

December 15th, 2020

## EXECUTIVE SUMMARY

**This document summarizes research about significant financial savings for dual credit, participants, their families, and Minnesota taxpayers.** Mark Misukanis, PhD, formerly a fiscal analyst at Minnesota Senate Education Finance Committee and Minnesota Office of Higher Education, is the author. He earned a PhD in education administration and now is president of New Pharos Consulting.

### Key Findings:

1. “Minnesota offers a number of approaches for students to obtain college credits while in high school under dual enrollment- programs,” including AP, IB, Concurrent Enrollment and PSEO.” (pg. 23)
2. “Enrollment has risen dramatically the last 10 years in each of the programs with growth in the 40 to 50 percent range.” (pg. 23)
3. “PSEO is the most cost-effective approach. In FY2021, state and local taxpayers will save an estimated \$15.1 million for students taking PSEO compared to other dual enrollment programs.” (pg. 23)
4. “With dual enrollment programs, parents and students realize significant cost savings with lower tuition or debt payments in the future. Under PSEO alone, a reasonable estimate for FY 20-21 is \$59.8 [million] annually.” (pg. 23)
5. “The State spends approximately \$8.5 million for AP and Concurrent Enrollment (\$4.5m for AP/IB, \$4.0m for CIS, pg. 7-10). This includes aid for exams and teacher training. This is in addition to the standard aid and levy paid for these students. If students used PSEO instead of these programs, this \$8.5 million could be reduced.” (pg. 23)
6. “Other state and federal student financial aid programs would also see savings as these students enroll in college and graduate early due to the accumulated credits.” (pg. 23)

This study describes costs and savings and does not include recommendations. The report was commissioned by People for PSEO, an organization that advocates for the Post-Secondary Enrollment Options Program (PSEO) and other dual credit options for Minnesota for students. People for PSEO asked New Pharos Consulting, a nonpartisan public policy research group, to conduct a comparative revenue analysis for each of the dual enrollment programs and determine potential savings to Minnesota taxpayers and parents of Minnesota’s dual credit programs. This study provides data about the costs of investing in dual-credit initiatives. It can assist policymakers and students in preparing for their futures. People for PSEO recognize that in some cases the costliest options are in the best interests of students/families. We believe families and students deserve several dual credit options. **People for PSEO has developed legislative recommendations based on this report.** To learn more about People for PSEO please visit [www.peopleforpseo.org](http://www.peopleforpseo.org).

Dual Enrollment Programs in Minnesota  
A Comparative Revenue Analysis

New Pharos Consulting

December, 2020



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**New Pharos Consulting**  
*Public Policy Research – Data Analytics and Reporting*

## **Forward**

People for PSEO is an organization that advocates for the Post-Secondary Enrollment Options Program (PSEO) for students in Minnesota. Started in 2017, it is led by current and former students who have or are currently using PSEO. The mission of People for PSEO is to work with families, students, and education and state institutions to promote, defend, and expand opportunities for Minnesota students via the Post Secondary Enrollment Options (PSEO) program through speaking, writing, conferences, social media and other functions.

PSEO is one of a number of programs that allow students to simultaneously earn both high-school and postsecondary credits for various coursework. In September of 2020, People for PSEO requested a revenue study of these programs. The purpose of the study is to perform a comparative revenue analysis for each of the dual enrollment programs and determine potential savings to Minnesota taxpayers and parents. It is not the intent of this study to draw conclusions as to the benefits of the various options. Rather, the study is solely financial in nature.

People for PSEO engaged New Pharos Consulting to perform this analysis. New Pharos is a Minnesota based non-partisan public policy research group. More details on the background and experience of the consultant are in Appendix Two.

## Introduction

Education leaders and policy makers have long recognized a need to accommodate differences in the intellectual abilities of students. Initially, for students in high school, they created various programs to provide additional challenges for those students with apparent higher intellectual capacity. Some of these efforts came within the high school setting itself including honors courses and related offerings of rigor. Other programs have extended beyond the K-12 system into the post-secondary structure by creating opportunities to take college level courses and receive college credit while still in high school. For example, the College Board has provided Advanced Placement classes since 1955, that are offered in the high school setting, possess college level rigor, and allow for assessment that may lead to college credit.

This has evolved over time so that today there are several ways students can be offered a higher level of rigor by enrolling in dual enrollment programs. While the initial Advanced Placement program was designed for the top students, now other students are accessing these options. These programs allow a student to receive both secondary and post-secondary credit through the successful completion of various courses. The curriculum offerings are broad ranging from History to Biology, Mathematics, English, and beyond. Students are now accessing career-technical opportunities at colleges and private trade schools at an increasing level. Clearly the lines between high school and post-secondary are being blurred.

The programs in this study include Advanced Placement, International Baccalaureate, Post- Secondary Enrollment Options, and Concurrent Enrollment frequently called “College in the Schools.”

Each of these programs provide students with multiple choices. More importantly, for the central objectives of this report, each program is financed using different revenue streams for the educational institutions that provide the program. The major goal of this report is to identify the revenue differences for Minnesota public school districts and charter schools among the options chosen by the student as well as the cost impact on the state. This is not just a school management issue; it directly affects taxpayers.

The report is structured in the following way:

- Section 1 is a brief description of the several programs. The purpose of this section is to provide a level of detail needed to generally understand the revenue issue, not to provide operational specifics.
- Section 2 provides a brief history of enrollment and spending data. The purpose of this section is to provide a background of the dynamics in student enrollment changes.
- Section 3 addresses the main goal of the report providing an analysis of the revenue differences between the programs.
- Section 4 addresses the potential costs to post-secondary institutions. Because students receive services from these institutions, it is appropriate that their potential costs be discussed. This section also includes a discussion of marginal cost issues in K-12.
- The focus of the study is on revenue issues. But there are longer term cost savings issues. Section 5 presents a broader and longer-term sweep of cost and savings possibilities from the dual enrollment programs generally, and PSEO specifically.
- There are two appendices in the report. The first is taken from Minnesota Department of Education (MDE) Reports showing extended detail of Dual Enrollment programs. Section 6 provides some brief expository notes on this data. A second appendix provides background information on New Pharos Consulting.
- Section 7 presents the conclusions of the report.

## **Program Descriptions Section 1<sup>1</sup>**

### **Introduction**

Section 1 is a brief description of the several programs that provide dual enrollment credit. The purpose of this section is to provide a level of detail needed to generally understand the revenue issues, not to provide operational specifics.

### **Postsecondary Enrollment Options Program**

In 1985, Minnesota became the first state in the nation to pass legislation to support course-taking at the postsecondary level by eligible high school juniors and seniors. Postsecondary Enrollment Options (PSEO) is a program that allows public and nonpublic students in 10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup> grades to earn college credit while still in high school, through enrollment in and successful completion of college level, nonsectarian courses at eligible postsecondary institutions. The PSEO program allows high school students to enroll in courses taught by college instructors on college campuses or through online courses; because of COVID, online is now the predominant method for students taking PSEO classes.

