This is the seventh in a series of reports by the Stark Education Partnership on the growth of high school based dual credit courses (HSBDC) in Stark County, Ohio. Prior studies – All Students Ready, Growing Dual Credit, Advancing College Opportunity, Growth & Impact, Reaching for 80%, and Return on Investment – may be seen at www.edpartner.org/publications or through the U.S. Department of Education’s Education Resources Information System (ERIC) at http://www.eric.ed.gov/.
Table of Contents

Acknowledgements ........................................................................................................ 4
Definitions ...................................................................................................................... 5
Executive Summary ........................................................................................................ 7

I. Stark County: Local Partnerships, Local Growth ............................................. 9

II. Dual Credit ............................................................................................................... 11
   High School Based Dual Credit (HSBDC) ............................................................ 11
   College Based Credit ............................................................................................... 12

III. Additional Post Secondary Opportunities ...................................................... 13
   Canton Early College High School (CECHS) ....................................................... 13
   Advanced Placement Courses (AP) ........................................................................ 14
   Career Technical Courses: Articulation Agreements ......................................... 14

IV. Outcomes of Stark County’s Post Secondary Opportunities ........................ 15
   College Access ......................................................................................................... 16
   Affordability ............................................................................................................. 16
   Persistence .................................................................................................................. 17
   Expanded Pipeline: A New Look at Attainment ............................................... 18

V. Conclusion: Local Partnerships, Local Growth .................................................. 19
Acknowledgements

The Stark Education Partnership would like to acknowledge the following individuals and organizations for their assistance in supplying information or data for this report.

- Mel Lioi, former Director, Stark Portage Area Computer Consortium and Assistant Superintendent, Stark County Educational Service Center
- Stark County’s High School Dual Credit Teachers
- Dennis Trenger, Director of Outreach, and Patricia Cotter, Administrative Assistant, Stark State College
- Dack Warner, Data Base Specialist, Stark Portage Area Computer Consortium

- Mike Bayer, Math Consultant, Stark County Educational Service Center
- Ken Brunner, Principal, Canton Early College High School, Canton City Schools
- The College Board
- Fred Dawson, Ph.D., Chief Information Officer, Canton City Schools
Definitions

General

• **Post Secondary Opportunities (PSOs)** are initiatives that allow students to take classes to earn college credit (dual enrollment) while in high school or claim college credit (accelerated learning) upon future admission to a college or university.

• **Memoranda of Understanding (MOUs)** are separate written agreements between school districts and institutions of higher education governing policies and costs for students taking college courses while in high school.

Dual Enrollment Programs

• **High School Based Dual Credit (HSBDC)** is a course offered on a high school campus through a collaborative agreement between an institution of higher education and a school district (MOU). A student may earn both high school and college credit for the course taught by a high school teacher who qualifies as a college adjunct.
• Canton’s Early College High School (CECHS) is where students have the opportunity to earn both a high school diploma and an Associate Degree within four years.

• Ohio’s traditional Post Secondary Enrollment Options (PSEO) program allows students to gain college or dual credit by taking a course primarily on a college campus and is outlined in legislation.

• College Based Credit (CBC) is a course taught on a college campus that students take under a collaborative agreement (MOU) between an institution of higher education and a school district. CBC may also result in high school credit.

Accelerated Learning Opportunities

• Career Technical Education/Tech Prep Programs (CTE) provides opportunities for students to receive college credit for courses after enrolling in a college or university having an articulation agreement in place with a K-12 district. CTE can also be HSBDC.

• Advanced Placement (AP) is a course where passing a standardized test at a score of 3 or higher may result in college credit at many colleges and universities upon admission.
Local Partnerships, Local Growth

Executive Summary

Post secondary opportunities (PSOs) for high school students continued to grow in Stark County during the 2012-13 academic year. School districts increased their focus on developing a college-going culture through Advanced Placement and Career Technical courses and by local partnerships with higher education that expanded dual credit offerings.

- Enrollments in high school based dual credit (HSBDC) courses reached an all-time high of 3,335 for an estimated 1,500 students.

- Another 560 students accounted for 1,120 enrollments in college based dual credit (CBDC) courses under partnership (MOU) agreements between districts and colleges.

