Return on Investment

An Annual Report on Dual Credit and Other Post Secondary Opportunities for Stark County High School Students

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This is the sixth 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, and Reaching for 80% – 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/.

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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.

- **Return on Investment (ROI)** is the estimated financial return for students in tuition cost savings or future income from PSOs.

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, where students gain college or dual credit by taking a course primarily on a college campus, 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 that differs from the state’s Post Secondary Enrollment Options (PSEO) program. CBC may also result in high school credit.

Accelerated Learning Opportunities

• 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.

• College Tech Prep (CTP) or Career Technical Education (CT2) where students may receive college credit for one or more courses after enrolling in a college or university with an articulation agreement in place with a K-12 district. While CTP and CT2 are considered accelerated learning opportunities, they can also be HSBDC.
Executive Summary

Stark County’s growing portfolio of Post Secondary Opportunities (PSOs) continues to enable students to earn college credit while in high school or to claim credit upon college enrollment. These opportunities include high school based dual credit courses (HSBDC), college based credit courses (CBC), Advanced Placement coursework (AP), Canton Early College High School (CECHS) and career-technical or College Tech Prep courses.

In addition to producing tuition savings for students and families, PSOs can be a deciding factor in whether underrepresented students go to college at all. If these students are successful in earning a college degree, they and their community will enjoy a considerable return on investment (ROI) over their lifetimes. In Stark County, that potential ROI has now passed $600 million.

For the 2011-12 academic year:

- A duplicated count of 9,087 students took advantage of 14,359 PSOs equivalent to a three hour college course.

- Potential tuition savings for these opportunities range from $6,348,195 at a two year state institution to $33,203,112 at a private four year college. Additional textbook savings can amount to $933,335.

- Since its founding in 2005, CECHS has graduated 209 students; 113 with Associate Degrees.

- Since 2006, HSBDC has been the deciding factor for an estimated 553 out of 5,285 participants in going on to college.
The ROI for these CECHS and HSBDC students at their current level of education is $138,748,000 in additional lifetime income. They will also pay $51,480,000 in additional taxes.

The potential ROI for these CECHS and HSBDC students, if all complete degrees, is $579,284,000 in additional lifetime earnings and $156,004,000 in additional taxes paid.

Agreements covering PSOs between districts and higher education institutions continue to proliferate in Ohio as the state restructures College Tech Prep and adopts other options such as Career-Technical Credit Transfer (CT2) or separate Memoranda of Understanding (MOUs).

In the absence of a central “clearinghouse” for such opportunities and a viable preschool through college (P-16) data system, it is difficult to know how many such opportunities exist, who takes advantage of them, and who “completes the transaction” to transfer earned, or claim, college credit.
Introduction: 80% – A Context for Changing the College Going Culture

“Yet for millions of students from low- and moderate-income families during this decade, caught between a crushing shortfall in student financial aid and rising college costs, the promise of a college education and high salaries after graduation will be an empty one....”

– Empty Promises: The Myth of College Access in America

Over a decade has passed since these words were written by the Advisory Committee on Student Financial Assistance in June of 2002. Sadly, they were prophetic and remain descriptive of the present. While finances are a major barrier to college access, other impediments abound for disadvantaged, first generation and low performing students.

Inadequate academic preparation and lack of college knowledge contribute to poor performance and persistence among many who do go on to college. Ironically, this adds to the expense as the vicious cycle of remediation comes into play. In Ohio, slightly over six in ten complete a four year degree within six years.

What if there was a way to mitigate these impacts? This is what the Community College Research Center at Teachers College Columbia University has found:

Colleges and school districts have begun to embrace dual enrollment as a strategy for improving college attendance and persistence among students who might lack sufficient preparation for college. Participation in DE (Dual Enrollment) can help these students succeed in higher education by giving them a realistic idea of what college requires and giving them a head start on college-level work. DE has the added benefit of potentially reducing the cost of college by providing low- or no-cost college credit and shortening time to a degree.
Stark County educators came to this realization in 2005 with the establishment of Canton Early College High School (CECHS). The following year, a pilot program funded by the Stark Education Partnership (SEP) began the growth of high school based dual credit (HSBDC), adding this option to an expanding portfolio of other post secondary opportunities (PSOs), such as College Tech Prep (CTP) and Advanced Placement (AP) coursework. Other communities across the state have also followed suit. Yet, Ohio now faces a dilemma. After two years of substantial growth, dual enrollment now appears to have leveled out across the state.\(^5\)

While the reasons behind this are not known, finding enough high school teachers to meet qualifications as college adjuncts (HSBDC) may play a substantial role. The future for Ohio’s students may well lie in how new agreements and approaches are crafted as districts and their college partners continue to move away from the traditional PSEO model that has served the state for over a generation.