The law allows eligible 10th-grade students to initially enroll in one Career and Technical Education (CTE) course through PSEO. If the student earns a “C” or higher grade in this first course, she/he is eligible to take additional CTE courses while in 10th grade. Other eligibility requirements apply.

Legislation passed in 2014 provides the opportunity to use PSEO funding for developmental coursework when a student who is enrolled in the graduation incentives program enrolls full-time in an Early/Middle College Program. This program model is a partnership between a State-Approved Alternative Program (SAAP) and an eligible postsecondary institution. The alternative program is specifically designed to offer well-defined pathways to postsecondary degrees and/or credentials. Students engaged in these programs are able to earn dual credit with intentional academic and wraparound support offered by the partnership. The first eight of these Early/Middle College models were implemented in the spring of FY15. More partnerships are forming across the state each year, and the numbers grew to 64 unique approved partnerships for FY18.

Direct contract partnerships exist between high schools and postsecondary institutions to offer PSEO and are allowable under to Minnesota Statute (commonly known as “PSEO by contract”). These contracts and fiscal arrangements are between school districts or charter schools and postsecondary institutions. Payments are made by the districts to the institutions and are not made by MDE. For the remainder of the report, PSEO students that enroll through the MDE are referred to as “regular PSEO” to distinguish them from contract students.

### **Enrollment and Transcripts**

Each participating postsecondary institution sets its own enrollment requirements for admission. Students may enroll in PSEO courses on a part-time or full-time basis. PSEO allows high school students to earn college credit at no cost to the student or family, and, after graduation from high school, to possibly enter into postsecondary institutions with some course requirements already met. Some students will have the

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<sup>1</sup> This section draws heavily on reports from the Minnesota Department of Education and the Office of Higher Education. The author acknowledges that some of the language is taken directly from those reports.

equivalent of an Associate of Arts degree (AA) or a career certification completed. The postsecondary institutions generate a separate college transcript with their college courses and grades for the participating high school students.

High schools must transcript credits earned in PSEO by a ratio prescribed in statute. High schools have the authority to decide which subject area and standards the PSEO course meets. If there is a dispute between the district and the student regarding the number of credits granted for a particular course, the student may appeal the decision to the Commissioner of Education.

### Courses

Courses taken through PSEO must meet graduation requirements for students at their high school. Only nonsectarian and non-developmental courses are considered eligible by statute. Courses must be offered by Minnesota PSEO eligible postsecondary institutions. While traditionally most PSEO courses are offered on the campus of the postsecondary institution, because of COVID more courses are now offered online. Postsecondary institutions are required to allow PSEO students to enroll in online courses consistent with the institution's policy regarding postsecondary student enrollment in online courses.

### Eligible Institutions

Eligible institutions include the University of Minnesota and its branches; all state universities, community colleges and technical colleges; private, Minnesota, two- or four-year, residential, degree granting, liberal arts colleges; non-profit, degree granting trade schools; or accredited opportunities industrialization centers in Minnesota. Public postsecondary institutions must participate and private postsecondary institutions may choose to participate.

### Funding

Funding for the PSEO program is determined under Minnesota Statutes. PSEO funding from the state that flows through the Department of Education pays for the student's tuition, fees and required textbooks at the postsecondary institution when students participate in PSEO. There is no charge to PSEO students for tuition, books or fees for items that are required to participate in a course; however, students may incur fees for equipment that becomes their property when the course or program is completed or for textbooks that are not returned to the postsecondary institution according to their policies. Public school students may be responsible for tuition costs if they do not notify the district of PSEO registration by a certain deadline. Funds are also available to help pay transportation expenses for PSEO students whose families are at or below the poverty level, as determined by the federal government.

Higher education institutions are paid on a per-credit basis. For FY 2020 this amount was \$211.66 for semester credits and \$141.11 for quarter credits. Revenue is shifted from district and charter schools to post-secondary schools. The details of this process are shown in Section 3.

### **Advanced Placement**

The Advanced Placement (AP) Program is a cooperative educational effort between secondary schools and colleges and universities. Since its inception in 1955, the College Board Program has provided high school students with the opportunity to take college-level courses in a high school setting. The program consists of more than 35 college level courses and standardized exams that assess proficiency in these courses. The College Board supports secondary schools by providing facilitated teacher training and a

curriculum of high academic intensity and quality that enables students to meet the standards for college-level learning in these subjects. Advanced Placement is open to any secondary school that is willing to organize one or more courses, foster teacher development, and administer the AP exams. Student eligibility differs from school district to school district. In some cases, any student may enroll in a course; in others, a teacher recommendation is required; in still others, a B average may be needed.

### AP Courses

The content in AP courses is structured similarly to college coursework. These courses prepare students for further education and college admissions offices often look favorably on a history of AP coursework on student transcripts. AP courses are not offered at every Minnesota high school.

### AP Teacher Training

Instructors are highly trained and utilize research-based strategies to reach all students. Instructors must participate in AP training prior to being approved to teach an AP class. Scholarships are available for public and non-public teachers attending in-depth summer AP Training. Training sessions must be official AP courses provided by College Board-identified institutions. The State subsidizes this training. In FY 2018, the State about \$226,000 for this purpose.

### AP Exams

AP exams are open to all students, not just those who have taken an AP course. Home-schooled, online students and others may take an AP exam for credit. Students who complete an AP course and/or take the end-of-course examination may qualify for college credit from postsecondary institutions, provided their score meets the institution's credit policy. All AP exams (except Studio Art, which is a portfolio assessment) consist of dozens of multiple-choice questions scored by machine, and free-response questions (essays, translations, problems) that are scored at the annual AP Reading by more than 10,000 college faculty and secondary AP teachers. In Minnesota, 61 colleges and universities recognize Advanced Placement exam scores. All schools wishing to designate a course as AP must first receive authorization for each course by completing the AP audit process, which involves submitting a copy of the course syllabus for review by college faculty. The AP course audit provides clear guidelines on curricular and resource requirements that must be in place and helps colleges better interpret courses marked as AP on students' transcripts. Minnesota State colleges and universities have adopted a policy establishing common practices among higher education institutions for awarding credit for scores of three, four, or five on AP exams.

### AP Exam Reimbursements

AP exam subsidies are available for public and nonpublic school students. The payment schedule for AP exams has varied over time, but has recently remained relatively constant. In 2018, the State reimbursed \$53 per exam for low-income students and \$40 for each exam taken by other students. Schools use free and reduced-price lunch eligibility as the criteria for determining low-income students that qualify for the fee reduction. The College Board waives \$31 per exam for all fee-reduced students and, if schools also waived their \$9 exam administration rebate from the College Board, the State reimbursement covered the remaining cost of these exams. The total expenditures for AP exams in 2018 was \$3,087,393. The appropriation for AP and IB courses discussed below for FY2020-21 is \$4.5 million each year.

