Selected Outcomes related to Tech Prep Implementation by Illinois Consortia
2002 - 2006

University of Illinois at Urbana-Champaign
Selected Outcomes Related to Tech Prep Implementation by Illinois Consortia

2002 – 2006

Office of Community College Research and Leadership with support from the Illinois Community College Board

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Acknowledgements

This report is possible because of the work of many people associated with Tech Prep in Illinois. First, we commend Illinois’ 40 consortia for their efforts to improve Tech Prep data reporting. This ongoing task is formidable, given the many challenges they face in identifying and tracking Tech Prep students at all educational levels. We are also grateful to the Illinois Community College Board for entrusting us with the important task of compiling and summarizing the data that represent Tech Prep implementation in Illinois.

We are especially grateful to Ivanete M. Araldi Maciente, doctoral student and research associate at OC-CRL, for her careful work in entering this year’s data and in asking the right questions about sometimes confounding findings.

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Suggested citation:

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The Illinois Community College Board partnered with the Office of Community College Research and Leadership in 1999 to develop the Tech Prep Evaluation System (TPES), a systematic, statewide process composed of an onsite review and improvement process, a local proposal and budget development process linked to outcomes assessment and continuous improvement, annual final programmatic reports, the monitoring of Tech Prep enrollments and outcomes, and a Web site. This report is a summary of key aspects of Tech Prep in Illinois over the five-year period of 2002 – 2006 during which all Tech Prep consortia provided annual data based on federal legislative requirements and state-determined essential elements of successful programs.

During FY07, the OCCRL has been involved in an effort to examine data collection and tracking practices among a select group of Illinois consortia. In addition, prior to entering the data reported by each consortium for this report, some consortia were contacted to discuss how the data were determined and the issues that impact accuracy. Some of the findings of that research are interjected along with outcomes to help consortium stakeholders understand the outcomes, their complexity, and the importance of obtaining accurate data.

Annual Tech Prep reports of the local Illinois consortia are posted on the OCCRL Web site at [http://occrl.ed.uiuc.edu/Projects/tech_prep/evaluation.asp](http://occrl.ed.uiuc.edu/Projects/tech_prep/evaluation.asp). By distributing these reports via the Web, local educators can monitor student participation and program activities within their own consortium over time, and they can compare their results with aggregate results for the state.
The Tech Prep Education Act, Title II of the Carl D. Perkins Vocational and Technical Education Act (Perkins) was originally authorized in 1984. It was reauthorized in July 2006 as the Carl D. Perkins Career and Technical Education Improvement Act of 2006. Several changes are included in the new Act; among them is the option for states to consolidate all or part of Title II Tech Prep funds with the Title I Basic State Grant. Officials in Illinois are currently collecting opinions and perspectives from the field on Tech Prep and the Perkins Act in general.

As implied in the full title of the new act, career and technical education, including Tech Prep, is expected to demonstrate improvement in programs and processes. States that choose to keep separate funding for Tech Prep face increased accountability measures outlined in the act. Illinois consortia currently report many of the performance indicators required, such as the numbers of secondary and postsecondary students who enroll in Tech Prep, complete courses that earn postsecondary credit, and enroll in remedial courses upon entering postsecondary education. Those results can be found in this report.
Consistent with federal law, Illinois implements Tech Prep programs through consortium arrangements typically involving a community college; multiple secondary schools; business, industry, and labor partners; and sometimes community groups. Illinois community college districts are the primary organizing structure for Tech Prep across the state. In total, 40 local Tech Prep consortia currently operate in Illinois.

Illinois Tech Prep programs include career interest areas in the fields of:

- Agriculture
- Arts and Communication
- Business and Administrative Services
- Health Care
- Human and Family Services, and
- Industrial and Engineering Technology

During the spring of 2007, the Illinois Community College Board and the Illinois State Board of Education are conducting statewide meetings to discuss five critical areas related to the Perkins legislation: programs of study, instructional support, stakeholder collaboration, state support in providing technical assistance, and developing and adopting approaches to measuring technical skill attainment. The information discussed among stakeholders throughout the state will affect the course of Perkins’ implementation in the coming years.
The median number of high school Tech Prep programs fluctuated from 16 to 19 between FY02 and FY06.

The median number of Tech Prep programs offered by local consortia over the five-year period of FY02 – FY06 ranged from a high of 19 programs per consortium in FY03 to a low in FY06 where a typical consortium offered an aggregate of 16 Tech Prep programs at the high school level, the same median as FY05. These results are based on at least 93% of the consortia reporting data for all five fiscal years.
The median number of high school students who participated in Tech Prep programs increased from FY02 to FY03, declined in FY04, and increased in both FY05 and FY06.