In Stark County for instance, HSBDC has leveled off as well, but a series of effective Memoranda of Understanding, initiated by the Stark County Educational Service Center (SCESC) between districts and colleges appears to be substantially accelerating dual credit through courses on college campuses (CBC).

This is the sixth in a series of annual reports by the Stark Education Partnership on PSOs for the county’s high school students. For the first four years, these reports focused on the growth of HSBDC alone, adding other opportunities in year five.

Continued monitoring of all these options is critical as Stark County relies not on just one, but rather a “portfolio” of PSOs to ensure that college access and success creates both a personal and community return on investment (ROI).

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\(^5\) Presentation by Dr. Darrell Glen, Ohio Board of Regents, at Landscape of Dual Enrollment: Designing Programs for Ohio Students, the Second Annual Conference of the Ohio Alliance of Dual Enrollment Partnerships, May 8, 2012, Columbus State Community College.
The State of Stark County’s Post Secondary Opportunities

Stark County school districts and their college partners support PSOs for the county’s high school students through the key programs and initiatives that follow.

High School Based Dual Credit (HSBDC)

High School Based Dual Credit (HSBDC) began with two teachers and two courses in a pilot funded by the Stark Education Partnership (SEP) in the summer of 2006. There were 65 students taking both courses, which were taught for the first time at two county high schools. Prior to HSBDC, 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 Post Secondary Enrollment Options (PSEO) program.

During the 2011-12 academic year:

- All districts executed Memoranda of Understanding with higher education partners.
- All Stark County high schools offered HSBDC. Districts offered a total of 210 sections of 58 distinct courses, an increase over 48 courses and 184 sections in 2010-11.
- Course enrollment was 2,781 for an estimated 1,400 students.
- Students successfully earned a “C” or higher in 2,540 or 93% of all enrollments.
• These enrollments translated to 8,343 credit hours or 2,781 three-hour college courses, or course equivalents, a slight reduction from 8,569 credit hours in 2010-11.

• Of the 2,781 HSBDC course enrollments 767 were college Math enrollments; 725 earned credit. 668 were college English enrollments; 628 earned credit.

**College Based Credit**

Dual enrollment at the college/university site for this agreement is defined as providing high school students the opportunity to be enrolled in a college-level course or series of courses taught at the college/university campus by the IHE faculty. Upon successful completion of the course, the student will receive both high school graduation credit and college credit from the cooperating IHE. – From Stark County MOU with partnering colleges.

Fueled by separate Memoranda of Understanding (MOUs) between Stark County school districts and institutions of higher education that reduce costs, the state’s traditional Post Secondary Enrollment Option (PSEO) program is often being supplanted by these new agreements. PSEO student enrollment at Stark State College, for example, was 68 in 2011-12 while 407 students enrolled under these memoranda.6

For the purposes of this report, credit earned through both PSEO and these agreements will be combined under the single heading of College Based Credit (CBC).

**Stark County College Course Enrollments**

<table>
<thead>
<tr>
<th>Institution</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kent State University – Main &amp; Stark</td>
<td>356</td>
</tr>
<tr>
<td>Kent State University – Tuscarawas</td>
<td>9</td>
</tr>
<tr>
<td>Stark State College</td>
<td>645</td>
</tr>
<tr>
<td>Malone University</td>
<td>68</td>
</tr>
<tr>
<td>University of Mount Union</td>
<td>5</td>
</tr>
<tr>
<td>Walsh University</td>
<td>64</td>
</tr>
<tr>
<td>University of Akron</td>
<td>149</td>
</tr>
<tr>
<td>University of Akron – Wayne</td>
<td>18</td>
</tr>
<tr>
<td>Tiffin University</td>
<td>6</td>
</tr>
<tr>
<td>Other</td>
<td>36</td>
</tr>
<tr>
<td><strong>Total Enrollment</strong></td>
<td><strong>1,322</strong></td>
</tr>
</tbody>
</table>