### Funding

The school district retains full general education, capital and related revenue established in state formulas. No funds are transferred to higher education institutions.

## **International Baccalaureate**

The International Baccalaureate (IB) Program is a non-profit, educational foundation established in 1968, offering four highly respected programs of international education that span the primary, middle, and secondary school years. Schools must complete an extensive application process to become an authorized IB World School and offer these programs. There are over one million students attending more than 4,000 IB World Schools in 153 countries worldwide. International Baccalaureate is recognized as a rigorous education, preparing students for demanding academic work so they may succeed at postsecondary institutions around the world.

### Program Emphasis

The program's emphasis on interdisciplinary learning requires students study courses across six disciplines, including computer science and mathematics, individuals and societies, and the arts. Part of the diploma process involves submitting an essay, completing the Theory of Knowledge course, and participating in creativity, action, and service projects. IB coursework also meets Minnesota's high school graduation requirements. As an alternative to the full diploma program, students may choose to take individual IB courses and exams to earn IB certificates, which are recognized for credit at most colleges and universities.

### Diploma Program

The Diploma Program (DP) is a comprehensive two-year international curriculum for students aged 16-19 available in English, French, and Spanish. The DP offers 157 exams in 51 disciplines that generally allow students to fulfill the requirements of their national or state education systems. Students who participate in the full Diploma Program are required to study and examine in six different academic subjects. At least three of the six subjects are taken at the higher level where students study the subject area in depth for two academic years totaling 240 hours. Challenging standard level IB courses span one academic year and total a minimum of 150 hours.

### College and University Policies

More than 90 percent of U.S. colleges and universities have an IB policy granting incoming students academic credit, placement, or both, for qualifying grades or scores on IB exams. Minnesota State colleges and universities have adopted a policy establishing common practices among higher education institutions for awarding credit for scores of four-seven in IB. In Minnesota, 47 postsecondary institutions acknowledge International Baccalaureate exam scores.

### Funding

The school district retains full general education, capital, and related revenue established in state formulas. No funds are transferred to higher education institutions.

## **Concurrent Enrollment Courses**

In Minnesota, Concurrent Enrollment courses are college level classes offered at the high school, usually taught by a qualified high school teacher who meets the criteria of the Higher Learning Commission (HLC). To assist high school teachers to meet HLC degree standards, the Legislature appropriated



\$1,150,000 for FY2020-21 to pay the cost of that additional education. This enables high school teachers to meet the same minimum qualifications as a college teacher.<sup>2</sup> These are offered in partnership with a college or university. Students who successfully complete these courses generate both high school and transcribed college credit from the partnering postsecondary institution. Many people refer to these courses as College in the High School. There is no cost to the student to participate in these courses.

By participating in Concurrent Enrollment, high school students can complete college requirements that allow for greater flexibility when they enter the university setting full-time. Concurrent Enrollment alums may graduate early, pursue second majors, and, participate in study abroad opportunities and internships. Concurrent Enrollment students gain college-level skills from these courses.

### Program Standards

Accreditation of postsecondary institutions through the Higher Learning Commission and the National Alliance for Concurrent Enrollment Partnerships (NACEP) set standards for quality and rigor in Minnesota Concurrent Enrollment programs. These accrediting bodies ensure that Concurrent Enrollment courses offered in high schools are the same courses that are offered on the sponsoring postsecondary institution campus and that students in the high schools are held to the same academic standards as students on campus. NACEP Accreditation Standards and HLC Accreditation Criteria are similar and cover areas such as teacher credentials and preparation, rigor of courses and curricular standards, expectations for student learning and learning outcomes, access to learning resources, and monitoring and oversight. NACEP accreditation also requires program evaluation and student surveys to monitor transferability of credits earned through Concurrent Enrollment.

### Teachers and Assessment

By requiring that Concurrent Enrollment programs be NACEP-accredited or meet comparable standards, the State requires that Concurrent Enrollment teachers be “approved by the respective college/university academic department and meet the academic department’s requirements for teaching the college/university courses.” Accredited programs or those meeting comparable standards must also provide “annual discipline-specific professional development activities and ongoing collegial interaction to address course content, course delivery, assessment, evaluation, and/or research development in the field.” The Higher Learning Commission also expects that postsecondary institutions require “the same level of credentials and qualifications for faculty in dual credit courses or programs that it does for its regular higher-education courses.” The HLC determines the criteria for faculty qualifications including high school teachers teaching Concurrent Enrollment.

Qualified high school instructors or college faculty teach the courses, which are offered at the secondary school or another location, according to an agreement between a public-school board and the eligible postsecondary institution. The same assessment methods and content are used as the equivalent sections taught on the college campus. Students earn a grade based on their work over the entire term of the course and on multiple and varied assessments. Concurrent Enrollment differs from AP and IB because post-secondary credit is granted for successful completion of the course, rather than on the results of a single high stakes test.

### Funding

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<sup>2</sup> Under a typical contract, this training increases local district costs as teachers move across lanes and realize increased salaries.

Minnesota Statutes provides funding to districts and charter schools to help defray the cost of offering college and/or university courses in high schools. Districts and charter schools are eligible for this state funding if the partnering postsecondary institution is accredited by NACEP, in the process of being accredited, or provides clear evidence of comparable standards. The Minnesota Department of Education monitors compliance with this statute by requiring non-NACEP accredited programs to sign a letter of assurances indicating the program meets this requirement and is an eligible institution. The Concurrent Enrollment appropriation of \$4.0 million annually supports funding of up to \$150 per student to districts and charters that offer a Concurrent Enrollment course. However, this level has been inadequate for the demand, and, after proration, reimbursements were \$52.48 per student per course (Fiscal Year 2018 figure).

The school district retains full general education, capital and related revenue established in state formulas. No funds are transferred to higher education institutions.

