

Advancing College Opportunity

An Impact Evaluation of the Growth of Dual Credit in Stark and Wayne Counties, Ohio

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September
2009

In accordance with provisions of the HB 119 proposal submitted by the Stark County Educational Service Center on behalf of Region 9 to the Ohio Department of Education, this evaluation was conducted by the Stark Education Partnership, Inc.



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September
2018

Table of Contents



Executive Summary.....	4
Preface: Defining High School Based Dual Credit.....	6
Introduction: A New Concept.....	7
Policy Considerations	9
Methodology: Impact Evaluation	19
Data Collection and Limitations	21
Results and Analysis	22
Future Research and Study.....	33
Conclusion: Dual Credit as a Disruptive Innovation	33
Appendix	38

Executive Summary

This impact evaluation looks at three years of growth for *high school-based dual credit* courses exclusive of Canton's Early College High School in Stark and Wayne Counties.¹

As *high school based dual credit* is increasingly implemented in low wealth and urban districts, accompanied by an increase in high school teachers qualified as college adjuncts, the chances are increased that *high school based dual credit* is operating as a disruptive innovation, prompting the counties to move towards an equitable, as well as an equal, college access strategy.

Specific findings are as follows:

- Sixteen hundred and twelve students took *high school based dual credit* courses in Stark and Wayne Counties during the 2008-09 academic year, increasing from 55 the summer of 2007.
- Seven institutions of higher education collaborated with 21 public school districts in the delivery of *high school based dual credit* courses.
- *High school based dual credit* courses in Stark and Wayne Counties adhere to college syllabi and meet college standards for content, instruction and grading. Each *high school based dual credit* course pairs a high school teacher/adjunct with a college professor/mentor.
- Over half of the teachers find *high school based dual credit* content harder than regular courses.
- Over three times as many students were enrolled in *high school based dual credit* in 2008-09 as were in enrolled in the Post Secondary Enrollment Option (PSEO) in 2006.
- *High school based dual credit* courses have not reduced College Tech Prep or AP participation.
- *High school based dual credit* participants in Stark and Wayne Counties continue to reflect a greater gender balance than state PSEO averages.
- Minority participation mirrors Stark County demographics at 11% but exceeds the 4.7% population rate in Wayne County.
- Eighty percent of *high school based dual credit* students scored a grade of "B" or above. This percentage has risen. The extended time, up to a full academic year, to complete a course for *high school based dual credit* may be a factor contributing to higher grades.
- Students in Stark and Wayne Counties earned over 5,000 hours of college credit at "C" or above in 2008-09. Only 6% of all hours attempted were below this standard.
- The majority of students (53%) taking *high school based dual credit* courses have no prior experience with early college opportunities. This trend has continued for three years.

¹ Note: Columbiana County participated the first year as part of Education Region IX.

- The number of *high school based dual credit* classes offered in 2008-09 reached 90, nearly four times the number in 2007-08.
- The number of university qualified high school/college adjuncts teaching *high school based dual credit* has expanded substantially since the summer of 2007. Sixty actively taught; the potential force now exceeds 150.
- There is an expanding fitness for *high school based dual credit* as a college access strategy based on district wealth and community type.
- There is growing fiscal benefit to students, families, and the community, potentially as high as \$2,132,560 in 2008-09.

These findings support the growing efficacy of *high school based dual credit* in advancing college opportunity for all students. This evaluation contains a separate section calling for future research and study on the impact of *high school based dual credit* as an equitable college access strategy.

Preface: Defining High School Based Dual Credit

Dual credit is a term often used interchangeably with dual or concurrent enrollment in reports and literature. Because of this confusion, this study will offer a specific definition for *high school based dual credit* in Stark and Wayne Counties.

For the purposes of this study, *high school based dual credit* means those courses offered through a collaborative agreement between an institution of higher education and a school district, taught by a qualified high school teacher on a high school campus and earning a student both high school and college credit while in high school.

Historically, opportunities for high school students to earn or bank early college credit in Ohio have fallen into two general categories.

These are dual enrollment where the common element is that students are – *enrolled in a college course, where college credit, and possibly high school credit, are earned during high school*. Examples are:

- Postsecondary Enrollment Option B (PSEO)
- Non-PSEO dual enrollment agreements
- Early College High School
- Seniors to Sophomores*
- College Tech Prep (note: not all CTP college credit is earned as dual enrollment); and

Accelerated Learning where the common element is: *college credit potentially earned upon matriculation to college*. Examples are:

- Advanced Placement (AP)
- International Baccalaureate (IB) – examination based
- College Tech Prep (some courses)²

² Gavlik, D. (2008). *Seniors to Sophomores and Opportunities for High School Students to Earn College Credit*. Ohio Board of Regents, presentation at the Ohio College Access and Success Conference in Columbus on August 14, 2008

I. Introduction: A New Concept

*The evidence supports the hypothesis that Region 9 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 HB 115 pilot and becoming self-generating.*³

When the 127th General Assembly passed House Bill 115 in 2007, school districts throughout Ohio were given the opportunity for the first time to create “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...”⁴

Following the initial implementation of HB 115 that summer in Columbiana, Stark and Wayne Counties, the researchers believed that not only was a new model being created, an entirely new concept was evolving. That concept was *high school based dual credit* as opposed to conventional dual credit through the state’s PSEO program that has largely taken place on college campuses. In the ensuing two years, Stark and Wayne Counties have continued this development and have created what to the best of our knowledge is the largest *high school-based dual credit* enrollment program in the state.⁵

This evaluation will look at the ensuing growth of this program over the last three years and will utilize a method known as impact evaluation to determine what conditions have changed for students, parents, schools and communities.

During the implementation process of HB 115 the now defunct Ohio Partnership for Continued Learning (OPCL) noted, “current dual enrollment policy & programs lack a state level plan.” Ohio, the OPCL further noted, only had “one dual enrollment ‘policy’ - the Post Secondary Enrollment Option,” and that policy did “not have state level oversight resulting in inconsistent implementation.”⁶

High school based dual credit in Stark and Wayne Counties did not evolve in a vacuum, nor did it grow haphazardly. The shape of the program was determined in an ongoing series of meetings between first six, and later seven, institutions of higher education and representatives across the various districts in both counties. These continuing, and sometimes very difficult, discussions hosted by the Stark County Educational Service Center (SCESC), preceded many state level discussions. Much of what the state will consider, was considered here.

The researchers believe that there are two major lessons with statewide implications that can be gained from what has happened locally.

The first is a review of what the practitioners have come to see as the importance of *high school based dual credit* within the context of state policy.

³ Rochford, J. & Gelb, A. (2007). *All Students Ready: A Process and Outcome Evaluation of the Region 9 Dual Credit Program in Columbiana, Stark and Wayne Counties Under House Bill 115*. Canton, Ohio: The Stark Education Partnership, Inc.

⁴ Ohio Department of Education (2007). *HB 115 RFP*. Columbus: Author.

⁵ The largest program of which we have knowledge is sponsored by the Franklin County ESC with 900 students.

⁶ Ohio Partnership for Continued Learning. (May 31, 2007). *Dual Enrollment Recommendations: Executive Summary*. Columbus: Author.

The second is how educators and policy makers in Stark and Wayne Counties have dealt with the major issues of belief, accreditation and benefit. Resolution of these issues can prompt growth, while failure to address them can inhibit growth and prevent *high school based dual credit* from ever becoming an equitable access strategy.

The Ohio Board of Regents is currently in the process of formulating draft recommendations for dual credit programs and those recommendations are expected by November 2009. Are there lessons, Ohio can learn from the implementation of *high school based dual credit* in Stark and Wayne Counties?

II. Policy Considerations

*All but eight states have dual enrollment policies, while the remainder have locally developed programs... However, few were explicitly designed as a bridge to college for students not already college bound.-Jobs for the Future*⁷

The history of dual credit, a component of dual enrollment, in Ohio and elsewhere has often been accompanied by twin tensions. The first tension is to have students succeed by mandating a series of requirements and conditions to insure that only higher achieving students will pursue such courses. The second tension is a growing desire to use dual enrollment as a college access strategy, particularly for poor, minority, and first generation college-going students, and for students who have hitherto performed poorly in school.

Jobs for the Future, after a study of postsecondary institutions in six New England states, noted:

Policymakers and educators concerned with improving the access of students underrepresented in postsecondary education are also beginning to consider dual enrollment as a strategy to introduce higher education to a “second population”: young people who may not consider themselves “college bound.” The hypothesis is that dual enrollment, if structured properly, can accustom these students to the demands of college while supporting them to meet those demands within their more familiar high school environments.⁸

Stark’s growth has unquestionably made the county a state leader in *high school based dual credit* and Wayne County’s performance is above average. Yet, our counties are in a state that, while having early on developed a dual enrollment strategy, also came very late to the use of *high school based dual credit* as a college access strategy. This takes some explaining.

A Generation of PSEO

Dual enrollment has been an option for Ohio high school juniors and seniors for twenty years. Known as the Post Secondary Enrollment Options Program (PSEO), the opportunity to earn dual credit through the program was also expanded to sophomores and freshmen in 1997. Regulations and requirements surrounding PSEO, including a minimum 3.0 GPA, have inhibited its growth and less than 5% of Ohio’s high school students have ever taken advantage of the program.⁹ Most significantly, dual enrollment courses under the traditional PSEO program are generally based on college campuses and taught by college faculty.

