught by community colleges. This community college has been designated as one of only six colleges to become a Cisco Certified Training Center in the United States, serving the eight-state Southwest region.

**College Preparation Program:** This summer program is a five-week, boot camp-like college readiness program in math for local high school students run by faculty at the community college. While the vision is to expand the curriculum eventually to include reading, writing, and science, the college is piloting the program in math. The objective of the program is to decrease remedial education in postsecondary education. The program is available to college bound students, and not only those intending to enroll in the community college.

**Youth Leadership Academy:** A Youth Leadership Academy is co-sponsored by the community college and the county League of United Latin-American Citizens. The purpose of the program is to cultivate leadership skills in 9<sup>th</sup> through 12<sup>th</sup> graders.

**Parent Leadership Program:** The college has a new program developed in partnership between the college, a local high school, and a regional corporation. The program is conducted exclusively in Spanish and is targeted towards Spanish speaking-only parents to help prepare them for their children's college education. Topics include areas such as financial aid, study skills, and assessment tests.

### Urban Institution

Dual Credit Program: Dual credit courses are offered to public, private, charter school, and home school students. The courses are offered at the college and at the high school and are taught by college faculty or high school instructors who meet hiring criteria to teach college-level classes. School districts interested in implementing the college's dual credit program must follow certain guidelines. The college's web site outlines specific policies for the program, including a policy over viewing the sale of textbooks for the dual credit courses, a policy for support services for dual credit students, and a policy for who can teach the courses. Tuition/fees are waived for juniors and seniors enrolled in public, private and charter schools, as well as home-schooled students. Additionally, international students are eligible to take the courses upon compliance of admission standards set by the college's International Student Office. Students are eligible to take two courses a semester.

Extension Centers: The college operates evening centers located in the area high schools where evening credit classes are offered to the public. Due to the location, many high school students take dual credit classes at the extension centers.

Tech Prep: College-level Tech Prep courses are taught in the high school. Students receive both high school and college credit, though the college credit is received in escrow. The Tech Prep Consortium has developed mini-grants available to institutions to strengthen or form new articulation agreements, develop or improve Tech-Prep courses, provide professional development to teachers, administrators, and counselors to improve local Tech-Prep programs, or develop effective systems for communication, evaluation, and reporting the Tech Prep program.

## **Washington**

### Suburban Institution

Running Start: A state mandated dual credit and enrollment program that allows high school students in their sophomore, junior, and senior years to take college-level classes on the community college campuses. The courses are taught by faculty at the college. Tuition and fees are paid for by the state, however students must pay for books, lab fees, and transportation costs. There are also certain eligibility requirements: the student must test at the college level on the COMPASS test in English, Math, and Reading. The state funding for the program follows the student; the high school and the community college are not doubly funded. Approximately 500 students participate in Running Start each quarter.

High School Enrichment: The high school enrichment program is set up for students who do not qualify for Running Start. With the enrichment program, high school students are invited to take college courses, mainly in the summer, for dual credit. To do so, students must be able to read at a college level. Students in the Enrichment Program must pay full-tuition for the courses.

College in the High School: Noting that many high school students are unable to leave the high school campus to participate in post-secondary classes, two and four year colleges in Washington have developed College in the High School programs, which provide college-level courses taught by college faculty in high school locations to 11<sup>th</sup> and 12<sup>th</sup> grade students.

Tech Prep: The Tech Prep program serves 9 school districts that include 30 schools. In 1998, the state of Washington started a process called direct credit that gives direct community college credit for the Tech Prep classes. The student can directly transfer the credit to the community college or transfer up to fifteen credits to the four-year university. With this new provision, the director of Tech Prep received a state grant to educate parents about Tech Prep and vocational careers. In doing so, the director has traveled the state giving presentations at Parent and Teacher Association (PTA) meetings marketing the program to parents who want their children to continue onto a four-year institution. The college has also integrated articulated CISCO courses into the Tech Prep program.

Reengagement program: A re-engagement program is offered for students between 16 and 21 who have not received a high school diploma. Through the program, students can receive their high school diploma through taking three classes a quarter at the community college. The program also incorporates a career exploration component. The school district is the fiscal agent and receives the average daily attendance funding for the student, which the school would not have otherwise. However, the classes are taught by part-time faculty from the college, mostly from the guidance and counseling fields. Although an institutional initiative on the part of this community college, other community colleges in the state offer similar programs.

Professional Development Program: The college runs a summer professional development institute that provides professional development and training for high school teachers and community and technical college faculty. Administrators at the college have developed instructional modules and lessons plans based on the skills standards required in high school to help community and technical college faculty better align the curriculum with high school faculty.

High Tech Learning Center: A consortium of school districts collaborated to develop advanced technological instruction, which are also designed to articulate with programs at the community and technical colleges.