## Data Trends Section 2

Section 2 provides data levels and trends in Table 1 for the dual enrollment programs under review. The source of the data in Table 1 is an annual report produced by the Minnesota Department of Education (MDE). This report is mandated under state statute.<sup>3</sup>

Some general observations of the data include:

- Students are clearly taking advantage of dual enrollment opportunities as 10-year growth is substantial in every program. A net count of students taking any dual enrollment course is of interest, but accumulating the student counts across programs would be inappropriate and likely reflect double counting. But for context, there were 66,019 (10<sup>th</sup> graders), 66,697 (11<sup>th</sup> graders), and 70,880 (12<sup>th</sup> graders) enrolled in public high schools in Minnesota in FY 2018.<sup>4</sup>
- The AP program is by far the largest of the dual enrollment programs. In FY 2018, nearly 46,000 students took a class and over 75,000 exams were taken. These did not all lead to college credit. On average, about 66 percent of exams result in a score of 3 or higher, the conventional passing score for acceptance. Each college has its own standards for accepting AP exam results.
- AP enrollment has grown substantially with a growth rate near 43 percent over the last 10 years.
- Concurrent Enrollment is the second largest program, with about 33,000 students involved.
- Concurrent Enrollment has remarkable growth over the last 10 years of about 54 percent.
- The PSEO program is the third largest program, although at 10,953 in FY 2019, it is significantly below the two larger programs. It may be that since AP and Concurrent Enrollment take place in the students home high school, there is a strong incentive of convenience to take courses on site.
- PSEO credits taken in FY 18 exceeded 161,500.
- The State transferred about \$33 million dollars to post-secondary schools in FY 20. This is not new spending, but reflects appropriations reallocated from districts to post-secondary schools.
- The IB program is the smallest of the four programs, although it has grown the fastest over the last 10 years.

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<sup>3</sup> Rigorous Course Taking Advanced Placement, International Baccalaureate, Concurrent Enrollment and Postsecondary Enrollment Options Programs Fiscal Year 2020 Report to the Legislature As required by Minnesota Statutes. Data has also been provided by the Data Analytics Office in the Department of Education

<sup>4</sup> Report Run: 09/05/2019

**Table 1**  
**Key Historical Data for Dual Enrollment Programs**

	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>FY16</b>	<b>FY17</b>	<b>FY18</b>	<b>FY19</b>	<b>FY20</b>
<b>Advanced Placement</b>											
Students	32,541	35,091	37,363	38,769	40,870	42,814	43,780	45,348	45,958	41,507	40,261
Exams	52,293	56,942	62,022	64,705	67,819	70,699	71,136	73,559	75,185	66,877	64,872
<b>International Baccalaureate</b>											
Students	2,330	2,602	2,799	3,150	3,553	3,651	3,462	3,995	4,060	4,038	NA
Exams	4,970	5,402	6,144	7,373	7,577	7,698	8,024	8,691	9,470	9,336	NA
<b>PSEO Enrollment</b>											
Public	5,620	5,841	6,353	6,915	7,029	7,768	8,275	7,322	7,516	7,520	NA
Home School	1,525	1,476	1,503	1,702	1,697	1,842	1,803	1,779	1,854	2,000	NA
Non-Public	621	733	726	762	787	762	906	1,042	982	1,031	NA
Direct Pay	NA	195	38	116	166	213	344	261	506	402	NA
Total	7,760	8,245	8,620	9,495	9,679	10,585	11,328	10,404	10,858	10,953	NA
State Funds Transferred (mills.)	\$22.8	\$24.5	\$25.5	\$27.9	\$28.8	\$31.8	\$33.7	\$31.5	\$32.7	\$34.2	NA
Total Credits				151,974	154,871	167,244	173,716	159,063	161,564	165,047	NA
<b>Concurrent Enrollment</b>											
Students	21,140	20,282	21,755	23,548	24,761	27,332	30,300	32,025	32,638	32,272	NA

NA- Data not available

## **K-12 Revenue Analysis**

### **Section 3**

Students have a variety of choices to draw from to attend more rigorous courses. Not all students have equal choices- some high schools do not offer AP courses or local colleges may not be easily accessible. But, with all dual enrollment programs, students can earn college credit while in high school at no cost.

The central objective of this section is to measure the different revenue flows to school districts or colleges or universities based on which dual enrollment program is chosen. The programs are treated differently under formulas established by the Legislature. This is a very important issue for the education institution providing the service. This section focuses on the various funding results for school districts and post-secondary institutions based on the program the student chooses for the post-secondary credit.

Perhaps the clearest way to approach this issue is to divide the dual enrollment programs into two groups. For ease of discussion, the distinguishing characteristic is where that student receives the services- the school district or a post-secondary institution. This differs when a PSEO student may take PSEO classes on-line but be at the high school, or under PSEO by contract. Advanced Placement, International Baccalaureate, Concurrent Enrollment, and PSEO by Contract are placed in Group 1. For the first three programs, the student attends classes within the school district. With Group 1, the State determined funding stays completely with the district. While program provision creates a management issue for district administration, there are no additional revenue issues. Revenue simply flows in the expected manner.

PSEO is alone in Group 2. The revenue stream with Group 2 is more complicated. Some of the State determined K-12 General Education, Referendum, Capital, and other revenue remains with the district and some (a portion of the basic allowance) is transferred to the providing post-secondary institution.

Importantly, and the central issue of this report, is the fact that total state determined revenue (combined school district/ post-secondary institution) is less for Group 2 students than Group 1 students. This difference is driven by the structure of state formulas.

The focus of the rest of this section is on Group 2 revenue. Two basic questions present themselves:

- which entity receives the revenue for PSEO programs; and,
- how much lower is the revenue for the districts PSEO students than that generated for a student remaining in the district? Recall, lower revenue for the school district means lower costs to taxpayers.

Tables 2 and 3 below are used to respond to these two questions. The data in the tables are state-wide per pupil average numbers and are based on the February General Fund Forecast for FY2021.<sup>5</sup>

Starting with Table 2, the data in column 2 simply reflects the average state-wide per-pupil amount for the indicated revenue component. Since these programs are for secondary students, the amounts (except for Compensatory Revenue and School Trust Land Endowment) need to be adjusted (simply multiplied) for the secondary student weight of 1.2. A secondary student that remains in the district taking either a

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<sup>5</sup> These tables were provided by Dr. Tom Melcher, Sharon Peck, and other specialists in the Department of Education.

standard high school curriculum or dual credit courses offered at the high school would generate revenue for each of the components shown in column 3.

**Table 2**  
**Revenue Average for All Students and Secondary Students**

<b>Revenue Component</b>	<b>Col. 2 FY 2021 Per Pupil Average</b>	<b>Col. 3 FY 2021 Per Pupil Average for Secondary Students</b>
Basic Revenue	\$6,567	\$7,880
Compensatory Revenue	552	552
English Language	67	67
Operating Capital	226	272
Equity Revenue	116	139
Gifted and Talented	13	16
Referendum	841	1,009
Location Equity	722	866
School Trust Land Endowment	44	44
<b>Totals</b>	9,148	10,845

Table 3 extends Table 2 and shows the revenue flows to the school district and to post-secondary institutions. Table 3 reflects the revenue under the assumption of a **full-time PSEO student** attending classes at a post-secondary institution. While not all students are full-time, this is a useful starting point for discussion.