- The number of Advanced Placement (AP) students again surpassed the 2,000 mark as 2,176 students qualified for an estimated 3,535 three-hour college course equivalents by scoring 3+ on AP Tests.

- One thousand four hundred and sixty-five students were enrolled in college-tagged Career Technical/ Tech Prep courses with the potential to claim credit for nearly 2,000 three hour college courses.

- The fifth graduating class of Canton Early College High School brought to 144 out of 256 the number of students who have also earned Associate Degrees. This 56% success rate is more than double the national average of 23% for early colleges.
Stark County’s PSOs have produced the following specific outcomes:

- A duplicated count of 5,956 students accounted for 11,060 enrollments in three-hour college course equivalents with a potential tuition savings between $4,988,060 at a two-year public and $24,767,280 at a four year private college or university. Textbook savings would amount to another $752,080.

- The direct college-going rate of HSBDC students is 84.2%, exceeding Stark County’s direct rate of 63%, the state at 62.7% and the national average of 63.3% for all students. This rate also betters Stark’s college-going rate of 73% within two years of graduation.

- Stark County at 54.9% and the City of Canton at 57.2% have a greater percentage of young adults in the college education pipeline than Ohio at 53.8% or the nation at 54.7%.
Stark County: Local Partnerships, Local Growth

“The success and sustainability of Dual Enrollment programs rests on the strength of the local district-college partnership” – SRI International¹

Fewer than half the students graduating from high school in Stark County went to college in 2001. While poverty and other circumstances often played a role, it didn’t seem to matter where one lived in the county in those days, or how much money their families had. The reality was that too few students were going on, even in the suburbs. The education pipeline narrowed right after high school.

In 2005, the Canton City Schools (CCS) with Stark State College (SSC), the Canton Professional Educators Association (CPEA) and the Stark Education Partnership (SEP) went to work on this pipeline. With funding from the Bill and Melinda Gates Foundation through KnowledgeWorks and the state of Ohio, these partners established Canton Early College High School (CECHS) to directly confront not only the issues of college access and affordability for the county’s most underrepresented students, but also college completion.

The following year, SEP and SSC joined with the Stark County Educational Service Center (SCESC) in launching a pilot program offering high school based dual credit (HSBDC) for 65 students. Over the next two years, HSBDC continued to grow with support from Ohio House Bills 115 and 119 (127th General Assembly) and through Early Adopters Grants.

¹ See: Dual Enrollment: Lessons Learned on School Level Implementation at http://www2.ed.gov/programs/slcp/finaldual.pdf
under the governor’s Seniors to Sophomores program. By the end of 2008-9 academic year, an estimated 1,294 Stark County students had earned nearly 4,000 hours of college credit. Stark County was well on its way to meet the intent of the Ohio State Legislature as expressed in HB 115 “to develop scalable and high quality models to promote the expansion of dual enrollment ... to provide access for students who have not had the opportunity through PSEO or other programs to gain college credit.”

In 2007 the SCESC, representing all 17 schools districts and six local colleges and universities, formed the first local Memorandum of Understanding (MOU) on dual credit. This agreement, in accordance with HB 115, set the framework for further local partnership agreements. The MOUs are reviewed annually and continue to this day.

The result has been phenomenal and sustained growth, not only in HSBDC but in other post secondary opportunities for Stark County students. The education pipeline has widened considerably after high school. In scarcely a decade, Stark County has seen its direct college-going rate increase to 63%, effectively matching the state average of 62.7% and the national average of 63.3%. The county’s “within two-year” college-going rate is even more dramatic at 73%.

This is the seventh annual report by the Stark Education Partnership on dual enrollment and other post secondary opportunities (PSOs) for the county’s high school students.
Dual Credit

Memoranda of Understanding (MOUs) between school districts and institutions of higher education have replaced the state’s traditional Post Secondary Enrollment Option (PSEO) program for dual credit in Stark County. These local partnerships increase services while reducing costs. The Stark County Educational Service Center (SCESC) conducts a yearly process to review and modify existing MOUs. MOUs govern both courses taught at high schools and on college campuses.