⁷ Hoffman, N., Vargas, J. & Santos, J. (2008). *On Ramp to College: A State Policymaker’s Guide to Dual Enrollment*. Boston: Jobs for the Future. p.9

⁸ Hoffman, N. & Robins, A. (n.d.). *Head Start on College: Dual Enrollment Strategies In New England 2004–2005 An Executive Summary*. Boston: Jobs for the Future

⁹ Blanco, C., Prescott, B. & Taylor, N. (2007). *The Promise of Dual Enrollment: Accessing Ohio’s Early College Access Policy*. Cincinnati: KnowledgeWorks Foundation with the Western Interstate Commission on Higher Education, p.3

Ohio's PSEO program (ORC 3365), while mentioning dual credit, is silent about the high school delivery of such credit. In fact the Ohio Administrative Code (OAC) notes:

The program (PSEO) is intended to provide expanded opportunities for appropriately qualified high school students to experience coursework at the college or university level... High schools continue to be responsible for providing a comprehensive and challenging college preparatory curriculum, including advanced placement and other advanced level courses, for their students.¹⁰

However, during the years that PSEO was the primary means for Ohio students to gain dual credit, Lorain County Community College and some private institutions, such as the University of Findlay and Kenyon College, did develop a system in which dual enrollment courses could be offered at high schools.¹¹ While this advanced dual credit as a high school-based concept, high qualifications remained in place for participants.¹² Dual credit as a college access strategy was not the norm for the state, nor did the possibility of implementing high school-based courses appear to be a serious consideration in Columbus.

HB 115, 119 and S2S

In 2006, Ohio House Bill 115 set aside \$3.6 million to establish *high school based dual credit*. Contracts between school districts and institutions of higher education for mathematics, science, or foreign language instruction resulted.

HB 115 was followed by HB 119 and the governor's *Seniors to Sophomores (S2S)* program 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 currently defined by the college.¹³

While it is still too early to determine the long-range impact of the house bills and *S2S* throughout the state, there is evidence that *high school-based dual credit* has, for the present, grown. The question is whether it will continue to grow, particularly as an equal or equitable college access strategy. For despite some legislative movement, Ohio is far from having standardized any alternative system to traditional PSEO. Given the current economic crisis in the state, it is problematic as to whether there will be any continued press to finance the expansion of *high school based dual credit*. This does not mean it is unimportant.

¹⁰ Ohio Administrative Code: [3301-44-02 Statement of purpose](#).

¹¹ See: Kenyon Academic Partnership at: <http://www.kenyon.edu/x42381.xml> and the University of Findlay UF-USA Dual Enrollment Program at: <http://www.findlay.edu/academics/colleges/coed/academicprograms/advanced/graduateoutreach/ufusa/default.htm>

¹² At Findlay a 3.2 accumulative GPA is required for students; 3.6 if the student takes more than 3 courses a semester.

¹³ Ohio Board of Regents (2008). *Request for Applications – Seniors to Sophomores Early Adopters Program*. Columbus: Author.

Why High School Based Dual Credit is Important: A Statewide Context

Innovation has made Ohio one of the largest economies in the world and the state's manufacturing sector is the third largest in the nation. However, Ohio's ranking of 39 among the 50 states in bachelor's degrees neither serves the state in the current economic situation, nor prepares it for long term competition in the global marketplace. Innovation must now drive our efforts to increase education attainment.

When the state's ten year *Strategic Plan for Higher Education 2008-2017* was released by Chancellor Eric Fingerhut in March 2008, one of the key accountability measures for the new *University System of Ohio* spoke directly to the audacious goal established by Governor Ted Strickland to increase college enrollment by 32%. The plan set a new target enrollment of 702,694 for Ohio's public colleges and universities by 2017. The following fall, the system registered 478,376 students—a number that had increased only by 12,520 students, or 2.7% over the previous year.

While efforts are underway to educate the state's current workforce, a key indicator for future workforce development is the percentage of high school graduates who stay in state and go directly to college. In 2001, 45% of all Ohio high school graduates entered our colleges and universities the following fall. Six years later¹⁴ the state enrollment remained at 45%.

The Ohio Board of Regents estimates that 15% of high school graduates go to college out of state. Even with this addition, taking us to 60%, the *National Center for Higher Education Management Systems* ranks Ohio a low 33rd among all states in the college going rate of high school graduates. The leader? Mississippi with 76.1%.

Targeting High School Based Dual Credit to Increase the College-Going Rate

High graduation rates and high college going rates are the norm in high wealth school districts. Take suburban Jackson Local in Stark County where 70% of all high school graduates will enroll in Ohio colleges the next fall. With another estimated 15% going out of state, the district college going rate is essentially maxed out at 85%. Educational attainment is generally higher than the state average in high wealth districts and the parents expect that students will obtain some form of post-secondary education.

School districts classified by the Ohio Department of Education as high poverty urban, small and medium high poverty urban, and high poverty rural, enroll 810,000 of 1.8 million Ohio students. The good news is that many of these districts have made great strides in increasing their high school graduation rates. However, these school districts have not reached a maximum for high school to college going and are usually at a rate that is well below the state average. Frequently persistence rates to the second year of college are much below the state average of 81%. Low educational attainment is the general rule in these communities and the expectation for high school to college matriculation is usually not present and must be created in the school environment.

The issue for Ohio is how to boost the number going on to, and successfully completing, college and how to do so now. Expanding *high school based dual credit* is one answer.

¹⁴ The most recent figures available through the Ohio Board of Regents are for the high school graduating class of 2007.

The Need to Change the Culture: Setting Up All Students for College Success

The replacement of the Ohio Graduation Test with the ACT will help boost college going. For instance in 2002 after Illinois introduced the test, a 6% increase occurred in college enrollments by students from families earning less than \$30,000. The institution of the *Ohio Core* curriculum will also assist, particularly with lowering remediation rates.

However, these new strategies will not move Ohio far enough or fast enough, particularly since they first become effective with the class of 2014, more than half way through the state's 10 year *Strategic Plan*.

The state needs to think differently about what can be done today. Ohio has existing opportunities for students to gain college credit while in high school through dual enrollment or accelerated learning, including Post Secondary Enrollment Option (PSEO), Tech Prep, Advanced Placement (AP) courses, International Baccalaureate, and recently, a new credit flexibility plan and *S2S*. Despite having some of these options for years, only *S2S* was specifically designed as a college access, not a high school enhancement, strategy.

The problem is that using standard dual credit as a high school enhancement strategy does not work for college access.

Dual credit opportunities have been used as high school enhancements for more than a generation. Broadly defined, along with other accelerated learning options, dual credit is actually institutionally pervasive across the United States. Two surveys conducted by the National Center for Education Statistics^{15, 16} found:

During the 2002–03 12-month school year, most public high schools offered dual credit and/or exam-based courses. Overall, 71 percent of public high schools offered courses for dual credit, 67 percent offered AP courses, and 2 percent offered IB courses.¹⁷

Further, the studies noted:

Of the 11,700 public high schools that offered courses for dual credit, 61 percent indicated that they offered courses for dual credit taught on a high school campus, 65 percent offered courses for dual credit taught on the campus of a postsecondary institution, and 25 percent offered courses for dual credit taught through distance education technologies.¹⁸

Despite the number of high schools with dual credit opportunities, actual use has remained low. Approximately 813,000 high school students took college-level courses through postsecondary institutions, either within or outside of dual enrollment programs, during the 2002-03 school year. That number only represented about 5 percent of the nation's estimated 15 million high school students.¹⁹ Even

¹⁵ Kleiner, B., and Lewis, L. (2005). *Dual Enrollment of High School Students at Postsecondary Institutions:2002–03* (NCES 2005–008). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

¹⁶ Waits, T., Setzer, J.C., and Lewis, L. (2005). *Dual Credit and Exam-Based Courses in U.S. Public High Schools: 2002–03* (NCES 2005–009). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

¹⁷ *Ibid*, p.3.

¹⁸ *Ibid*, p.6.

¹⁹ *Dual Enrollment of High School Students at Postsecondary Institutions:2002–03*, p. 7.

though other college-based options may have pushed this enrollment to over 1,000,000, relatively few students, particularly those in urban or low wealth districts, are being served. Barely functioning as an equal access strategy, dual credit does not seem to be functioning as an equitable access strategy at all.

Karl Krueger of the Education Commission of the States, drawing on figures from the National Center for Education Statistics, confirms this. He offers the estimate that only 5% of institutions with dual enrollment programs – or 2% of all institutions – had dual enrollment programs geared toward high school students at risk of academic failure.²⁰

Given this heritage, why are so few students participating and why has dual credit not expanded beyond a high school enhancement strategy?

In part, the restrictions put into place by states and the fact that institutions of higher education and schools often exceed such restrictions can be seen as contributing factors. Restrictions at whatever level are symptomatic of larger issues that are seldom well articulated.

These are the issues of belief, accreditation, and benefit.

Belief

Belief that all students, even low achieving students with adequate support, can master college level coursework while in high school is a critical ingredient, even a precursor, to expanding dual credit, and particularly *high school based dual credit* as a college access strategy.