The law provides that 12 percent of various revenue components, and all Compensatory Revenue and School Trust Land Endowment Revenue, remains with the district. For instance, Basic Revenue in Column 4 is \$946, or 12 percent of \$7,880 shown in column 3. Column 4 shows the various amounts from the other components that remain with the school district. For the district, total revenue falls from \$10,845 to \$1,826. This reduction creates an incentive for districts not to encourage PSEO as an alternative, a fact that is reflected in comments from students. The district receives funding for a student even though it provides no courses for that student.

The amount in Column 5 shows the amount paid to the post-secondary institution. The calculation is a bit complicated. The calculation starts with \$6,567 Basic Revenue from Column 2, but then reduces this by \$425. The \$425 is an adjustment that reflects prior year General Education formula changes that “rolled in” amounts from other formulas.<sup>6</sup> The difference is \$6,142. This amount is multiplied by the secondary pupil weight of 1.2 resulting in \$7,370. The amount going to the post-secondary institution is 88 percent of this amount, or \$6,486. This is converted into a per-credit amount. MDE administratively pays

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<sup>6</sup> Over time the Legislature has redefined the basic revenue allowance to include or exclude certain components. This artificially changes the basic allowance amount. Hence, the term “rolled in.” When these changes have been made, the PSEO funding formula has been adjusted to reflect the change.

post-secondary institutions this per-credit amount. For FY2020 the per credit amount is \$211.66 for semester credits and \$141.11 for quarter credits.

The amounts in Column 6 are simply the sum of Columns 4 and 5, or total revenue authorized by the State for both state aid and local levy. The total per-pupil revenue for Column 6 is \$8,312. This is split between school districts and higher education institutions. Under the assumption of a full-time PSEO enrollment, a student leaving a district would generate \$2,534 (\$10,845 in Column 3 minus the \$8,312 from Column 6) less in state aid and levy than one remaining in the district. The savings to taxpayers is this difference of \$2,534.

**Table 3**  
**Revenue Averages Including PSEO Students**  
**Assuming a 30 Credit Load**

Revenue Component	Base Revenue Per-Pupil Averages		Estimated Per Pupil Averages 30 Credit Assumption for PSEO		
	Col. 2 FY 2021 Per Pupil Average	Col. 3 FY 2021 Per Pupil Average for Secondary Students	Col. 4 Per Pupil Revenue at 12 Percent for Districts	Col. 5 Per Pupil Revenue at 88 Percent for Post-Secondary	Col. 6 Total Per Pupil Average Revenue
Basic Revenue	\$6,567	\$7,880	\$946	\$6,486	\$7,432
Compensatory Revenue	552	552	552		552
English Language	67	67	8		8
Operating Capital	226	272	33		33
Equity Revenue	116	139	17		17
Gifted and Talented	13	16	2		2
Referendum	841	1,009	121		121
Location Equity	722	866	104		104
School Trust Land Endowment	44	44	44		44
<b>Totals</b>	<b>9,148</b>	<b>10,845</b>	<b>1,826</b>	<b>6,486</b>	<b>8,312</b>

The objective of this section, and centrally for the report, is to estimate the savings that occur when students use the PSEO option compared to other dual enrollment programs. This per pupil amount, is \$2,534, or approximately a 23.4 percent difference, for a student taking a dual enrollment program through PSEO at a 30 credit, or full-time load. What does this mean in dollar terms? We start with the 7,520 public school PSEO students for FY 19 in Table 1. We do not include other PSEO students since they do not generate state aid or levy. The total savings is simply determined by multiplying the 7,520 by \$2,534, or approximately \$19.1 million.

Table 3 shows the impact under the assumption of full-time PSEO students to describe the issue; the 23.4 percent is the savings under this assumption. But most PSEO students do not take a full post-secondary

load. What is a more realistic number under a less than full-timer load? We can get a sense of this number by using data from Table 1. In 2019, 10,953 students from all sectors took 165,047 credits. This is about 16 credits per student. Assuming students from all sectors were similar, changing the 30-credit load assumption to the average level of 16 would reduce the 23.4 percent to approximately 18.5 percent. The dollar estimate saved under a more realistic credit load level is about \$15.1 million per year. This figure more accurately reflects taxpayer savings for students obtaining college credit via regular PSEO programs.



**Revenue and Expenses in Higher Education and School Districts**  
**A Marginal Cost Discussion**  
**Section 4**

Section 3 estimates change in revenue per student for school districts and post-secondary institutions. Savings to state and local taxpayers was estimated to be somewhere between 18.5 percent and 23.4 percent for students in PSEO programs compared to other dual enrollment programs. Obviously, this implies that PSEO is a less expensive, i.e., more effective program for the State which enables students to obtain post-secondary credits. Critics may claim that this is an inaccurate depiction, costs are simply shifted to post-secondary institutions and there are no real cost savings. This section deals with this concern. Because marginal cost issues affect K-12 as well, a brief discussion of marginal cost changes in the K-12 system is addressed.

**Revenue at Post-Secondary Institutions**

As indicated in Section 3, the law provides that 88 percent of the basic allowance be transferred to the higher education institutions for full- time PSEO students. This amount is prorated based on whether the student is full or part time. Administratively, MDE pays higher education on a per-credit basis.

How are post-secondary schools affected? From a strictly revenue perspective, a post-secondary institution may compare this amount to the tuition it would receive for a regularly enrolled student in its system. Depending on the institution, public or private, the difference could be material. For instance, for FY 20-21 at the University of Minnesota, if you receive undergraduate credit and are not registered as a graduate or professional degree student, the tuition rate is the same for all undergraduate students and does not vary by college of enrollment. According to the **13-credit policy**, if you are a degree-seeking undergraduate student, you must pay a flat tuition rate based on 13 credits, no matter your credit load. This means that even when you take 12 or fewer credits, you must pay the 13-credit flat tuition rate and any credits beyond 13 are available at no additional charge. This posted price is \$6,659.

But the posted price is simply the starting point. In higher education there is the posted tuition amount, the so- called sticker price, and net price after discounts. Depending on a student's family situation, the student may qualify for grants and aid, but this would not change the revenue amount received by the University. Higher education institutions are more interested in the net revenue generated by students. Tuition discounting does change revenue; extensive discounting occurs as institutions manage enrollment through internally funded sources.<sup>7</sup>

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<sup>7</sup> On a typical airline flight, the passengers on board the airplane have paid various fares to be transported in the same time frame to the same destination. Likewise, at a baseball game or rock concert, the attendees have been charged various prices for essentially the same experience. These policies are customary and not subject to legal challenge. They are not treated with the same suspicion as invidious discrimination on the basis of race or gender.