6 Data Source: SSC, Dennis Trenger.
Canton Early College High School (CECHS)

In 2005, the Canton City Schools (CCS), Stark State College of Technology (SSCT), Canton Professional Educators Association (CPEA) and SEP came together to found Canton Early College High School (CECHS). Start up funding was provided by the Bill and Melinda Gates Foundation through KnowledgeWorks and the state of Ohio. 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 2011-12 academic year:

• Seventeen college courses were offered at CECHS.
• Two hundred forty-four CECHS students in all four classes earned 2,734 credit hours or the equivalent of 911 three-hour college courses. The pass rate was 92%. This was an increase over 2,019 hours in 2010-11.  
• CECHS’s fourth class graduated bringing the total number of graduates to 209.
• Over half, or 113 students, graduated with Associate Degrees. The Return on Investment (ROI) based on the education received in projected additional lifetime earnings and taxes paid now equals nearly $60 million.

Advanced Placement Courses (AP)

Completing an AP courses 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.

• AP course enrollment was 3,261 for 2,042 students in 2011.
• A pass rate at a score of 3, or better (qualifying for credit), was achieved on 2,007 tests for a pass rate of 62%, up from 57% the year before. Test results for 2012 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.

College Tech Prep

During the 2011-12 academic year, there were 6,000 College Tech Prep course enrollments at 16 Stark County high schools and R.G. Drage Career Center.

Each course enrollment carries the potential to claim three college hours upon enrolling in the same program area at a partner college or university.

7 Source: Stark State College.
8 Source for Stark County AP Statistics: College Board, Columbus, Ohio.
9 Source: The College Board. AP Course Audit at: http://www.collegeboard.com/html/apcourseaudit/
Outcomes of Stark County’s Post Secondary Opportunities

Definitive Outcome 1 – Financial return to Students and Families

Stark County’s PSOs can provide a substantial financial return to students and their families in tuition savings depending on where a student chooses to go to college.

In its Quarterly Report on Household Debt and Credit, the Federal Reserve Bank of New York announced that student loan debt reported on consumer credit reports reached $904 billion in the first quarter of 2012, a $30 billion increase from the previous quarter.¹⁰

Students and their families increasingly face a dilemma. While a college education is clearly related to increased earnings, nearly two-thirds will need to borrow money to go.

While little has been written about the long-term impact of this debt on personal or community economics, work by Chris Christopher, an economist with IHS Global Insight, hints that it may be considerable.¹¹ Students with sizable debt, Christopher believes, move back in with families, delay marriage, buying a car and other purchases.

Stark County’s growing portfolio of PSOs represents a sizable opportunity to reduce student debt by enabling students to earn college credit at no cost.


Stark County Post Secondary Opportunities

2011-12 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>AP\textsuperscript{14}</th>
<th>College Tech Prep</th>
<th>Total\textsuperscript{15}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Students</td>
<td>1,400</td>
<td>661</td>
<td>244</td>
<td>2,042</td>
<td>4,740</td>
<td>9,087</td>
</tr>
<tr>
<td>Number of 3 Credit Hour Courses or Equivalents</td>
<td>2,781</td>
<td>1,322</td>
<td>911</td>
<td>3,345</td>
<td>6,000</td>
<td>14,359</td>
</tr>
<tr>
<td>Low Range Tuition Benefit @ $441\textsuperscript{12}</td>
<td>$1,226,421</td>
<td>$583,002</td>
<td>$401,751</td>
<td>$1,475,145</td>
<td>$2,646,000</td>
<td>$6,348,195</td>
</tr>
<tr>
<td>Mid Range Tuition Benefit @ $1,320</td>
<td>$3,670,920</td>
<td>$1,745,040</td>
<td>N/A</td>
<td>$4,415,400</td>
<td>$7,920,000</td>
<td>$17,751,360</td>
</tr>
<tr>
<td>High Range Tuition Benefit @ $2,469</td>
<td>$6,866,289</td>
<td>$3,264,018</td>
<td>N/A</td>
<td>$8,258,805</td>
<td>$14,814,000</td>
<td>$33,203,112</td>
</tr>
<tr>
<td>Textbook Benefit @ 65\textsuperscript{13}</td>
<td>$180,765</td>
<td>$85,930</td>
<td>$59,215</td>
<td>$217,425</td>
<td>$390,000</td>
<td>$933,335</td>
</tr>
</tbody>
</table>

Definitive Outcome 2 – Likely Enrollment

Stark County HSBDC students are more likely to immediately enroll in college, and CECHS students to continue enrollment, than the general student body.