This is different from the concept of equal access, meaning more opportunities for low income or underserved populations. Often, this still means “high performing” low income or underserved populations. State policy and many local partnerships appear increasingly to be working with the concept of equal access; few seem to be focusing on belief and equitable access. As the Western Interstate Commission on Higher Education (WICHE) notes this also reflects in policy,

Much of the language in statute and board policy targets certain students – those who are academically talented, prepared, or highly motivated, not necessarily those who are economically disadvantaged or who might benefit from getting a head start on college.²¹

An example of a local program working on this belief, and among the largest in the nation, is the *College Now* program of the City University of New York (CUNY) that today partners 250 high schools with CUNY’s 17 undergraduate colleges. The program serves over 30,000 students.²²

Interestingly, there were two factors in the late 1990s that promoted both the creation and expansion of the *College Now* program. The first factor was an increase in graduation requirements by New York State; the second was a desire on the part of CUNY to eliminate the need for remedial coursework among New York City students who comprised the majority of the institution’s enrollment.

²⁰ Krueger, K. (2006). *Dual Enrollment: Policy Issues Confronting State Policymakers*. Denver, Colorado: Education Commission of the States

²¹ Western Interstate Commission for Higher Education (2006). *Accelerated Learning Options: Moving the Needle on Access and Success*. Boulder, Colorado: Author, p. 20.

²² Full information about the College Now program can be found at: <http://collegenow.cuny.edu/>

Therefore, *College Now* is not just about dual credit. The program incorporates two other critical components that set it apart from many other local and most state mandated programs. *College Now* works to provide skill development for those students not yet ready to take dual credit courses and collaborates with high school teachers and administrators on curriculum and professional development.

As CUNY's *College Now* program demonstrates, there is a difference between the use of dual credit as an access strategy for underrepresented students and equitable access for all. The latter requires a fundamental belief that, given the proper support, all students can meet the requirements for, and succeed in, college level work in high school.

This is a challenge met so far, by design, through only one program in Ohio, Early College High Schools. For Stark and Wayne Counties, Canton's Early College High School serves as a powerful exemplar.

For Stark State College of Technology and the Canton City Schools, early college high school was a risk. Many adults sincerely wondered if the students could meet the college standards of academic rigor because the students were not selected on the basis of previous high academic performance. Instead, they were first in the family to go to college, reflective of the minority population in Canton City Schools, and classified as high poverty students. A unique team teaching arrangement between high school teachers and college professors was created to serve students as a cohort in the first two years of a four year program. If individual students needed extra support, college tutors provided it. This collaboration rapidly brought students up to the level they needed to succeed in college coursework.

After the first class in the summer of 2005 had a 95% success rate in passing the first six hours of dual credit coursework, adults became believers and now thought that the school's goal of both a high school diploma and associate degree could be met.

Prior to early college high school, the Canton community saw dual credit as a few high performing students taking a course on a college campus. After the first summer of early college high school, the community began to ask, "Why can't we do this for other students?" During the summer of 2006, the Stark Education Partnership drew upon the lessons from early college high school and launched a *high school based dual credit* pilot for other districts. Sixty-five students repeated the success of early college.

When Ohio created other opportunities with House Bills 115 and 119 in the 127th General Assembly, and the *S2S* program, the rest of Stark County was ready. Wayne County also became involved.

Stark State College of Technology, who took the risk with Early College High School, was the higher education partner in 62 of the 90 *high school based dual credit* classes offered during the 2008-09 academic year.

It would be a mistake to assume that *high school based dual credit* courses are open to all students within Stark and Wayne Counties, regardless of their current academic standing. This is not the case. What is happening is that the culture is beginning to shift towards the expectation that all can do this successfully. That expectation, prompted by belief, begins to foster change. The presence of qualified teacher/adjuncts on high school campuses and the magnitude of the expansion of *high school based dual credit* classes related in this study begin to produce a system impact. The issue is no longer one of a few discrete, highly selective programs. Consider the results in the Canton City Schools.

The year early college high school was being planned in Canton, only 29 students participated in dual enrollment through PSEO. This past year, 156 students in Canton were taking dual credit courses at their high schools in addition to 287 students at early college high school. These numbers are a remarkable

contrast to the 19 students who had gone to college from Timken High School in 2004—the year before Early College High School began.

Accreditation

Accreditation is directly related to the issue of quality of coursework and is of vital concern to institutions of higher education. “If access is broadened, if high school teachers serve as instructors, and if courses are taught on a high school campus then quality will suffer,” goes this argument.

There have been some attempts over the years to adopt broader guidelines for dual credit offerings. One of the most significant is by The National Alliance of Concurrent Enrollment Partnerships (NACEP).²³ The organization was founded in 1999, following an earlier convening of professionals by Syracuse University. From its original 20 founding institutions, NACEP’s membership has grown to 352 members (146 institutional and 206 individual), in 29 states.

In 2002 NACEP adopted standards to provide measurable criteria of elements in five categories that the organization considers “markers of excellent programs”. These are curriculum, faculty, students, assessment, and program evaluation. Based on these standards, NACEP accredits programs through a peer review process.

A landmark model that has worked with issues of accreditation with *high school based dual credit* is Syracuse University’s *Project Advance*. The program began in 1972 when seven local high schools had asked the university to develop such a program for qualified high school students. Today Project Advance partners with 165 high schools.²⁴ *Project Advance*’s trademark slogan is “Our Courses, Your Classroom.” Teacher requirements vary by course taught but of particular interest is a degree of flexibility surrounding teacher qualifications and its relationship to the issue of accreditation:

For some subjects, the master’s degree requirement in the subject area may be waived if the teacher has substantial teaching experience, coursework related to the particular Syracuse University course, or experience in business and industry... In some cases, certification to teach a course will be made contingent upon completion of additional graduate coursework, field experiences, or a program of structured independent study.²⁵

Syracuse is a long established program that remains a notable exception in recognizing teacher experience. Increasingly, teacher qualifications, as well as the rigor of *high school based dual credit* courses is generating concern.

Some states like Utah have instituted policies dealing with accreditation and course quality. Utah requires that public school teachers must first be approved as adjunct faculty and supervised by a state institution of higher education. The state also requires that the appropriate department or program at an institution of higher education approve certain course content, procedures, and teaching materials in dual credit. Most significantly, Utah has instituted assessment tools to measure whether students are receiving a quality, college-level education when enrolled in dual credit programs. These concerns are also emerging in Ohio.

This is underscored by a recent policy analysis of Ohio’s dual enrollment programs. *Jobs for the Future*, who conducted the analysis, raised two specific quality concerns that are relevant to the situation in Stark

²³ See: The National Alliance of Concurrent Enrollment Partnerships at: <http://www.nacep.org/>

²⁴ For complete information see: Project Advance at: <http://supa.syr.edu/index.php>

²⁵ Project Advance. *Administrative Requirements* at: <http://supa.syr.edu/partners/index.php?p>

and Wayne Counties.²⁶ The first centered on the fidelity of *high school based dual credit* coursework to college-based coursework. The second concerned whether or not higher education set the minimum instructor qualifications for dual credit coursework taught at high schools. It was found by *Jobs for the Future* that there was no current PSEO policy in either regard. The situation is different in Stark and Wayne Counties.

High school based dual credit courses in Stark and Wayne Counties adhere to college student entrance requirements, syllabi and meet college standards for content, instruction and grading. Each *high school based dual credit* course pairs a high school teacher/adjunct with a college professor/mentor. High school faculty in Stark and Wayne Counties are subject to departmental review and identical qualifications at partner colleges and universities as would apply to all others seeking adjunct status. Additional requirements are outlined in separate memoranda of understanding between districts and institutions of higher education. Commencing in the spring of 2007, and continuing to the current day, agreements between the districts and partner institutions of higher education overseen by the SCESC maintain quality assurance.

In order to assist faculty in meeting adjunct qualifications, SCESC and the Stark Education Partnership has teamed to promote what, to the best of our knowledge, is the largest professional development effort in the state targeted to gain high school teachers the qualifications to become adjuncts.

Through a grant of \$113,000 from TGTM in 2007, the Stark Education Partnership supported teachers in obtaining content-oriented master's degrees or additional graduate content courses to meet the qualifications necessary to achieve adjunct status. Forty-seven teachers across 14 Stark County public school districts were supported in their coursework and 28 have qualified for adjunct status at this time. In addition, SCESC supported 34 math and science teachers who took another 38 graduate courses.

Math courses were offered by Kent State University through the Masters in Mathematics for Educators (MIME) Program. The masters degree program was developed through a partnership with Kent State through the county's Math and Science Partnership (MSP) grant. Teachers in this program earn a masters degree in mathematics that includes at least 18 graduate content hours. Additional graduate math courses were offered through the University of Akron.

Teachers also completed online science courses at the University of Mississippi, University of Nebraska and the Ohio State University.

Benefit

Benefit is the third factor that often promotes or inhibits growth of dual credit options. Benefit here, means to all parties and is often difficult to ascertain due to the relatively sparse data that has been collected on dual credit programs. What can be seen, in states like Ohio, is that there is an immediate financial liability for both districts and institutions of higher education in conventional programs such as PSEO.

Inversely, is there a benefit? This has been difficult to calculate. WICHE offers an explanation from the state perspective.

²⁶ Vargas, J. (2009). College and Career Ready Policy Institute: Ohio Inaugural Work Group Meeting *Systems integration Workgroup*. July 28, 2009. A power point presentation for the Ohio Board of Regents. Columbus: Jobs for the Future.