As with tickets, so too with tuition. Tuition discounting extends these concepts to higher education. As a form of financial aid, a tuition discount should not be deemed the same as a scholarship. For marketing purposes, it can be disguised as such, but by any definition, it is another thing altogether. While a scholarship in a strict sense is paid for by donations, either in the form of an endowment-generating income or annual gifts, tuition discounting is unfunded and relies on redistribution of revenue paid by some students as a subsidy to other students. See <https://www.insidehighered.com/views/2017/09/26/why-tuition-discounting-has-created-more-problems-solutions-essay>

Discounting can be a highly complex exercise as institutions attempt to manage student population levels and characteristics while maximizing the revenue raised. Total discount rates vary by institution, and in some cases can be very deep. In FY19-20, the average discount rate for all undergraduates in a national study was nearly 48 percent.<sup>8</sup>

### **State Aid to Higher Education Institutions.**

A second reasonable question to ask is, do the additional students attending post-secondary institutions through PSEO drive any higher education state funding? Aside, from the transfer of general education revenue estimated in Section 3, the answer is no. The two public higher education systems in the State, the University of Minnesota and Minnesota State, receive significant funding from the Legislature in annual appropriations. While not receiving direct appropriations, private colleges also receive significant benefits either in State grants or tax benefits. But importantly, none of these direct appropriations to public institutions or benefits are student driven. Each system receives annual block grant funding that for the most part is allocated and spent for whatever purpose the system determines.<sup>9</sup> The means that students shifting from the K-12 system to higher education have no impact whatsoever on the amount the state appropriates.

### **Costs at Post-Secondary Institutions**

Do PSEO students increase costs to post-secondary institutions? This question is more complicated. More directly, if *one* more student attends a higher education institution, do its costs increase? What happens if 1,000 more students attend? Are there actual cost increases?

Economics 101 suggests two ways to view cost changes, either as average costs or marginal costs. Average costs are simply total costs divided by the full-time equivalent number of students. Total costs comprise both fixed costs, (those costs the institution pays regardless of teaching loads), and variable costs, (costs that change with changing output, or in this case, additional students). The second idea reflects marginal costs. Marginal costs measure the increase in total cost with each additional student.

Measuring these two costs are important for administrative effectiveness. Average costs are straightforward and can generally come directly from institutional accounting data. Marginal costs are much more difficult to assess. The statement below taken from a higher education report is revealing.

“But here’s the problem. Marginal revenue is relatively easy to understand: it’s pretty close to average revenue, after all, though it gets a bit more complicated in places where government grants are not provided on a formula basis, and there’s some trickiness when you start calculating domestic fees vs. international fees, etc. But the number of universities that genuinely understand marginal cost at a program level is pretty small.

Marginal costs in universities are a bit lumpy. Let’s say you have a class of twenty-five students and a professor already paid to teach it. The marginal cost of the twenty-sixth student is essentially zero – so grab that student! Free money! Maybe the twenty-seventh student, too. But after a while, costs do start to build. Maybe on the 30th student there’s a collective bargaining

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<sup>8</sup> The [2019 NACUBO Tuition Discounting Study](#)

<sup>9</sup> The Legislature often adds specific programmatic funding or limiting rider language that restricts the use of some funds.

provision that says the professor gets a TA, or assistance in marking. Whoops! Big spike in marginal costs. Then where you get to forty, the class overfills and you need to split the course into two, get a new classroom, and a new instructor, too. The marginal cost of that forty-first student is astronomical. But the forty-second is once again almost costless. And so on, and so on.

Now obviously, no one should measure marginal costs quite this way; in practice, it would make more sense to work out averages across a large number of classes, and work to a rule of thumb at the level of a department or a faculty. The problem is very few universities even do that (my impression is that some colleges have a somewhat better record here, but the situation varies widely). Partly, it's because of a legitimate difficulty in understanding direct and indirect costs: how should things like light, heat, and the costs of student services, admissions, etc., be apportioned – and then there is the incredible annoyance of working out how to deal with things like cross-listed courses. But mostly, I would argue, it's because no one *wants* to know these numbers. No one wants to make decisions based on the truth. Easier to make decisions in the dark, and when something goes wrong, blame it on the Dean (or the Provost, or whoever)."<sup>10</sup>

This quote reflects conceptual ideas about higher education marginal costs. What about empirical evidence? This evidence is fairly thin and dated. One study, published in 1986, is old, but important because the University of Minnesota was the institution under investigation.<sup>11</sup> Additionally, for our purposes, the study focused on graduate programs and in a more detailed way issues such as advising costs, and internal administrative demand, problems that do not apply to PSEO students. This is a long and complicated paper, but one key statement in the report was:

“There was a consensus that a professor's main cost of classroom instruction is preparing and delivering lectures and that this cost does not vary with enrollments. Increases in enrollments in the relatively large first-year graduate lecture courses were not regarded as costly provided there are teaching assistants. It was thought that higher enrollments in laboratory courses are costly because of the need to work individually with students and because of the constraints on laboratory space. However, it was usually stated that the former cost could be mitigated by using advanced graduate students as teaching assistants. Everyone we talked with felt strongly that the higher the quality of extra students, the lower the net costs.”<sup>12</sup>

And from the paper's conclusion:

“We found that the costs directly facing individual faculty members vary with their interests and capabilities and are not amenable to quantification. Nonetheless, we concluded that in general, faculty in well-established departments already teaching a large variety of courses face only modest costs of additional classroom enrollments. In contrast, there are high costs of advising additional graduate students, but advising has offsetting benefits that can increase substantially with the quality of the student. The costs and benefits of advising can be especially large in the laboratory sciences”<sup>13</sup>

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<sup>10</sup> <https://higheredstrategy.com/marginal-costs-marginal-revenue-2/>

<sup>11</sup> The Marginal Costs of Instruction Author(s): Stephen A. Hoenack, William C. Weiler, Rebecca D. Goodman and Daniel J. Pierro Source: Research in Higher Education, 1986, Vol. 24, No. 4 (1986), pp. 335-417 Published by: Springer Stable URL: <https://www.jstor.org/stable/40195721>

<sup>12</sup> See Page 354

<sup>13</sup> See Page 409

A more recent paper suggests a small level of marginal costs.<sup>14</sup> But recall, serving higher education institutions do receive revenue from the State that likely covers small marginal cost increases.

Although PSEO has been in existence since 1985, there has been little analysis of its effectiveness or costs. The single report to date was published in 1996 by the Minnesota Legislative Auditor.<sup>15</sup> While the report focused mainly on students' issues, there is a small section on higher education costs. The report found that PSEO students increased higher education costs by \$16.3 million (1993-94 dollars).<sup>16</sup> The report also found that on net, after subtracting K -12 savings, there was a net cost to the State of \$4.5 million.

The study contends that there are more than marginal costs to the post-secondary systems from these students because "there is little evidence that the students have a marginal cost impact." To determine higher education costs the Auditor assumes an average cost approach. The report simply multiplies the average cost against a count of PSEO students. There were adjustments at the University of Minnesota for upper division courses that are more expensive.<sup>17</sup> This is adjustment relevant since few if any PSEO students take upper division courses.