The total number of Tech Prep high school students in Illinois’ 40 consortia reached 87,460 in FY06. Reported as a median, there were about 1,300 Tech Prep students enrolled and 428 graduates per consortium in FY06³.
The mean percentage of Tech Prep students who earned articulated and dual credits ranged from 66% reported in FY02 and FY05 to 91% reported in FY03.

The opportunity to earn college credit in high school has offered Tech Prep students the ability to accelerate college enrollment. There was an early and dramatic increase in the percentage of students earning this type of credit, 25% between FY02 and FY03, before the percentage began to decline in FY04 to 66% in FY05. In FY06, 73% of all first-year college Tech Prep students had earned college credit in high school, 31% of them through credits in escrow and 51% through dual credit.

### Mean percentage of students entering community college Tech Prep programs who earned articulated and dual credits while enrolled in high school

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent of Students</th>
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<tr>
<td>FY02</td>
<td>66</td>
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<td>FY03</td>
<td>91</td>
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<td>80</td>
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<td>FY05</td>
<td>66</td>
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<tr>
<td>FY06</td>
<td>73</td>
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Percent of students entering community college Tech Prep programs who earned articulated and dual credits while enrolled in high school.
First Year College Enrollment

The average number of Tech Prep students who matriculated to the community college in a Tech Prep program has increased each year, from 67 in FY02 to 147 in FY06.

The average number of Tech Prep students per consortium has shown a dramatic increase over the five years of this report. Based on data checking with the consortia and investigation of ways in which Tech Prep students are identified, some of the increase can be attributed to improvement in the ways students are identified at the community college. Still, it is believed there are more students enrolled in Tech Prep programs of study at community colleges than are identified currently. Two reasons are commonly cited as contributing to this data gap: 1) many colleges do not have access to student identification information from the secondary level to match with college enrollment, and 2) students who identify themselves as “college transfer” when completing the college enrollment forms are not captured in the postsecondary system as Tech Prep students even when they are enrolled in Tech Prep programs of study.
The mean percentage of first-year college Tech Prep students who took at least one remedial course was relatively stable from FY02 to FY06.

The mean percentage of first-year community college students who were enrolled in at least one remedial course increased slightly over the five-year period, from 37% in FY02 to 39% in FY06 based on at least 75% consortia reporting for all five years. It is important to note that many postsecondary Tech Prep programs do not allow students who need remediation to formally enroll in the program, so secondary Tech Prep students needing remediation receive it before enrolling in a postsecondary Tech Prep program. This and other factors may account in part for the disparity between the five-year (FY02 – FY06) average rate of 39.8% and the 64.5% remediation rate reported in a widely cited national study of first-year community college students. Even so, the lower rate of remediation for postsecondary Tech Prep students is an important finding.
The mean enrollment of postsecondary Tech Prep students who are in their second year in a Tech Prep program of study showed steady growth before stabilizing in FY04 through FY06.

The mean number of second-year Tech Prep college students showed an increase from 48 in FY02 to 60 in FY03 before stabilizing from FY04 to FY06. Because of various problems associated with identifying Tech Prep students at the postsecondary level, this number might under-represent actual enrollment. In some consortia efforts are underway to improve student identification, including assigning students a college ID number upon enrollment in or successful completion of a dual credit course at the secondary level. This effort is designed to aid identification of Tech Prep students at the postsecondary level and help monitor their persistence and degree completion.
Curriculum Reform: Existence & Growth

Four curriculum reform efforts were prevalent in high schools in FY06. Three efforts were found to show the most growth at both levels between FY02 and FY06.

Four curriculum reform efforts were identified by most consortia (93% – 100%) as evident in high schools within the consortia:

- Supplementing existing vocational-technical courses with academic content (100%)
- Coordinating academic and vocational-technical courses by sequencing and reinforcing related content, often through block scheduling (93%)
- Supplementing existing academic courses with vocational-technical content (93%)
- Adding applied curriculum to the existing curriculum (93%)

Three reforms showed the highest rate of growth at the high school and the community college levels between FY02 and FY06:

- Replacing parts of the existing curriculum with applied academic courses
- Coordinating academic and vocational-technical courses by sequencing and reinforcing related content, often through block scheduling
- Providing academies, combining courses from vocational-technical areas and math, science, communication, and other academic areas
High school faculty dominated the attendance in professional development activities related to Tech Prep over the five-year period.

After a decline in attendance among all four groups from FY02 to FY03, the median number of high school administrators’ and college faculty and administrators’ attendance remained stable through FY06. Interestingly, high school faculty attendance, consistently the largest population, increased from a median of 163 in FY03 to a high of 209 in FY05 before declining to a five-year low of 160 in FY06.
High school personnel consistently accounted for about 75% of the participants in Tech Prep professional development activities.