The financing of accelerated learning options is a complex issue, with little specific information from states on funding levels, the sources of those dollars, and the distribution of dollars among programs or students. States should be expected to estimate expenses and determine cost savings or lack of savings associated with accelerated learning options for students and the state. Few states do this, however, and an important reason why may be the lack of incentive for anyone to take responsibility for this kind of reporting. In most states, no single agency or office is charged with performing this kind of follow up, with the exception of the auditor's office.²⁷

Public school districts, public colleges and universities, arguably exist to benefit the public good. The same might even be said to be true for private institutions that likewise have the end goal of promoting an educated populace. Yet, these institutions are not charities and must operate on a sound financial basis.

Given these contexts, as WICHE noted, few have determined the savings, or lack of savings, in instituting such programs. Further, our capacity to track dual credit students through college enrollment, degree completion, and workforce entry is non-existent.

What has been learned in Stark and Wayne Counties about the benefits of expanding *high school based dual credit* courses?

- There is a financial benefit to students and parents as represented in savings for tuition and books, dependent on enrollment in higher education and *high school based dual credit* course acceptance. This value since the summer of 2007 may be as high as \$2,750,000.
- There has been a benefit to districts and teachers in the form of subsidized professional development resulting in enhanced qualifications for 81 teachers. The estimate here exceeds \$200,000.
- Short-term, additional grant funds, such as *S2S* have funded additional in-district and college components to support *high school based dual credit*.

Perhaps more important is what we do not know:

- The absolute and long-term real financial benefit to students and families;
- the impact of *high school based dual credit* courses on raising student achievement, high school graduation rates, and district instruction;
- whether *high school based dual credit* results in increased college enrollment, retention and completion, particularly for partner organizations;
- whether there is a summative financial benefit or liability for the state, districts, colleges and universities;
- and what long-term community benefits might accrue.

What is known seems promising. Long-term, both Stark and Wayne Counties and the state of Ohio will need to evolve a model that considers these and other possible benefits and deficits to fully develop an analysis. As WICHE stated, the financing is a complex issue. Inherent in such a model must be a consideration of related consequences. For instance, remedial coursework offers an up-front funding stream for many colleges and universities. If dual credit, particularly *high school based dual credit*, begins to eliminate the need for remedial coursework, will the added retention and completion rates compensate? No one knows for sure at this time.

²⁷ *Accelerated Learning Options: Moving the Needle on Access and Success*, p. viii.

Given ongoing issues with belief, accreditation and benefit, to what degree can it be said that dual credit is functioning as an equal or even equitable college access strategy across the nation; how would we know in a single state like Ohio? Knowledge is hampered by state data collection techniques. This has prompted WICHE to observe that data is seldom effectively collected in any detail:

Absent that kind of detail, it is impossible to know the extent to which low-income students benefit from these opportunities. Without detailed information on who participates and how they participate, policymakers, educators, and practitioners have no basis for identifying program failings and designing program improvements.²⁸

Local evaluations can also suffer from such limitations. A new methodology advocated by the *World Bank* to look at the impact of programs will be employed by this study. *Impact Evaluation*, as the methodology is termed, will give an opportunity to study the real and emerging benefits of *high school based dual credit* in Stark and Wayne Counties.

²⁸ Western Interstate Commission for Higher Education (2006). *Accelerated Learning Options: Moving the Needle on Access and Success*. Boulder, Colorado: Author, p. 74

III. Methodology: Impact Evaluation

Although accelerated learning programs are increasingly popular, there is very limited evidence based research to demonstrate their effectiveness in improving access and success for students, particularly those who are economically disadvantaged or are racial/ethnic minorities. Additionally, little information is available to document that these programs are cost effective for states or students.²⁹

In recent years, a new form of assessment has emerged as a way to look at the effects of policies and programs on individuals, their families, companies and organizations, and even whole communities, states or nations. Known as Impact Evaluation, this assessment starts with a central question. “What would have happened to those receiving the intervention if they had not in fact received the program?”

In order to fully evaluate the impact of *high school based dual credit* courses a system would need to be developed that would track of students through college enrollment and completion, and compare them to peers of similar demographics and achievement who had not taken such courses. Such a system of tracking does not exist in Ohio today.

Because it seeks to estimate the magnitude of certain effects with clearly indicated causation, impact evaluation is increasingly being used to inform policy makers on decisions as to whether to expand, modify, or eliminate a particular program or policy.

That evaluation goes far beyond just a measurement of program results. As Mathematica, Inc., one of the nation’s preeminent policy research organizations, puts it:

Making policy decisions usually involves more than just understanding program impacts. It's also important to know the context and conditions in which a program produces results, the populations for whom it is effective, and the relationship between costs and effectiveness. State and federal governments, funders, policymakers, and community stakeholders must constantly analyze how limited resources can be used to produce the greatest benefits.³⁰

The World Bank, advocating the use of Impact Evaluation to measure the success of numerous projects around the world, notes that “an impact evaluation must estimate the counterfactual, which attempts to define a hypothetical situation that would occur in the absence of the program, and to measure the welfare levels of individuals or other identifiable units that correspond with this hypothetical situation.”³¹

After three years of growth, Stark and Wayne Counties are in a position to begin to formulate conclusions about both the context and conditions surrounding that growth. In a broad sense, that context will be

²⁹ Western Interstate Commission on Higher Education (2006). *Accelerated Learning Options: Moving the Needle on Access and Success*. Boulder, Colorado: Author, p.81.

³⁰ Mathematica, Inc. *Program Evaluation: Choosing Well Between Experimental and Quasi-Experimental Methods* at: <http://mathematica-mpr.com/about%20us/programevaluation.asp>

³¹ The World Bank. *What is impact evaluation?* at: <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY/EXTISPMA/0,,menuPK:384339~pagePK:162100~piPK:159310~theSitePK:384329,00.html#whyconduct>

centered in several distinct domains. These are the student, teachers, professors and colleges, districts and communities, families and the state.

For the purposes of this report, that counterfactual situation will be Stark and Wayne Counties during the 2005-06 academic year. The specific context is the potential for further PSEO growth. This year was selected as it represents the counties, and particularly Stark, prior to the institution of the *Summer Scholars* program by the Stark Education Partnership. *Summer Scholars* was the first formal *high school based dual credit* program aside from Early College High School in Canton.

There are, however, two assumptions governing this impact evaluation. The first assumption is that, minus any other influences, the conventional PSEO program would not have substantially grown in either Stark or Wayne Counties. How valid is this assumption?

Charts below display the four-year trend in PSEO enrollments both in our counties and for the state of Ohio. While steady growth did occur, numbers were not dramatically increasing.

Historic PSEO Participation in Stark and Wayne Counties

	FY 03	FY 04	FY 05	FY 06
Stark	296	339	317	363
Wayne	85	84	98	123

Overall statewide participation in PSEO for the same period of time displays steady but not dramatic growth.

Historic PSEO Participation in the State of Ohio

FY 03	FY 04	FY 05	FY 06
9,484	9,666	10,364	10,656

The second assumption is that participation and/or growth in PSEO, College Tech Prep and AP coursework was not supplanted by *high school based dual credit* enrollment. In essence, *high school based dual credit* courses in Stark and Wayne Counties represent new opportunities.

We have some evidence from the 2007-08 academic year (latest available) that this is the case:

- AP students increased in Stark County from 1,561 to 1,618 students during that year, with an increase in number of tests from 2,427 to 2,556.³²
- While AP participation in Wayne County did decrease from 205 to 166 students in 2008, numbers have fluctuated over the last five years with the greatest number of students being in 2004 at 213.³³

Even using FY 07 PSEO³⁴ historical participation figures, which may be confounded with some dual credit reporting, the number of students increased in both Stark and Wayne Counties. College Tech Prep participation increased from 1,317 students to 1,786 that same year.

³² Data supplied by the College Board, Columbus, Ohio office.

³³ Data supplied to the Stark Education Partnership by P. Renner, College Board, Columbus Office.

IV. Data Collection and Limitations

Data collection consisted of reported participation and grades by class, survey administration to student participants, and interviews of high school faculty and college professor/mentors. Surveys were returned by 1,137 students, representing 70% of the participants and interviews were conducted with forty-four of the 60 high school teachers in Stark and Wayne Counties and 20 of the college professor/mentors.

Sixty-five percent of the students reported that they were seniors, 27% juniors, and 8% sophomores.

This study made use of public data and accessible and verifiable information, as indicated in accompanying footnotes and references. This is not to mean that such data is always undisputed, or that there are no questions as to accuracy of reporting or to its interpretation. Jobs for the Future, for instance in its analysis, noted, “OBR (Ohio Board of Regents) data reports 3,000-4,000 more students participating in PSEO at Ohio’s Public Postsecondary Institutions compared to the total PSEO student count reported by the ODE (Ohio Department of Education)”.³⁵

Teachers reported on an individual basis data from ninety separate *high school based dual credit* courses. As with any large data collection effort, there is an assumption that all numbers are correctly tabulated and reported without error.

In order to facilitate participation in, and the return of student questionnaires, questions were kept to a minimum. This accounted for a high return by 70% of the participants, lending fidelity to the findings. It was also determined by the researchers that highly sensitive questions, such as family financial status and grade point average, represented an unwarranted intrusion of privacy on the part of a third-party, though such information had its potential use.

The districts, however, may wish to do additional analysis on this basis.