But given the discussion above, this is inappropriate. First, it seems that the burden be placed on the demonstration of actual costs (average or marginal), not a dismissal of no evidence of marginal costs. Marginal cost analysis is the correct approach to the issue. Second, funding for higher education is materially different today than in the 1980's and 1990's. In the historical period, there was much more focus in State debates on average cost funding, enrollment adjustments and a State 'promise' to fund 67 percent of a student's higher education costs. This framework does not exist today. But third, and most importantly, this is a static approach. If average costs are higher today because of PSEO, then these costs will be lower in the future since there will be fewer students in the higher education system.

In conclusion, it seems a fair statement that PSEO generally has little impact on higher education revenues aside from the basic allowance shifted on a per credit basis, and small or non-material impacts on higher education costs.

### **A Brief Note on School District Marginal Cost Changes**

If marginal costs do not increase much when a student arrives at a post-secondary institution, can it be equally said that there is no marginal cost decrease at the school district? The same economic concepts apply in both directions and to both levels of education. A school district may argue that a student leaves with the bulk of the revenue but also leaves behind substantial costs. This may be true, but it is no different than the impact of open enrollment programs in the state, or even when students simply leave the district for another location. School district leaders are expected to manage these revenue changes under all of these circumstances.

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<sup>14</sup> A Report on Incremental Costs and Benefits Associated with Increasing Enrollment at UMBC Brad R. Humphreys Associate Professor of Economics UMBC May 17, 2000

<sup>15</sup> Postsecondary Enrollment Options Program, Office of the Legislative Auditor, March 1996

<sup>16</sup> See page 85

<sup>17</sup> See page 90

## **Other Potential Savings**

### **Section 5**

Minnesota's dual enrollment programs, whether it occurs in school districts or at post-secondary institutions, is a cost-effective approach for students to gain college credit and high school credit at the same time. All of the programs in the end save money for parents and taxpayers. The list below offers a few examples, but it is not exclusive:

- Parents and students avoid future tuition payments and student debt. It is not possible given the data to estimate saving for all of the programs. But an estimate for PSEO is possible. If we take the credits earned at each institution in FY 2018, multiply the full-time equivalent number of students by tuition and fee levels at each of these schools for FY2021, the result is a savings of \$59.8 million. An alternative way to look at this is there would be \$59.8 million less in student debt in the future, a significant number with current concerns over student debt.
- Dual enrollment programs, especially in light of the significant growth shown over the last 10 years in Table 1, should decrease the need for capital costs in the future for high education institutions. There will be less demand for classrooms and college dorms. While these programs are a small part of larger demographic changes (smaller graduating classes) and technological innovations (on-line learning), and COVID revealed opportunities, they do accentuate these pressures.
- Other public programs will save money. For low income students, there will be lower PELL grants from the federal government and State Aid grants from the State. Merit based scholarships will see reduced demand.
- Finally, there are larger economic implications if students actually use dual enrollment programs to finish college earlier and enter the workforce sooner. This action reduces opportunity costs for students and enhances the labor force in the State sooner.

**A Brief Note on The Appendices**  
**Section 6**

Appendix 1 contains a Table that shows PSEO credits and payments to post-secondary institutions in Minnesota for Fiscal Year 2018. This is the most recent information available from the Department of Education.<sup>18</sup>

- The Community and Technical Colleges generate the largest amount of both credit and payments.
- The University of Minnesota Twin Cities campus is a significant generator of credits, and reflects the largest among public universities. The 11,341 count of credits at the UofM in FY 2018 appears to be a large number, but the total undergraduate credits hours for the Twin Cities Campus in the 2016-17 academic school year (excluding summer) exceeded 911,000. PSEO is just over 1 percent of total credits. This figure adds credence to the assertion that these students have no, or little impact on costs.
- The most interesting number in the Table is for the University of Northwestern – St. Paul. At a reimbursement of nearly \$5 million, PSEO comprises a material part of the University's budget.

Appendix 2 is a background description of New Pharos Consulting and Mark Misukanis, Ph. D., the Principal Investigator for the report.

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<sup>18</sup> See the citation in footnote 3.

## **Conclusions**

### **Section 7**

This section presents the key messages from the report.

1. Minnesota offers a number of approaches for students to obtain college credits while in high school under dual enrollment- programs.
2. The programs structures are very different with some driven by national or international groups (AP and IB), some taking place in the high school settings (Concurrent Enrollment) and one other occurring mainly on college campuses (PSEO).
3. Enrollment has risen dramatically the last 10 years in each of the programs with growth in the 40 to 50 percent range.
4. Analyzing the revenue formulas put in place by the Legislature for the several programs, PSEO is the most cost-effective approach. In FY2021, state and local taxpayers will save an estimated \$15.1 million for students taking PSEO compared to other dual enrollment programs.
5. As shown in Section 1, the State spends approximately \$8.5 million for AP and Concurrent Enrollment. This includes aid for exams and teacher training. This is in addition to the standard aid and levy paid for these students. If students used PSEO instead of these programs, this \$8.5 million could be reduced.
6. Enrollment in the programs should not be considered cost drivers for higher education institutions. Under marginal cost ideas, the change in credits is too small. Under average costs notions, enrollment today would cancel enrollment in the future. Indeed, since future costs are higher, there could be a net savings.
7. With dual enrollment programs, parents and students realize significant cost savings with lower tuition or debt payments in the future. Under PSEO alone, a reasonable estimate for FY 20-21 is \$59.8 annually.
8. Other state and federal student financial aid programs would also see savings as these students enroll in college and graduate early due to the accumulated credits.