While data on college outcomes is not readily available for AP or College Tech Prep students, the National Student Clearinghouse Student Tracker enables all Stark County districts to measure college outcomes for HSBDC, and in Canton’s case, CECHS graduates.

Enrollment Patterns of 2010 Graduates

<table>
<thead>
<tr>
<th></th>
<th>Canton City Schools</th>
<th>All Stark Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of All Graduates Enrolling</td>
<td>52%</td>
<td>62%</td>
</tr>
<tr>
<td>% HSBDC Graduates Enrolling</td>
<td>77%</td>
<td>78%</td>
</tr>
<tr>
<td>CECHS Graduates Enrolling</td>
<td>80%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

\textsuperscript{12}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.

\textsuperscript{13}From the National Association of College Stores, Higher Education Retail Market Facts & Figures, 2012. Available at: http://www.NACS.org

\textsuperscript{14}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 2012 results will not be available to SEP until November.

\textsuperscript{15}Note: Student count may be duplicated. For instance, an AP student also taking HSBDC or a College Tech Prep student taking CBDC.
Probable Outcome – *Impacting District College Going Rates*

*Stark County PSOs are impacting district college going rates, regardless of community wealth.*

In 2005 before the advent of HSBDC and CECHS and with lower CBC, AP and College Tech Prep participation, Stark County’s college going rate was 51%. Ohio was at 57% and the U.S. at 60%. Graduates who delayed entry into college were not tracked at all. In four years time, Stark County saw a 25% rate of increase in the direct college going rate while the state saw 12% and the nation, 7%.

**Percent of High School Graduates Going Immediately to College – by District and Type**

<table>
<thead>
<tr>
<th>District Type</th>
<th>District Name</th>
<th>‘10 Grad Rate</th>
<th>‘10 College Going Rate</th>
<th>‘10 College Going Rate within 1 Year</th>
<th>‘11 College Going Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural/agricultural – high poverty, low median income</td>
<td>Sandy Valley</td>
<td>88%</td>
<td>46%</td>
<td>51%</td>
<td>62%</td>
</tr>
<tr>
<td></td>
<td>Minerva</td>
<td>91%</td>
<td>60%</td>
<td>62%</td>
<td>47%</td>
</tr>
<tr>
<td>Rural/agricultural – small student population, low poverty, low to moderate median income</td>
<td>Fairless</td>
<td>96%</td>
<td>50%</td>
<td>52%</td>
<td>49%</td>
</tr>
<tr>
<td></td>
<td>Osnaburg</td>
<td>93%</td>
<td>57%</td>
<td>62%</td>
<td>61%</td>
</tr>
<tr>
<td></td>
<td>Marlington</td>
<td>92%</td>
<td>62%</td>
<td>63%</td>
<td>56%</td>
</tr>
<tr>
<td></td>
<td>Tuslaw</td>
<td>98%</td>
<td>57%</td>
<td>62%</td>
<td>53%</td>
</tr>
<tr>
<td>Urban – low median income, high poverty</td>
<td>Alliance</td>
<td>80%</td>
<td>44%</td>
<td>51%</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>Canton Local</td>
<td>93%</td>
<td>54%</td>
<td>56%</td>
<td>54%</td>
</tr>
<tr>
<td></td>
<td>Massillon</td>
<td>90%</td>
<td>57%</td>
<td>65%</td>
<td>57%</td>
</tr>
<tr>
<td>Major Urban – very high poverty</td>
<td>Canton City</td>
<td>80%</td>
<td>52%</td>
<td>61%</td>
<td>51%</td>
</tr>
<tr>
<td>Urban/Suburban – high median income</td>
<td>Lake</td>
<td>98%</td>
<td>72%</td>
<td>74%</td>
<td>74%</td>
</tr>
<tr>
<td></td>
<td>Northwest</td>
<td>97%</td>
<td>61%</td>
<td>68%</td>
<td>56%</td>
</tr>
<tr>
<td></td>
<td>North Canton</td>
<td>99%</td>
<td>82%</td>
<td>84%</td>
<td>80%</td>
</tr>
<tr>
<td></td>
<td>Perry</td>
<td>93%</td>
<td>66%</td>
<td>70%</td>
<td>61%</td>
</tr>
<tr>
<td></td>
<td>Plain</td>
<td>91%</td>
<td>69%</td>
<td>73%</td>
<td>69%</td>
</tr>
<tr>
<td>Urban/Suburban – very high median income, very low poverty</td>
<td>Jackson</td>
<td>100%</td>
<td>83%</td>
<td>86%</td>
<td>83%</td>
</tr>
<tr>
<td></td>
<td>Louisville</td>
<td>98%</td>
<td>68%</td>
<td>73%</td>
<td>71%</td>
</tr>
<tr>
<td>Stark County Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stark County Total</td>
<td></td>
<td>64%</td>
<td>68%</td>
<td>62%</td>
<td></td>
</tr>
<tr>
<td>Ohio</td>
<td></td>
<td>63%</td>
<td>?</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>U.S.</td>
<td></td>
<td>64%</td>
<td>70%</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>
College Going: A Tale of Different Rates