³⁴ See Ohio Department of Education, *PSEOP Historical Participation* at: <http://education.ohio.gov/GD/Templates/Pages/ODE/ODEDetail.aspx?page=3&TopicRelationID=695&ContentID=18633&Content=62953>

³⁵ College and Career Ready Policy Institute: Ohio Inaugural Work Group Meeting *Systems Integration Workgroup*. July 28, 2009

V. Results and Analysis

This section reports both the impact and program findings from the study with associated analysis.

Prior to the Stark's *Summer Scholars* in 2006 and the first courses under HB 115 in the summer of 2007, a *high school-based dual credit* course was not an option for students in Stark and Wayne Counties. PSEO at both the county and state level exhibited no promise of substantial future growth. Returning to this counterfactual, the question becomes, "What is different today because of *high school based dual credit*?"

In order to answer this question, it is necessary to look at the findings from this study and determine what can be fairly attributed to the intervention of *high school based dual credit* courses.

For the purpose of this analysis, results are categorized as either Impact or Program Findings and are organized according to specific domains. These domains are student, teacher, college professor, district and community, and family.

A. Student Domain

S.1. IMPACT FINDING: Over three times as many students are enrolled in high school based dual credit as were in conventional PSEO in 2006.

Prior to Early College High School in Canton and the *Summer Scholars* pilot in Stark County in 2006, the primary way for students to earn dual credit was, as noted, under the state's conventional PSEO program. *High school based dual credit* courses under HB 115 commenced in the summer of 2007, generally corresponding to the end of Ohio's fiscal year. The PSEO figures for FY 07 may then be considered to correspond to the last year in which this figures were not impacted or inflated by *high school based dual credit* courses taught under that bill or HB 119.

For the purposes of this study, PSEO will be used as a baseline. A cautionary note is needed with this comparison. Students may still apply for conventional PSEO. This means that a certain number of students are still using this program and those numbers do not reflect in *high school based dual credit* enrollment displayed below.

Given its historical performance of at the state level and in Stark and Wayne Counties, there is no evidence that PSEO would ever have expanded to serve this number of students. There are additional questions concerning whether or not *high school based dual credit* is supplanting existing PSEO, College Tech Prep, or AP coursework.

High School Based Dual Credit Enrollment Compared to PSEO Enrollment

	PSEO FY 07	High School Based Dual Credit FY 09
Stark	396	1,294
Wayne	114	318
Total	510	1,612

S.2. IMPACT FINDING: Nearly all high school based dual credit students say they already plan to go to college.

Throughout all three evaluations, the percentage of students who say they already had planned to go to college has remained statistically high with only a handful of students changing their mind after taking a *high school based dual credit* course.

Findings of this nature carry a cautionary note, as there is a risk that students, particularly those taking a course that earns college credit, may be reluctant to admit to not having college aspirations. Simply put, they might be saying what they think the researchers want to hear. There may also be a wide gap between saying that one plans to go to college and the reality of attending.

While this finding may have some significance, the same condition is probably paralleled in PSEO, i.e. that all students intend to go on. There were, however, slight shifts in the percentage of students deciding to go to college each year after taking *high school based dual credit* courses. For 2008-09 this would have represented 16 students.

Student Plans about Going to College

	Summer 2007	2007-08	2008-09
Plan to go before course	98%	97%	95%
Plan to go after course	100%	99%	96%

S.3. IMPACT FINDING: High school based dual credit participants in Stark and Wayne Counties reflect a greater gender balance than state PSEO averages. Minority participation mirrors Stark County demographics at 11% but exceeds the 4.7% population rate in Wayne County.

KnowledgeWorks and WICHE found in their dual enrollment study that 64.6% of PSEO participants were female and nine out of ten were white, non-Hispanic.³⁶ While minority figures for 2008-09 generally reflect these findings, gender balance is far greater.

Given that a significant gender imbalance has existed in PSEO, the 50% male and 50% female participation in *high school based dual credit* reflects a substantial difference. However, whether this demonstrates a significant impact on access, as females are generally more likely to go to college in Ohio, is not known.

³⁶ *The Promise of Dual Enrollment*, p.26.

Stark County has an 11% and Wayne County a 4.7% minority population. With the largest *high school based dual credit* enrollment in Stark, minority participation can be said to be representative of, if not surpassing these averages.

Minority, Gender and First Generation College-Goers

	Minority	First Generation	Male	Female
2007-08	28%	30%	44%	56%
2008-09	11% ³⁷	20% ³⁸	50%	50%

S.4. IMPACT FINDING: Despite enrollment growth, 80% of high school based dual credit students still score “B” or above.

Student grades often represent a problematic statistic for comparative purposes. However, even with significant enrollment growth and a diversification of course offerings, students are maintaining the same degree of success in *high school based dual credit* courses as the previous year.

Of the 1,612 grades issued in 2008-09, thirty were F’s. Less than 100 grades (317 credit hours) were below the “C” grade generally required for transfer or recognition by colleges and universities. Accurate tracking for students who drop courses was instituted for the first time in 2008-09.

A further indication of student success can be found in the higher grade ranges. A grade of B-, or above, was earned by 323, or 76.7% of the students during the 2007-08 academic year. The percentage of students in this category during the 2008-09 academic year increased to nearly 80%.

This may be a significant finding as the large increase in students between 2007-08 and 2008-09 could possibly reflect a broadening of access in terms of relative grade point averages. Without corresponding GPA’s for *high school based dual credit* students over both years, this will remain unanswered.

Student Grades for High School Based Dual Credit Courses

	A	A-	B+	B	B-	C+	C	C-	D+	D	F
Summer 2007	45%	6%	4%	26%	4%	0%	13%	0%	2%	0%	0%
2007-08	38%	6%	7%	21%	5%	3%	14%	1%	1%	2%	2%
2008-09 Half Year Course	42%	2%	2%	27%	1%	1%	15%	0%	0%	4%	3%
2008-09 Full Year Course	41%	2%	2%	34%	1%	0%	14%	0%	0%	3%	1%

There is an additional factor that may be having a substantial impact on student grades, the finding and the subsequent findings on hours earned at “C” or above on students seeking additional help. Most high school based dual credit course are for three college credit hours. Unlike on a college campus, many

³⁷ NR 6%

³⁸ NR 7%

courses cover an entire academic year and are accompanied by five classroom sessions a week, instead of three. The full impact of this additional time devoted to coursework is not understood at present.

S.5. IMPACT FINDING: Students in Stark and Wayne Counties earned over 5,000 hours of college credit at “C” or above.

A grade of “C” is generally the minimum that many colleges and universities will consider for full credit on transfer courses. As such, student performance here can be considered as an indicator of program success.

Only 317 hours or less than 6% of the total hours attempted by all students fell below a “C”.

***2008-09 College Hours Attempted and Earned
by High School Based Dual Credit Students***

Location/ Semester	Hours Attempted	Hours “C” and Above
Stark I	1,027	946
Wayne I	198	194
Stark II	3,259	3,037
Wayne II	842	832
Total	5,326	5,009

S.6. PROGRAM FINDING: Forty-two percent of students take advantage of additional help or assistance for high school based dual credit courses.

Over one-half of the students during the 2008-09 academic year reported that they did not stay after classes for additional help. Yet, a solid minority does take advantage. This question may have limitations in that it presumes such help remains readily available across all courses. It is also clear that several teachers did not structure additional help beyond what they would normally make available to students. Forty-two percent of the students did seek additional support in mastering class material.³⁹

There may be another factor influencing the percentage of students who seek additional help. Most *high school based dual credit* courses are offered for three hours of college credit. Unlike on a conventional campus where a three hour course is taught once or three times a week for a semester, *high school based dual credit* courses often extend a full academic year with five weekly classes. Students taking high school based dual credit courses in this format accounted for 1,236 of the 1,612 total enrollments. The greatest percentage of students seeking additional help four or more times was during the summer of 2007 when courses were taught in an accelerated fashion.

Further study will be needed to determine the full impact of this extended time frame, particularly on lower performing students.

³⁹ Note: Forty-six students were included in the summer '07 sample; 270 in the 2007-08 and 1,131 in the 2008-09.

***Participation in Opportunities for Additional Help
by High School Based Dual Credit Students***

Number of Times	Summer 2007	2007-08	2008-09
0	43.4%	40.3%	58.0%
1-3	13.0%	45.7%	40.0%
4 or More	43.4%	14.0%	2.0%

S.7. IMPACT FINDING: The majority of students taking high school based dual credit courses have no prior experience with early college opportunities.

For the majority of students taking *high school based dual credit* courses, this is their first experience with an early college opportunity. This finding continues to support the notion that *high school based dual credit* is functioning to expand such opportunities to more students. Only 7% of the 2008-09 students reported that they had experienced four or more early college opportunities prior to taking their *high school based dual credit* course.

This finding supports the notion that *high school based dual credit* is reaching a broader population of students and further lessens the chance that it is supplanting PSEO, College Tech Prep, or AP coursework. The percentage equates to over 850 students and indicates that *high school based dual credit* represents a new concept different from PSEO.

Ever Taken an AP, Honors, or PSEO Course?

	Summer 2007	2007-08	2008-09
Yes	43.4%	46.7%	46.0%
No	56.5%	52.6%	53.0%

S.8. IMPACT FINDING: The number of high school based dual credit classes in 2008-09 reached 90, nearly four times the number in 2007-08.

The sheer number of *high school based dual credit* classes offered in Stark and Wayne Counties has grown significantly. Enrollment has ranged from as small as one to 46 students. The majority of these courses are focused on math, English and science, though courses as diverse as music theory, media, and sociology are offered.