**Appendix 1**  
**PSEO Total Number of Credits and Expenditures by Institution**  
**FY 2018**

POSTSECONDARY INSTITUTION NAME	INSTITUTION TYPE	TOTAL NUMBER OF CREDITS	AMOUNT PAID
ALEXANDRIA TECHNICAL/COMMUNITY COLLEGE	Community	1,419	\$287,858
ANOKA TECHNICAL COLLEGE	Technical	1,076	\$218,277
ANOKA-RAMSEY COMMUNITY COLLEGE	Community	14,098	\$2,859,920
BEMIDJI STATE UNIVERSITY	State University	91	\$18,460
BETHANY LUTHERAN COLLEGE	Private	574	\$116,441
BETHEL UNIVERSITY	Private	2,584	\$524,190
CENTRAL LAKES COLLEGE	Community & Technical	3,828	\$776,548
CENTURY COLLEGE	Community & Technical	5,425	\$1,100,515
COLLEGE OF ST. SCHOLASTICA	Private	220	\$44,629
CONCORDIA COLLEGE	Private	175	\$35,500
CONCORDIA UNIVERSITY - ST. PAUL	Private	4,263	\$864,792
CROWN COLLEGE	Private	2,504	\$507,961
DAKOTA COUNTY TECHNICAL COLLEGE	Technical	738	\$149,710
DUNWOODY COLLEGE OF TECHNOLOGY	Private	99	\$20,083
FOND DU LAC TRIBAL AND COMMUNITY COLLEGE	Community	1,679	\$340,601
GUSTAVUS ADOLPHUS COLLEGE	Private	162	\$32,795
HAMLIN UNIVERSITY	Private	142	\$28,806
HENNEPIN TECHNICAL COLLEGE	Technical	1,773	\$359,670
HIBBING COMMUNITY COLLEGE	Community	321	\$65,118
INVER HILLS COMMUNITY COLLEGE	Community	9,546	\$1,936,501
ITASCA COMMUNITY COLLEGE	Community	1,645	\$333,704
LAKE SUPERIOR COLLEGE	Community & Technical	3,145	\$637,994
LEECH LAKE TRIBAL COLLEGE	Community	20	\$4,057
MACALESTER COLLEGE	Private	4	\$811
MCNALLY SMITH COLLEGE OF MUSIC	Private	157	\$31,849
MESABI RANGE COMMUNITY/TECHNICAL COLLEGE	Community & Technical	2,407	\$488,284



METROPOLITAN STATE UNIVERSITY	State University	508	\$103,052
MINNEAPOLIS COLLEGE	Community & Technical	7,112	\$1,442,740
MINNEAPOLIS COLLEGE OF ART AND DESIGN	Private	33	\$6,694
MINNESOTA STATE COLLEGE SOUTHEAST	Community & Technical	734	\$148,899
MINNESOTA STATE COMMUNITY/TECHNICAL COLLEGE	Community & Technical	2,700	\$547,722
MINNESOTA STATE UNIVERSITY - MANKATO	State University	1,209	\$245,257
MINNESOTA STATE UNIVERSITY - MOORHEAD	State University	384	\$77,898
MINNESOTA WEST COMMUNITY/TECHNICAL COLLEGE	Community & Technical	3,519	\$713,864
NORMANDEALE COMMUNITY COLLEGE	Community	7,974	\$1,617,605
NORTH CENTRAL UNIVERSITY	Private	2,430	\$492,949
NORTH HENNEPIN COMMUNITY COLLEGE	Community	3,646	\$739,627
NORTHLAND COMMUNITY/TECHNICAL COLLEGE	Community & Technical	535	\$108,530
NORTHWEST TECHNICAL COLLEGE	Technical	206	\$41,789
OAK HILLS CHRISTIAN COLLEGE	Private	146	\$29,617
PINE TECHNICAL/COMMUNITY COLLEGE	Community & Technical	306	\$62,075
RAINY RIVER COMMUNITY COLLEGE	Community	90	\$18,257
RED LAKE NATION COLLEGE	Community	44	\$8,925
RIDGEWATER COLLEGE	Community & Technical	5,279	\$1,070,897
RIVERLAND COMMUNITY COLLEGE	Community	3,295	\$668,423
ROCHESTER COMMUNITY/TECHNICAL COLLEGE	Community & Technical	3,848	\$780,605
SAINT PAUL COLLEGE	Community & Technical	6,794	\$1,378,230
SOUTH CENTRAL COLLEGE	Community & Technical	1,605	\$325,590
SOUTHWEST MINNESOTA STATE UNIVERSITY	State University	281	\$57,003
ST. CATHERINE UNIVERSITY	Private	246	\$49,903
ST. CLOUD STATE UNIVERSITY	State University	7,247	\$1,470,126
ST. CLOUD TECHNICAL/COMMUNITY COLLEGE	Community & Technical	4,168	\$845,520
ST. MARY'S UNIVERSITY OF MINNESOTA	Private	264	\$53,555
SUMMIT ACADEMY	Private	15	\$2,028
U OF M – CROOKSTON CAMPUS	University of Minnesota	608	\$123,338
U OF M – DULUTH CAMPUS	University of Minnesota	1,803	\$365,756
U OF M – MORRIS CAMPUS	University of Minnesota	359	\$72,826

U OF M – TWIN CITIES CAMPUS	University of Minnesota	11,341	\$2,300,635
UNIVERSITY OF NORTHWESTERN – ST. PAUL	Private	23,504	\$4,768,021
VERMILION COMMUNITY COLLEGE	Community	354	\$71,812
WHITE EARTH	Community	111	\$22,517
WINONA STATE UNIVERSITY	State University	715	\$145,044
<b>TOTALS</b>	--	<b>161,508</b>	<b>\$32,762,430</b>

**Appendix 2**  
**Summary of Background and Experience**  
**New Pharos Consulting**

New Pharos is a non-partisan public policy and data analytics firm in Minnesota. It has existed for nine years undertaking projects in a variety of State policy areas.

The Principle Investigator for this project is Dr. Mark Misukanis, a Senior Consultant with New Pharos Consulting. Dr. Misukanis has over 32 years of experience in numerous policy areas in state government including tax research, education spanning early childhood through postsecondary education, overall state budgeting covering the programs of every state agency and other policy areas such as economic development and commerce. He spent the first six years of his career in the Department of Revenue performing tax research and operating a large economic model of the state producing economic projections as well as simulating alternative policy options. He spent 12 years as the Fiscal Policy Analyst for the Education Funding committee in the State Senate. In this position he worked on a number of education programs and developed numerous funding formulas. This experience also included cost analysis of school district spending patterns. He has published numerous policy reports on education and other policy areas in the state during this career.

Dr. Misukanis spent eight years as the Director of the Office of Fiscal Policy and Analysis in the Senate and has a full understanding of a broad range of funding areas (education, health, human services) and is considered an expert in state budget policy.

From 2004 through 2011, he served as Director of Finance and Research for the Minnesota Office of Higher Education. In that role, he managed the daily operations of the Financial, Administrative Operations and Policy Research Divisions of the Office. He possesses a strong understanding of both public and private post-secondary institutions in the state. Dr. Misukanis served as Acting Director of the Agency during 2009.

Dr. Misukanis has completed numerous other education related projects. During 2009, he prepared a report on cost of living indexes for school districts across the state. This work was done on behalf of Parent's United, a group that represented all of the major education associations in the state. In 2008, he worked with Education|Evolving, a local education group on a project investigating the allocation of school district funds directly to school buildings.

Dr. Misukanis is currently an adjunct faculty at Metropolitan State University. His appointment is in the Masters in Nonprofit Management and Public Administration program.

Dr. Misukanis holds a Ph. D. in Education Policy and Administration from the University of Minnesota and has completed Masters work in Economics with a focus on public finance at the University of Wisconsin. He earned his Bachelor's degree in Economics from the University of St. Thomas.