Much attention has been paid recently to the new national college going rate of 70%. Not everyone realizes that rate includes anyone going to college who has completed high school or earned a GED up to age 24. Stark County’s college going rates are different, being based in “on-time” high school graduation. Further, college going rates are highly uneven across the country. As Barbara Schneider of Michigan State University puts it:

Although the average college-going rate in U.S. public and private high schools has risen to nearly 70 percent, it is unevenly dispersed among high schools (NCES, 2006). There are “blue ribbon” high schools where nearly every senior will attend a postsecondary institution in the fall following their spring graduation. Then there are other high schools where the proportion of seniors who matriculate to a postsecondary school is very small, sometimes as low as 20 percent.

No Stark County high school has a college going rate less than 50% after one year. Six exceed the 70% mark. The county’s college going rate for all districts combined is now 73% after two years.

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16This rate is actually for completers between the ages of 18-24. Completers include GED or equivalency. Data on low income students subject to sampling error

Return on Investment

The Model

In 2012, SEP developed a model to estimate the potential return on investment (ROI) for the two PSOs, CECHS and HSBDC. This model concerned the role of these PSOs as the deciding factor in whether a student would go to college. The purpose was to calculate a ROI based on projected additional lifetime earnings and taxes paid.

The model employs similar calculations to those found in the College Board publication Education Pays 2010 that used U.S. Census, IRS and tax analysis data. All values are in 2008 dollars. Funding was provided by the JPMorgan Chase Foundation. A major challenge was to determine with some confidence who these students were.

CECHS by design supports students who might not go to college. Studies often question if the same is true for dual enrollment (HSBDC) students.

While many HSBDC students already plan on college, the Stark County population is largely first in their families to go to college and higher in minority representation than the general student body. HSBDC students are at nearly 20% poverty.

The SEP model suggests that, given these conditions and looking at college enrollment patterns, HSBDC has made the difference in going directly on to college for 553 of the 5,285 students taking such courses since 2006.
Current Lifetime Earnings and Taxes Paid

Below is a “snapshot” as of 2012. As have some college, or earned a degree, current values can be calculated on accepted salary differentials. Just by virtue of what these students have accomplished to date, this potential reaches nearly $200 million. This is without going on to complete further college.

Current ROI in Expected Median Additional Earnings
CECHS Graduating Classes and HSBDC

<table>
<thead>
<tr>
<th></th>
<th>Median After Tax Earnings</th>
<th>Taxes Paid</th>
<th>Total Earnings</th>
<th>Total Taxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School</td>
<td>$26,700</td>
<td>$7,100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some College</td>
<td>$31,000</td>
<td>$8,700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference from HS (@649 students)</td>
<td>$4,300</td>
<td>$1,600</td>
<td>$2,790,700</td>
<td>$1,038,400</td>
</tr>
<tr>
<td>Associate Degree</td>
<td>$32,700</td>
<td>$9,300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference from HS (@113 students)</td>
<td>$6,000</td>
<td>$2,200</td>
<td>$678,000</td>
<td>$248,600</td>
</tr>
<tr>
<td>Yearly Median Total</td>
<td></td>
<td></td>
<td>$3,468,700</td>
<td>$1,287,000</td>
</tr>
<tr>
<td>Lifetime Median Total (40 years)</td>
<td></td>
<td></td>
<td>$138,748,000</td>
<td>$51,480,000</td>
</tr>
</tbody>
</table>