Growth in Number of High School Based Dual Credit Classes

Summer 2007	2007-08	2008-09
9	23	90

If Stark and Wayne Counties can sustain and continue to expand such opportunities, an ever-widening menu of opportunities can be offered to students. What is not presently known is the degree various colleges and universities might accept such courses, particularly those that depart from core content areas. The expansion in the number of classes is, in itself, indicative of program growth though most still remain focused on math and science. Two factors contribute to this. The first is the focus of both HB 115 and 119 on STEM disciplines, the second was the presence of the MSP grant in Stark County and the resultant professional development supported by the grant.

B. Teacher Domain

T.1. IMPACT FINDING: The number of high schools teachers serving as instructors for high school-based dual credit courses has expanded substantially since the summer of 2007.

The effective *high school based dual credit* staff for 2008-09 is 60 teachers. Of these, 40 are in Stark County districts and 20 in Wayne.

Growth in Number of High School Teachers Teaching High School Based Dual Credit Courses

	Summer 2007	2007-08	2008-09 ⁴⁰
Teachers	9	19	60

Added to these teachers are those who obtained graduate content hours through a grant from TG™ awarded to the Stark Education Partnership in 2007. Twenty-eight TG™ supported teachers have now met the qualifications to become adjuncts, 19 more are in progress.

The SCESC has also supported an additional 34 math and science teachers this past year in pursuing graduate level coursework to obtain adjunct status. Together with all those who have taught dual *high school based dual credit* courses over the past three years, these individuals form a growing high school/adjunct teaching force, now at 152 teachers.

By comparison, there were 1,032 high school teachers in math, science, and foreign languages in Stark County when HB 115 was enacted. A survey of 102 teachers in these disciplines conducted by SCESC indicated that while interest was high in becoming adjuncts, 59 had no Master's level content work in the subjects they taught. Of those having the content courses, only 12 were acceptable by the colleges and universities as adjuncts.

Do these teachers represent the only high school teachers across two counties who are, or can, qualify as adjuncts? The answer almost certainly is not. Save for math, science, and foreign language teachers, no comprehensive survey has been made across all disciplines nor is it known how many teachers have independently obtained adjunct status with a college or university. What the teachers do represent is a baseline teaching force.

The future expansion of dual credit in the high schools remains dependent on a highly qualified teaching staff that meets the requirements of partner colleges and universities to obtain adjunct status. The growth

⁴⁰ Note: teachers for Wayne and Stark County only.

of teachers in school districts in Stark and Wayne Counties who meet these qualifications is one of the most significant impacts of the program.

T.2. PROGRAM FINDING: High school teachers believe they are adequately supported by higher education faculty and institutions.

Teachers noted varying levels of support from the partnering colleges and liaisons prior to and during their *high school based dual credit* teaching experience. Support ranged from none for those with prior adjunct status to an abundance of supportive materials and contact.

High school teachers working as adjuncts who have not worked on a college campus evidenced a struggle with the different cultures. High school curriculum and context creates one set of expectations while the college culture functions with a different set of expectations. Teachers had suggestions to bridge that gap. Many of the teachers suggested or endorsed the idea of a network for new adjuncts teaching *high school based dual credit*. Whether face-to-face or virtual they felt a network would allow them to share best practices and strategies for success and to problem solve.

The majority of teachers (91%) felt that the level of support was adequate. This contrasts with 59% for the 2007-08 academic year.⁴¹

Teacher Rating of College Faculty, Institution Support

Excellent	30%
Good	36%
Adequate	25%
Poor	9%

T.3. PROGRAM FINDING: Teachers assess student performance in high school based dual credit courses as good or excellent.

Teachers felt that their students performed well in *high school based dual credit* courses. Significantly, no teacher rated student performance as being poor.

Teacher Assessment of Student Performance in High School Based Dual Credit Classes

Excellent	25%
Good	66%
Adequate	9%
Poor	0%

T.4. PROGRAM FINDING: Over half of the teachers find high school based dual credit content harder than in regular courses.

⁴¹ Note: Not all 50 teachers answered every question. Percentages should be interpreted as representative of those responding. The 2007-08 N=17 teachers.

Most teachers rated the content of their *high school based dual credit* courses as harder than that of their regular courses and cited differences in pace and depth, a lack of busy work and a higher level of thinking.

***Teacher Rating of the Content
of High School Based Dual Credit Courses***

Harder	58%
Same	42%
Easier	0%

C. College Professor Domain

Interviews were successfully conducted with twenty of the college faculty mentors. All college faculty interviewed indicated a willingness to continue to work with districts on *high school based dual credit* offerings and 89% felt that such courses benefited their institutions as well. However, communication and contact with teachers appears to be an issue.

During 2007-08 academic year 40% of college faculty had taught in a high school setting, this compares to 30% this year. Thirty percent also indicated that they had prior experience working with K-12 faculty on issues of instruction and curriculum.

C.1. PROGRAM FINDING: College faculty view professor mentor/teacher relationship as critical to program success but most feel they are only occasionally, or rarely, consulted.

Significantly, 100% of the college faculty interviewed felt that the professor mentor/teacher relationship was critical for program success. However, the majority indicated that contact occurred only occasionally.

***To what extent did your teacher
call upon you for support/advice/consultation?***

Often	11%
Occasionally	72%
Rarely/None	17%

C.2. PROGRAM FINDING: College faculty are largely unaware of whether the rigor and content of the courses were being adequately met in the high school setting.

The fact that the majority of faculty is not aware of whether or not rigor and content has been maintained points to a need to improve communication. Interestingly, many college faculty mimicked suggestions from high school teachers that some form of internet-based interface be developed.

Do you have any insight into whether the rigor/content of the course has been adequately met in the high school setting?

Yes	35%
No	10%
Don't know	55%

In this same regard, college faculty also expressed concern on the communication or information they received about the program. Forty percent felt it had been only fair, 20% rated it as poor.

The now concluding \$7.5 million National Science Foundation Math and Science Partnership grant in Stark County represented a key opportunity for high school and college faculty to build relationships to improve math and science instruction. By design, that grant fostered college and high school faculty collaboration. While it is beyond the purview of this study to determine the impact of that grant on current *high school based dual credit* offerings, the fact that 30% of college faculty did have prior experience working with high school teachers may be reflective of specific outcomes emerging from MSP.

One outcome that MSP did produce was that both college faculty and high school teachers came to respect and understand each other's respective skills and how they needed to work together to create an integrated P-16 system of math and science education.

The notion of continuing a blending of both cultures, particularly in terms of alignment, expectation and rigor, becomes all the more critical since the MSP grant has expired. The state of Ohio has provided few structured opportunities for high school and college faculty to collaborate in an ongoing fashion.

The growth of *high school based dual credit* has opened possibilities for additional, and perhaps ongoing collaboration, a sort of MSP effect. Such ongoing collaboration can only benefit high school teaching, the preparation of students for college, and college instruction as well.

D. District and Community Domain

D.1. IMPACT FINDING: There is an expanding fitness for access based on district and community type.

If *high school based dual credit* is to serve effectively as an expanding college access strategy in Stark and Wayne Counties and particularly serve communities and a population of students who may have fewer opportunities to go on to college, how well is the program accomplishing these goals? One way to look at this is to examine the districts in which *high school based dual credit* has grown relative to the Ohio Department of Education's *Typology of Ohio School Districts*. The typology was developed by ODE to "provide a rational basis for making data-driven comparisons of groups of districts."⁴²

⁴² See: Ohio Department of Education. *Typology of Ohio School Districts* at: <http://education.ohio.gov/GD/Templates/Pages/ODE/ODEDetail.aspx?page=3&TopicRelationID=3&ContentID=12833&Content=61540>

***Districts Where High School Based Dual Credit is Offered
in Stark and Wayne Counties By Typology Category***

	Type	High School Based Dual Credit Offered	'07 CGR ⁴³	High School Based Dual Credit Not Offered	'07 CGR
1	Rural/agricultural – high poverty, low median income	Sandy Valley Minerva	49% 38%	Southeast	39%
2	Rural/agricultural – small student population, low poverty, low to moderate median income	Fairless Osnaburg Tuslaw Dalton Green North Central Northwestern Triway	48% 50% 46% 53% 43% 31% 45% 39%	Marlington	44%
3	Rural/Small Town – moderate to high median income				
4	Urban – low median income, high poverty	Canton Local Massillon Orville Ritman Wooster	43% 50% 47% 38% 40%	Alliance	31%
5	Major Urban – very high poverty	Canton	37%		
6	Urban/Suburban – high median income	Lake Northwest Perry Plain	54% 60% 60% 52%	Chippewa North Canton	49% 64%
7	Urban/Suburban – very high median income, very low poverty	Jackson	66%	Louisville	58%

High school based dual credit in Stark and Wayne Counties centers in five of the seven major categorizations of districts. Sixteen of the 21 districts offering *high school based dual credit* have substantial poverty and/or issues centered on adult education attainment. This is not to minimize or preclude the presence of *high school based dual credit* in the remaining five districts but reinforces that there is a growing match between emerging programs and communities in the highest need categories.

This is supported by the additional finding indicating the majority of students (53%) in Stark and Wayne Counties have never experienced an early college opportunity. Twenty percent are first generation and twelve percent are minorities. Males and females, once again, enroll equally.

⁴³ CGR-College Going Rate: Percent of graduates who went immediately to college in Ohio.