High School Based Dual Credit (HSBDC)

High School Based Dual Credit (HSBDC) courses are taught either by qualified high school teacher adjuncts, or on-line. HSBDC began with two teachers, 65 students and two courses in a pilot funded by the Stark Education Partnership (SEP) in the summer of 2006. Prior to this pilot, the only way for a Stark County student to earn college, or both college and high school, credit was to attend a class on a college campus through Ohio’s PSEO program.

During the 2012-13 academic year:

- All districts executed Memoranda of Understanding with higher education partners.
- All Stark County high schools offered HSBDC. Districts offered a total of 238 sections of dual credit courses, an increase over the 210 sections offered in 2011-12.
• Course enrollment was 3,335 for an estimated 1,500 students.

• Students successfully earned a “C” or higher in 3,175 or 95% of all enrollments.

• These enrollments translated to 10,524 credit hours or 3,508 three-hour college courses, or course equivalents, an increase over 8,343 credit hours or 2,781 three-hour college courses in 2011-12.

• Sixty-four percent of all dual credit sections were in the STEM (Science, Technology, Engineering and Math) disciplines.

**College Based Credit**

College Based Dual Credit (CBDC) is similar to conventional PSEO in that high school students enroll in a college-level course taught at a college or university campus by a professor.

In 2012-13, the largest CBDC enrollment was at Stark State College with 256 students. An additional 294 students took courses at Akron, Kent, Malone and Walsh Universities, either under conventional PSEO or MOU arrangements bringing the total CBDC enrollment to 560. It is estimated that each student earned the equivalent of six college hours.³

³ The six hour estimate for credit earned on college campuses is not inconsistent with findings by KnowledgeWorks and WICHE (2007) *The Promise of Dual Enrollment: Assessing Ohio’s Early College Access Policy* that found half of students taking more than six hours.
Additional Post Secondary Opportunities

Canton Early College High School (CECHS)

The goal of CECHS is to allow students an opportunity to earn both a diploma and an Associate Degree during their high school career.

During the 2012-13 academic year:

• Twenty-seven distinct college courses were offered at CECHS.

• Two hundred fifty-five CECHS students in all four classes earned 2,978 credit hours or the equivalent of 992 three-hour college courses.

• CECHS’s fifth class graduated bringing the total number of graduates to 256.

• Over half, or 144 students, have graduated with Associate Degrees. The Return on Investment (ROI) based on the education received in projected additional lifetime earnings and taxes paid now exceeds $74 million.
Advanced Placement Courses (AP)

Completing an AP course allows students to take a standardized test to qualify for college credit at participating colleges and universities. Credit granted can range from three to 15 college hours depending on the course and the score students make on the test.

- 2,176 students enrolled in AP courses in 2012, an increase over 2,042 students in 2011.

- A pass rate at a score of 3, or better (qualifying for credit), was achieved on 2,121 tests for a pass rate of 61%. Test results for 2013 are not yet available.

- For the 2011-12 academic year, Stark County districts offered 157 sections of AP’s inventory of 34 courses, up from 150 sections the year before.4

Career Technical Courses: Articulation Agreements

During the 2012-13 academic year, there were 1,465 students enrolled in Career Technical courses enrollments at Stark County high schools and R.G. Drage Career Center. Students enrolled in an estimated 1,905 courses with college elements. Each course enrollment carries the potential to claim three college hours upon enrolling in the same program area at a partner college or university.

* Sources: The College Board and the AP Course Audit at: http://www.collegeboard.com/html/apcourseaudit/
Outcomes of Stark County’s Post Secondary Opportunities

In 2005, when the Stark County community created its first partnership to increase dual enrollment with the establishment of CECHS, the county’s history of low college attainment was being sustained by a low college going rate (49%) among its youth. The first priority was to increase that rate.

Yet, educators and policy-makers knew increasing the college going rate was only the first step; students had to actually earn a degree. Unfortunately, in Ohio and elsewhere throughout the nation, that prognosis was not good. In Ohio, 27.1% graduated with an Associate Degree in three years (nation, 29.2%) and 54.7% (nation, 55.5%) with a Bachelor’s in six years.5

While the goal of earning a college degree could be readily charted for CECHS, such a measure becomes problematic for other PSOs due to the time involved in earning a degree and the relative “newness” of several interventions that have only dramatically expanded since 2009. For students who enroll in HSBDC courses as freshmen, for instance, college completion may be a decade away.