Participation in professional development by institution type (high school, community college, business and industry) remained relatively stable from FY02 to FY06. The overwhelming majority of participants (a five-year average of 75%) were high school personnel including teachers, counselors, and administrators (listed in descending order). Community college faculty, counselors, and administrators accounted for an average of 14% over the five-year period, starting at 16% in FY02, dipping slightly during FY03 – FY05, before rebounding to 16% in FY06. Business and industry partners accounted for an average percentage of 11% over the five-year period, but increased from a low of 8% in FY02 to a high of 13% in both FY05 and FY06.
Barriers that Challenge Implementation

Each year, local consortium directors are asked to indicate the level of impact of 20 barriers on implementation of Tech Prep using a scale of 1 (none) to 6 (very major). In FY06, 11 barriers were identified by at least 22% of consortium directors as having a major or very major impact. Those with an asterisk were also identified in recent years as major or very major barriers. The first and fourth barriers listed below were newly identified in FY06.

1. Diversion of resources to comply with NCLB mandates (27%)
2. *Lack of acceptance that Tech Prep programs are rigorous academic programs (27%, up from 23% in FY05)
3. *Lack of financial resources for Tech Prep (24%)
4. Problems with data sharing between secondary and postsecondary levels (24%)
5. *Stereotype about Tech Prep as appropriate for less academically and socially proficient students (24%, down from 28% in FY05)
6. *Lack of qualified certified instructors to fill technical teaching jobs in high schools (22%, down from 28% in FY05)
7. *Lack of consistency in identifying Tech Prep students (22%)
8. Lack of substitute teachers to fill in for regular teachers during professional development activities (22%)
9. Little time designated for joint planning by academic and vocational or secondary and postsecondary faculty (22%)
10. Lack of authority of local personnel to make changes needed to implement Tech Prep (22%)
11. *Lack of understanding of the Tech Prep concept by local educators (22%)
Looking Forward

The Tech Prep philosophy as conceived by Dale Parnell in *The Neglected Majority* (1985) and subsequently legislated in the 1990 Perkins Act was an innovative educational reform. If practiced in the form of systemic educational reform as it was conceived, it offers the groundwork for seamless and rigorous programs of study that connect secondary to postsecondary education in career pathways.

With the passage of Perkins IV and the allowance of states to determine whether or not to merge Title II Tech Prep funds with the Title I Basic State Grant, Illinois, like many states, faces a difficult decision. During the spring of 2007, Illinois Tech Prep leaders are gathering to determine the best strategy for Illinois to pursue. Future career and technical education (CTE), regardless of name or funding structure, is likely to look much like a model Tech Prep program where academic and career teachers collaborate to create rigorous, relevant, and contextual learning environments designed to capture students’ interests, shape their career development, and facilitate their transition from high school to college and beyond. Perkins IV presents a challenge and an opportunity to improve CTE and Tech Prep for Illinois students. As we look forward to FY08, Illinois Tech Prep leaders are preparing for that challenge.
The original data used in this report were derived from information on the Tech Prep Final Programmatic Report, submitted by Illinois consortia each year to the ICCB and forwarded to OCCRL. Unless otherwise noted, outcomes reported in this document reflect data from 39 of the 40 consortia in Illinois and are reported with the consortium level as the unit of analysis. Because of its size and unique consortium arrangement, wherein all high schools associated with Chicago Public Schools and the seven City Colleges of Chicago comprise one consortium, Chicago’s consortium data are not included in most calculations because they would skew the consortium-level means and medians and distort understanding of a typical consortium in the state of Illinois.

Illinois’ definition of a Tech Prep program is a program specific core of academic and technical courses taught during the two years of high school preceding graduation at a minimum, and at least two years of community college education in a non-duplicative course of study leading to an associate degree or a two-year certificate in a specific career field or two years of an apprenticeship following high school (http://www.iccb.org/TechPrep/pdf/definitions.pdf).

This statistic excludes the Chicago consortium due to its large size, which would skew the measures of central tendency.

Two recent research studies support this outcome of Tech Prep articulated and dual credit courses. They include:


5This percentage and the resultant mean is computed from the population of identified first-year postsecondary students, a population that is difficult to identify and commonly believed to under-represent the actual number of students enrolled in Tech Prep programs; these factors could subsequently misrepresent the percentage of Tech Prep students enrolled in remedial education.


7This curriculum reform showed the highest increase compared to last year at both the high school and community college levels.
This publication was prepared pursuant to a grant with the Illinois Community College Board (ICCB), funded through the Carl D. Perkins Vocational and Technical Act of 1998.

Funding for this report was awarded by the ICCB and was conducted by staff at OCCRL. Conclusions or suggestions based on the data are the result of professional judgment and do not necessarily represent official position or policy of the ICCB or the University of Illinois.

We appreciate receiving feedback on the quality and utility of reports and materials we produce. The complete annual reports for the years 1999 through 2006 can be found online (http://occrl.ed.uiuc.edu/Projects/tech_prep/annual_report.asp). If you have comments or suggestions for this or other OCCRL products, we would appreciate hearing from you. Please direct your comments to:

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