E. Family Domain

F.1. IMPACT FINDING: There is growing fiscal benefit to students, families, and the community, potentially as high as \$2,132,560 in 2008-09.

Financial benefit assumes that students will pursue higher education and that courses will be fully transferable. Fees excluded, tuition can range from \$103 per credit hour at Stark State College of Technology to \$384 at Kent State Main or \$400 at the University of Akron. At private schools tuition is higher. The University of Findlay, for instance, has a regular academic program tuition fee of \$12,508. The range used here will be predicated on Stark State and University of Akron fees and will assume a transferable grade of “C” or better.

At 1,026 earned hours in Wayne County, the potential tuition savings can range from \$105,678 to \$410,400. In Stark County, this range at 3,983 hours is \$410,249 to \$1,593,200.

Added to these projected savings on tuition are savings reflected in textbooks and, sometimes, fees. A conservative estimate based on statistics from the American College Bookstore Association, might place this at \$80 per student. This would amount to another \$128,960.

There is a value in such savings to a community. This is dependent on the number of students who have completed college, return to their own communities and secure employment. Devlin Barnett of the Associated Press used figures from the Department of Education's National Center for Education Statistics (NCES) in a study called *The Condition of Education 2006* to calculate the average student debt load at \$19,202.00⁴⁴. The repayment of such loans, plus interest, diverts money for years from the purchase of goods and services in the local economy.

⁴⁴ See: Average Student Loans Top \$19,000 at: Encarta.msn.com/departments/financial/article=averagestudentloans

VI. Future Research and Study

This study has raised some significant questions to guide future research and study on the impact of *high school based dual credit*, particularly as an equitable college access strategy. Some of these questions can be addressed presently. Others will require the development of enhanced tracking of student outcomes through an integrated P-16 data system.

In order to assess the design and determine the full impact of *high school-based dual credit*, several key questions will require answers.

- To what extent are students participating in *high school based dual credit* representative of both the performance and demographics of the general high school population?
- Does the extended time frame, often up to a full academic year, for students to take a *high school based dual credit* course contribute to successful completion?
- Can such an extended time frame be used to help more lower performing students successfully complete *high school based dual credit* courses?
- What has been the impact of *high school based dual credit* courses on high school coursework and rigor?
- What is the ongoing impact of college faculty and high school teacher collaboration through *high school based dual credit* on integrating the culture of both sectors, a continuing of the *MSP* effect?
- What impact do *high school based dual credit courses* have on student GPA and high school completion?
- Do *high school based dual credit* participants enroll in college in greater numbers than their peers who have not taken such courses?
- Is their rate of college retention and college completion higher?
- Is there a relationship between the number of *high school based dual credit* hours earned and increases in respective student outcomes for all categories?
- Is there a difference in outcomes between students who take *high school based dual credit* courses and students who participate in other early college experiences, such as PSEO, College Tech Prep and AP coursework?
- Is there a difference in outcomes for *high school based dual credit* on the basis of economic status, gender, race, and prior academic performance?

- If dual credit, particularly *high school based dual credit*, begins to eliminate the need for remedial coursework, will the added retention and completion rates compensate colleges and universities for the loss of this funding stream?

VII. Conclusion: High School Based Dual Credit as a Disruptive Innovation

*Fifteen percent of the state's total enrollment increase at public college and universities between 2004 and 2008 took place in Stark County alone.*⁴⁵

*Reframing dual enrollment as a key platform for high school success... embeds dual enrollment in the larger agenda of constructing a seamless transition to postsecondary education—an agenda that requires collaboration across secondary and postsecondary sectors and changes both*⁴⁶.

Given that dual credit coursework through PSEO has been an education option for nearly a generation in Ohio, it is fair to ask why dual credit does not seem to have a transformative effect on college access for either the K-12 or higher education system. Part of the problem is that few have sought to use dual credit as a transformative strategy.

The growing focus on *high school based dual credit* is college access. But is that access evolving into equal access? Granted, the focus on college access is both commendable and needed. However, can the promise of access fully be realized unless *high school based dual credit*, in turn, begins to transform the systems utilizing it to both expand and fully actualize the potential of equitable access?

In order to determine how this might happen, it may be useful to think of *high school based dual credit* as a disruptive innovation. That term was developed by Clayton Christensen. While Christensen and co-author Michael B. Horn make a case for on-line learning as a disruptive innovation in education, we propose something else.⁴⁷ The definition also describes *high school based dual credit*, particularly if such dual credit is indeed a new concept as this study maintains:

Disruptive innovation ... describes a process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves 'up market', eventually displacing established competitors. An innovation that is disruptive allows a whole new population of consumers access to a product or service that was historically only accessible to consumers with a lot of money or a lot of skill. Characteristics of disruptive businesses, at least in their initial stages, can include: lower gross margins, smaller target markets, and simpler products and services that may not appear as attractive as existing solutions when compared against traditional performance metric.⁴⁸

High school based dual credit in Stark and Wayne Counties describes a "product" that did begin initially, with the *Summer Scholars* program in 2006 as a simple application at the bottom of the early college opportunity "market". It was prompted by the innovation of early college high school. With the passage of House Bills 115 and 119 and the large presence of *S2S* (nearly a quarter) in Stark County, *high school based dual credit* has begun to "relentlessly move up the market."

⁴⁵ Sources: Ohio Board of Regents. *Preliminary Headcount Enrollments at Ohio Colleges & Universities Fall 2004-05; 2005-06; 2007-08*

⁴⁶ Add and Subtract, p.7.

⁴⁷ In: *Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns*

⁴⁸ See: Clayton Christensen, *Key Concepts - Disruptive Innovation* at: http://www.claytonchristensen.com/disruptive_innovation.html

While it does not appear that *high school based dual credit* is displacing established competitors, such as College Tech Prep, PSEO, and AP coursework at present, it is unquestionably allowing a whole new population of “consumers” to access the product of early college opportunity. This will continue to happen as *high school based dual credit* moves towards the concept of equitable access, fostered by the belief that all students with proper support can succeed at college coursework while in high school.

The final lesson from Christensen here is that *high school based dual credit* might not appear as attractive as other options when compared against traditional performance metrics. Our lack of definitive, longitudinal data in this regard often adds to that unattractiveness. Stark and Wayne Counties, and the state of Ohio are at a crossroads, particularly since the pilot funds under both the House bills and S2S are now concluded. What will continue this disruptive innovation?

The work of Satish Nambisan might offer a clue.

An Innovation Taking Place in the Space between the Sectors

The operational form and substance of both K-12 and higher education has long been determined by legislation, regulation, and accreditation. The result has been that both have evolved as separate sectors along what has traditionally been viewed as an education continuum for only a few and which is now being viewed as critical for all.

Satish Nambisan, in looking at platforms for collaboration, notes that “some of the brightest ideas for social change grow in the spaces between organizations and sectors.”⁴⁹

Yet, the multi-part nature of social issues and problems require that organizations make use of three sets of practices and systems to employ successful collaboration. These are categorized under exploration, experimentation and execution.

Are we beginning to think about college access differently?

Stark and Wayne Counties are moving from the exploration and experimentation stages to execution. What happens in the future will be dependent on a wide variety of state and local considerations. Districts and partner colleges and universities are developing substantial ideas for social change in that space known as dual credit. Growing evidence supports that they are achieving equal access. It may also be that they are expanding equitable access for those to whom the opportunity to go to college has never been real or substantial. In order to continue, issues of belief, accreditation and benefit must be clearly defined for equitable access, as Canton’s early college high school demonstrates. This paradigm requires different thinking and enhanced support never found with traditional options such as PSEO, College Tech Prep and AP coursework.

States with high college going rates seem to have a combination of policies and programs, a college-going culture or both. Historically, Ohio has lacked both. Our standard options before early college high school, HB 115 and 119, and S2S primarily served to enhance the high school experience. Now that *high school based dual credit* has expanded, it requires continuing “bright ideas for social change” to grow equitable access.

⁴⁹ Nambisan, S. (2009). Platforms for Collaboration. *Stanford Social Innovation Review*. Vol. 7, No. 3. pp. 44-49.

Future Considerations

Dr. Willard R. Daggett of the International Center for Leadership in Education⁵⁰ is a mentor of sorts to the Stark County community. This August, he presented a depiction of the American education system to assembled school administrators and board members as the only system in the world that truly tried to balance “equity and excellence.”

For Stark and Wayne Counties, equity and excellence no longer means working to achieve this balance in P-12. By virtue of the growth of *high school based dual credit*, it now means P-16. Equity and excellence includes college access. Only the future will tell if we are having a long term impact. We do not have the current means, though the same may come, to track our dual credit students through college enrollment. We can only speculate whether their remediation rates will be reduced and whether they will complete college.

We need to know all of this.

More importantly, we must continue to work with belief, accreditation, and benefit. We must build the supports to insure that access remains equal and equitable and an option for an ever-expanding body of students. *High school based dual credit* cannot be merely a high school enhancement; it has to serve as a bridge between high school and college.

Consider though that Ohio today has 1,451,000 adults, age 25 and over, that have some college but no degree. That is more adults than have a Bachelor’s degree. In Stark, it is 48,000 and in Wayne, 11,600.⁵¹

Over half of the adults in Ohio never went to college in any capacity, more than that in Stark and Wayne. What might the fiscal situation of our state and counties be like today if they had?