Given these limitations, there are three important mid-term outcomes that can be charted for Stark County students. All are necessary, though perhaps not sufficient in themselves, to increase degree completion. Beyond these three outcomes, there is a telling global indicator. If PSOs are proving successful, than the college enrollment pipeline must be expanding.

5 Data for year 2009 from NCHEMS Information Center at: http://www.higheredinfo.org/
College Access

In 2006, the year of the first HSBDC pilot, Stark County’s high school to college going rate was 51%. Today, direct college enrollment (next fall) is 63% and increases to 73.1% within two years of graduation. Results for Stark County dual enrollment students are even higher.

When records were reviewed\(^6\) for 1,698 HSBDC students from 2008 and 2009, it was found that 82.4% had enrolled in college. This rate far exceeds the Ohio average at 62.7% and the national average of 63.3% for all students.

Affordability

A study funded by the Lumina Foundation, the Center for College Affordability and Productivity (CCAP) found that savings from accumulating college credit in high school had “the potential to be immense both for the student and the public.” The Center further noted that students could reduce the total cost of a college education by up to 12.5% if they earned a semester of credit in high school.

This would not only lessen the financial burden on students but also on taxpayers since states subsidize public higher education. In fact, CCAP notes that for every 1 million students entering college with a semester’s worth of early credits, the cost of college could be reduced by over $9.5 billion dollars.\(^7\)

Stark County’s portfolio of PSOs offers a substantial opportunity for students and families to earn or bank college credit at no cost for tuition or books. This potential savings amounts to millions on an annual basis.

\(^6\) National Student Clearinghouse Student Tracker records for all Stark County districts.

\(^7\) See: The Center for College Affordability and Productivity, 25 Ways to Reduce the Cost of College: #2 Promote Dual Enrollment Programs at http://centerforcollegeaffordability.org/
Stark County Post Secondary Opportunities
2012-13 Range of Potential College Cost Savings to Students and Families

<table>
<thead>
<tr>
<th>Post Secondary Opportunity</th>
<th>HSBDC</th>
<th>CBDC/PSEO</th>
<th>CECHS</th>
<th>APs</th>
<th>College Tech Prep</th>
<th>Total(^9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Students</td>
<td>1,500</td>
<td>560</td>
<td>255</td>
<td>2,176</td>
<td>1,465</td>
<td>5,956</td>
</tr>
<tr>
<td>Number of 3 Credit Hour Courses or Equivalents</td>
<td>3,508</td>
<td>1,120</td>
<td>992</td>
<td>3,535</td>
<td>1,905</td>
<td>11,060</td>
</tr>
<tr>
<td>Low Range Tuition Benefit @ $451(^{10})</td>
<td>$1,582,108</td>
<td>$505,120</td>
<td>$447,392</td>
<td>$1,594,285</td>
<td>$859,155</td>
<td>$4,988,060</td>
</tr>
<tr>
<td>Mid Range Tuition Benefit @ $1,341</td>
<td>$4,704,228</td>
<td>$1,501,920</td>
<td>N/A</td>
<td>$4,740,435</td>
<td>$2,554,605</td>
<td>$13,501,188</td>
</tr>
<tr>
<td>High Range Tuition Benefit @ $2,460</td>
<td>$8,629,680</td>
<td>$2,755,200</td>
<td>N/A</td>
<td>$8,696,100</td>
<td>$4,686,300</td>
<td>$24,767,280</td>
</tr>
<tr>
<td>Textbook Benefit @ 68(^{11})</td>
<td>$238,544</td>
<td>$76,160</td>
<td>$67,456</td>
<td>$240,380</td>
<td>$129,540</td>
<td>$752,080</td>
</tr>
</tbody>
</table>

Persistence

A key measure of persistence is first to second year retention, meaning students who return for a second year of college. In 2005, before Stark’s first high school based dual enrollment pilot, that rate was 77% both for the state and county. The last published figures for the state show that rate as being 75% for public and 78% for private institutions in the fall of 2010.\(^{12}\) Stark’s rate was 83% for public and 93% for private.\(^{13}\)

\(^{8}\) The estimate here is slightly under 5 college semester hours for successfully passing an AP exam at 3+. There is no consistent rule on college acceptance or award of credit. Depending on the test and the level (3, 4, 5) at which a test is passed, institutional credit awards, such as at Kent State, can range from 3 (European History) to as high as 15 hrs. (Calculus BC at 4 or 5). See: Ohio Board of Regents, Advanced Placement Credit Awards. Results are based on 2011 pass rates as aggregated 2013 results will not be available to SEP until November.