Future Lifetime Earnings and Taxes Paid

One out of five HSBDC students pursues an Associate Degree. We also know that 76% of CECHS graduates continue college immediately upon graduation. The potential ROI on all degrees for both HSBDC and CECHS if all students complete their degrees is nearly $600 million in earnings and taxes paid during their lifetimes.

Potential Median Additional Earnings for CECHS and HSBDC Students on Degree Completion to 2012

<table>
<thead>
<tr>
<th></th>
<th>HSBDC</th>
<th>CECHS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Associate Degrees (111)</td>
<td>Bachelor’s Degrees (442)</td>
</tr>
<tr>
<td>Median Yearly Salary After Taxes</td>
<td>$666,000</td>
<td>$7,072,000</td>
</tr>
<tr>
<td>Yearly Taxes</td>
<td>$244,200</td>
<td>$2,607,800</td>
</tr>
<tr>
<td>Total Additional Yearly Wages</td>
<td>$910,200</td>
<td>$9,679,800</td>
</tr>
<tr>
<td>Lifetime Salary After Taxes</td>
<td>$26,640,000</td>
<td>$282,880,000</td>
</tr>
<tr>
<td>Lifetime Taxes</td>
<td>$9,768,000</td>
<td>$104,312,000</td>
</tr>
<tr>
<td>Total Additional Lifetime Wages</td>
<td>$36,408,000</td>
<td>$387,192,000</td>
</tr>
</tbody>
</table>

At its current state of development, the model does not account for similar effects in College Tech Prep, CBDC, or AP coursework. While it may be assumed that these options do result in some students going on to college who may not have done so otherwise, corresponding data on social and economic indicators and college enrollment are not present.
Proliferating Opportunities But Little Information

Between 2009 and 2011, forty-one Stark County high school graduates enrolled in Hocking Technical College. Such a pattern might seem unusual considering Hocking is a two-year college nearly 150 miles from Canton. Granted, it is the only two-year college in the state with dormitories, but there must be more.

This is because Hocking has agreements with high schools across the state\(^2\) to transfer high school technical classes into college credits. For example four such agreements exist with Stark’s R.G. Drage Career Center alone. Three award 16 hours, a full semester, of college credit.

Despite the fact that HSBDC has leveled out across the state, the Hocking Technical College agreements are one example of how colleges and school districts are shifting away from the state’s traditional PSEO program to create new post secondary opportunities for students. These opportunities will continue to proliferate as new options such as Career-Technical Credit Transfer (CT)\(^2\), on-line dual credit and the restructuring of College Tech Prep take shape to allow more students to enter college with credit.\(^2\)

In all of this the state, and subsequently its communities, suffer from two distinct liabilities. First there is no centralized “clearinghouse” for such opportunities. Students and families are faced with a new dimension of “college knowledge” meaning the need to know what these opportunities are when starting high school. Students are highly dependent on school counselors and teachers for this information. A fair question is whether or not such information is readily available to school staff.

\(^{2}\) See: High School Credit at: http://www.hocking.edu/transferprograms/highschool

\(^{2}\) See CT2 at: https://www.ohiohighered.org/transfer/ct2
Second, Ohio does not have an effective P-16 data system. Who exactly takes advantage of such opportunities and whether or not they “complete the transaction” by transferring college credits earned or banked in high school into meaningful financial and time savings towards degrees and higher rates of completion is not yet known.

Eventually, the National Student Clearinghouse Student Tracker system will supply many of these answers for Stark County, but there will still be substantial gaps in knowledge. For instance, while the College Board can tell where students send their AP scores, and Student Tracker can tell what they major in and when they graduate, no record is readily available to tell whether those AP scores ever translated into college credit.

Until such time information issues like this are resolved, Stark County’s and Ohio’s Return on Investment (ROI) will remain theoretical.