High school based dual credit, and its counterparts in Tech Prep, Advanced Placement, PSEO, and International Baccalaureate all advance college opportunity. It may well be that opportunity is best advanced through *high school based dual credit* for those who might never go on. This is what we must act on today.

⁵⁰ See:<http://www.leadered.com>

⁵¹ U.S. Census Bureau American Community Survey 2005-2007 estimates.

APPENDIX

Teacher Responses

1. Did you receive support from the academic department or faculty member at your partnering college?

No	7
Yes	43

The fifty teachers in Stark and Wayne counties had varying levels of support from the partnering colleges and liaisons prior to and during their *high school based dual credit* teacher experience. Support ranged from none for those with prior adjunct status to an abundance of supportive materials and contact.

2. If so, what was the nature of the support?

Seven colleges participated in *high school based dual credit* in 2008-2009. The nature of the support in one case is prescribed and teachers were very satisfied with the expectations and the collaboration. At some institutions coordinators suggested the amount of support, at others the amount of support offered was up to the individual faculty member.

Support included:

- A one day summer meetings for returning adjuncts
- A weeklong summer seminar for new adjuncts
- Administrative support
- Syllabus
- Pacing guide
- Face to face meeting(s)
- Classroom visit(s)
- Text book
- Teaching materials
- Tests
- Ongoing e-mail and/or phone contact
- Teaching visit to high school
- Observation
- Review of students work and grading – high, middle, low
- One district/school used *S2S* funds for a liaison within the high school for the purpose of recruiting students, recruiting teachers and responding to teacher’s questions.

3. How well would you rate this support?

Excellent	13
Good	16
Adequate	11
Poor	4

4. What would you suggest for the future?

The best part of this experience is that I am respected as the teacher in charge.

Without seeing the tests I'm unsure about what to emphasize and what to de-emphasize. I need more information in order to have a focus consistent with the college campus

- Some college faculty refused to share tests with teacher/adjuncts – a frustration for teachers who wished to have benchmarks for rigor and focus
- An in-service with on campus college faculty with the purpose of sharing best practices
- A phone number to call for administrative issues
- More information about prerequisites
- Clarification of expectations of students for students and parents
- Meeting with college needs to be scheduled better – not during school day

5. How well did your students do with the college level content?

The Compass evaluation we used to determine eligibility was a wake -up call for our students and our teachers.

My students did well with the concepts. The biggest challenge is the pace.

The high school based dual credit experience in our department has led to the raising of rigor in the classes that precede it.

Excellent	11
Good	29
Adequate	4
Poor	0

- Small group is a helpful strategy
- Self motivation, engagement and maturity are required for success
- Many teachers saw a pattern of struggle prior to student success
- Students new to college prep coursework struggled more than those with college prep experience
- Some teachers held the opinion that the Compass score requirements are too low
- Some teachers in schools with block scheduling felt that students, particularly struggling readers, would achieve more if the class were offered 5 days a week for shorter duration.

6. How much would you say this content differs from what you would teach in a standard or upper level high school course?

The high school based dual credit class covers more topics, is more complex, with more homework. It provides tools, not steps to solve problems.

Harder	25
Same	18
Easier	

- Teachers cited differences in pace and depth; a lack of busy work and a higher level of thinking.
- Challenges included: filling in the “blanks” of what’s missing in the content.
- The number and length of assignments
- The revision process in the writing
- Increased student direction
- Those teaching a one semester class over two semesters had different experiences.
- Those teaching a mixed class of dual credit and high school students had different experiences
- Some teaching a class not offered in high school had no comparison
- Some found the class to be similar to AP; others found it less rigorous than AP
- Some science class teachers found the lack of labs to be different

7. What additional support did you need to supply for students?

- Many teachers provided the same opportunities to Dual Credit students as available to all students – before and after school and during homeroom, lunch or planning period.
- One school used S2S funds to hire a Dual Credit tutor available during study hall and homeroom. Teachers were not confident that a general tutor could answer rigorous questions.
- Some teachers go to extra lengths to provide support for students
- Teachers assigned to multiple locations relied on others to supply support.
- Some teachers were available through e-mail
- Some teachers opened computer labs to enable research
- Teach one semester class over two semesters
- Set up an inquiry based lab for science class
- One: one meeting
- Web page with links, sample papers, available by phone
- Study tables
- Trips to college campus to provide extra experiences i.e. to see a human cadaver; to see a model train wreck
- Use of pod casts
- Use of GPS modeling

8. As we look toward future dual credit offering, what additional support should we be providing for high school teachers working as adjuncts?

The College of Findlay model is very beneficial. I know their expectations and have excellent support.

High School teachers working as adjuncts who have not worked on a college campus evidenced a struggle with the different cultures. High school curriculum and context creates one set of expectations while the college culture functions with a different set of expectations. Teachers had suggestions to bridge that gap. Many of the teachers suggested or endorsed the idea of a network for new adjuncts teaching dual credit. Whether face to face or virtual they felt a network would allow share best practices and strategies for success and to problem solve.

Additional ideas included:

- An opportunity to for teachers to visit the college campus and class they will be teaching
- A college/district process for IEPs: who's responsibility; what testing accommodations are to be made
- Provide teacher with test samples
- An opportunity for students to visit the college campus to experience that class on campus
- Writing lab for students or college writing lab available to students
- Students should have the opportunity to take dual credit by distance learning
- A teacher's edition of the college text with rubrics, additional challenges and/or supports
- Addition access to primary resources for research
- Texts for each student
- An on-line professional development workshop for teachers
- Access to the college liaison to meet challenge of difficult lesson
- Eliminate practice of dual credit and high school credit students in the same class
- Meet with college professor at least once each semester
- Tuition reimbursement for college coursework
- Agreement on high school and college grading scales
- Better, increased communication.
- Meetings to determine alignment and common assessments
- School administration awareness of impact of all school activities during at the same time of day
- Online mentoring for adjuncts
- Send bill to drive home the cost/financial opportunity

College Faculty Responses

Q1: Did you feel that the professor mentor/teacher relationship was a critical part of this program? How?

Yes	100%
No	0%

College faculty each provided some of the following materials to teachers including: text, syllabus, assignments, pacing, tests and an opportunity to sit in campus classroom.

Additional comments:

- Yes, but it was incumbent upon the high school teacher to ask for help.
- Yes, I would like to see the high school instructors visit with the college department to create a meaningful connection.
- The relationship is very important but I don't understand my role.
- Since most high school adjuncts are not highly qualified I believe support and communication is very important.
- We need a better mechanism to communicate with the high school adjuncts i.e. a website where questions can be asked and best practice shared.
- No matter how competent the high school teacher, without college teaching experience we need to align expectations.
- Yes, this is essential if the course is to be equal.

Q2: Have you ever taught in a high school setting?

Yes	30%
No	70%

Q3: Have you ever worked directly with K-12 faculty on issues of instruction or curriculum e.g. MSP?

Yes	30%
No	70%

Q4: To what extent did your teacher call upon you for support/advice/consultation?

Often	11%
Occasionally	72%
Rarely/None	17%

College programs varied widely across campuses:

- One college requires a week long summer seminar for first year adjuncts and a one day refresher for returning adjuncts. The college mentor visits the classroom to observe and teach and high, medium and low student work is submitted for each assignment. Presentations are made as a spring meeting. Additional ongoing phone and e-mail communication takes place throughout the year.

- One college holds a (2) ½ day workshops, one-on-one meetings and ongoing e-mail and phone communication. The college mentor teaches 3-5 times during the semester.
- One college holds a one day workshop and provides guidelines. One department held an additional meeting.

Additional comments:

- We are trying to hire a coordinator to observe and mentor new adjuncts.
- It is challenging that schools and the college have different calendars. I visited classrooms but it is a huge time issue with more than one teacher in more than one school.

Q5: Do you have any insight into whether the rigor/content of the course has been adequately met in the high school setting?

Yes	35%
No	10%
Don't know	55%

Additional comments:

- I have concerns that the students in this Dual Credit program are not the top students and perhaps there has been grade inflation.
- I had too many teachers on my list and was unable to monitor rigor.
- One workshop is not adequate. I would suggest a ½ day morning session.
- I never considered following up or monitoring for rigor or mentoring.
- I assume that since the teacher asked no questions that there were none.

Q6: How would you rate the communication/information you received about the program?

Good	40%
Fair	40%
Poor	20%

Additional comments:

- I have had no direction or understanding of what is expected of me or of the teacher.
- Private schools have not had communication from the county since the inception of Dual Credit.

Q7: Are you interested in continuing to work with school districts on dual credit offerings?

Yes	100%
No	0%

Additional comments:

- Although this program has value I don't know that the financial challenges have been addressed.
- I'd like to see the high school and college grading system differences addressed.
- Yes, I'd like to see more junior college faculty involved as mentors.

Q8: Do you see a direct benefit to your institution and/or to yourself through dual credit programs?

Yes	89%
No	11%

Additional comments:

- Dual credit benefits the university in increased enrollment. I benefit from the exchange of ideas.
- Dual Credit has opened lines of communication between the high school and the college.
- Dual Credit provides an invaluable outreach.
- The conversations fill the gap between the high school and college curriculum.
- The relationship with a high school adjunct has brought a college focus to the teachers.
- There is great value in working with high school students to raise the level of achievement. The challenge is to educate the educators in the rigor required for a college level curriculum. We need a program and the time to do it.
- Everyone is a winner.