\(^{9}\) Note: Student count may be duplicated. For instance, an AP student also taking HSBDC or a College Tech Prep student taking CBDC.

\(^{10}\) Tuition ranges based on Ohio 2 year public (low range) to state four-year (mid-range) to private four year institutions (high range) and includes applicable fees. Low range based on Stark State College tuition. Mid range based on Kent State main and high range on Walsh University. These are the largest public and private destinations for Stark County students.


\(^{12}\) Ohio Board of Regents (2012). First to Second Year Retention at Ohio’s Public and Private Colleges and Universities Fall 2004 to Fall 2009 Cohorts of First-Time, Full-Time, Degree-Seeking Undergraduates, Columbus: Author.

\(^{13}\) National Student Clearinghouse.
Expanded Pipeline: A New Look at Attainment

Education attainment can be viewed as actual, or it can be seen as a pipeline supporting real and potential degrees. By the conventional “real” measure of a Bachelor’s Degree or higher, usually for those 25 and over, Stark at 20.7% unquestionably trails Ohio at 29.5% and the nation at 31.5%.

Looking at “potential” measures for young adults, those who are just beginning to be impacted by local dual enrollment and other post secondary efforts, the result is entirely different. Stark County and the City of Canton have a greater percentage of young adults in the pipeline than Ohio or the nation.

### Education Attainment Adults – Age 18 to 24

<table>
<thead>
<tr>
<th></th>
<th>Some College or Associate Degree</th>
<th>Bachelor’s Degree or Higher</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>45.6%</td>
<td>9.1%</td>
<td>54.7%</td>
</tr>
<tr>
<td>Ohio</td>
<td>45.4%</td>
<td>8.4%</td>
<td>53.8%</td>
</tr>
<tr>
<td>Stark</td>
<td>47.5%</td>
<td>7.4%</td>
<td>54.9%</td>
</tr>
<tr>
<td>City of Canton</td>
<td>51.9%</td>
<td>5.3%</td>
<td>57.2%</td>
</tr>
</tbody>
</table>
Conclusion: Local Partnerships, Local Growth

In 2007, a review by the Stark Education Partnership concluded that, “the evidence supports (Stark County) is evolving a dual credit program in advance of the state that is not PSEO but a different construct. There is evidence that this program is expanding beyond the Ohio HB 115 pilot and becoming self generating.”14

Such an expansion was necessary. While Ohio House Bill 115 had set aside $3.6 million to establish high school based dual credit, the intent of the legislation was clearly on the establishment of local partnerships. Contracts, or MOUs, between school districts and institutions of higher education for dual credit in mathematics, science, or foreign language were to result. HB 115 was then followed by HB 119 and the governor’s Seniors to Sophomores (S2S) program in 2008 that included dual credit courses on high school campuses as an option. The significance of S2S was that for the first time the state began to modify the requirements that had kept PSEO as a program for higher performing students. S2S required that students complete Algebra II and three years of high school English with a grade of “C” or better, and score college ready on the college partner’s placement assessment as then “currently defined” by the college.15

Neither the House Bills nor the S2S program were meant to be revisions of PSEO; they were meant to be alternatives that shifted the focus of dual credit towards courses that were


to be taught on high school campuses for greater numbers of students. In order for that to work in the long-term, local partnerships and agreements were needed between school districts and institutions of higher education.

Such agreements (MOUs) took place in Stark County. The result was an expansion of dual credit far beyond what had been achieved through the conventional PSEO program and a widening of the education pipeline.

**Stark County Total Dual Enrollment Growth**

Stark County PSEO-vs-MOU Dual Enrollment Growth

Source: Ohio Department of Education, June 2013. Figures do not include private college data.