

PROPOSED FINAL REPORT: **Opportunity Scholarship and Opportunity Expansion Programs**

LEGISLATIVE AUDITOR'S CONCLUSION:

The Washington State Opportunity Scholarship (WSOS) complies with statute and provides scholarships to low- and middle-income students pursuing high-demand STEM and health care degrees. WSOS can improve legislative reporting by coordinating with state agencies for financial aid and employment data.

December 2019

The Opportunity Scholarship Act created the Washington State Opportunity Scholarship (WSOS) in 2011. WSOS provides scholarships to low- and middle-income students who pursue bachelor's degrees in high-demand science, technology, engineering, mathematics (STEM), and health care fields. The legislation also directed a JLARC review (ESHB 2088).

WSOS complies with statute and provides scholarships to students pursuing a high-demand STEM or health care degree

WSOS has provided more than 21,000 scholarships to over 10,000 low- and middle-income Washington residents between academic years 2012-13 and 2018-19. Scholars must pursue a bachelor's degree in a high-demand STEM or health care field. WSOS is funded through private contributions and state matching funds. In total, WSOS has received \$175 million in private contributions and state matching funds since fiscal year 2012.

WSOS has spent \$64 million on Opportunity Scholarships and \$14 million on non-scholarship costs since fiscal year 2013. Per statute, WSOS reports the amount it pays to its nonprofit program administrator each year. This payment amount only reflects a portion of the total non-scholarship expenditures.

Opportunity Scholars have lower out of pocket costs and fewer student loans than their peers

The Legislature created the Opportunity Scholarship to help make college more affordable. There is no single definition of college affordability. Whether college is affordable or unaffordable is ultimately a policy decision.

To assist with that decision, JLARC staff identified several key affordability metrics that can be used to compare Opportunity Scholars to their peers (students who met WSOS eligibility requirements, and did not receive a scholarship). These include:

- Out of pocket costs¹ (net price of college).
- Percentage of students borrowing money through loans, and borrowers' annual loan amounts.
- Unmet need (cost of college not covered by grants, scholarships, and family contributions²).

In comparison to their peers, Opportunity Scholars have lower out of pocket costs, student loans, and unmet need. For example, Opportunity Scholars pay an average of \$11,000 out of pocket each year while their peers pay an average of over \$13,000.

Opportunity Scholars are more likely to continue their education than their peers. Early recipients have graduated with degrees in high-demand fields.

One of WSOS's objectives is to increase the number of degrees earned in high-demand STEM and health care fields. While some Opportunity Scholars have graduated, many are still pursuing a degree and more time is needed to identify their outcomes. To date, eighty-four percent of those graduating earned a degree in a high-demand field. Scholars who have not yet graduated are more likely to continue their education than their peers.

WSOS can improve its legislative reporting with student financial aid and employment data collected by state agencies

WSOS issues annual reports to the Legislature that include the information required by statute. These reports do not assess whether WSOS meets the legislative intent to help make college more affordable or help Scholars enter middle-income jobs. The reports provide limited information about Opportunity Scholars' employment and earnings. WSOS does not currently have access to state financial aid and employment information that would improve legislative reporting in the future.

The Opportunity Expansion Program funded three university STEM programs. All have secured funding for the future.

The Opportunity Expansion Program received \$6 million through a state Research & Development (R&D) tax credit before the credit expired in 2015. The WSOS Board awarded a total of three Opportunity Expansion Program grants to Central Washington University, Western Washington University, and the University of Washington. These grants focused on capacity

¹Cost of attendance not covered by grants and scholarships.

²Expected family contribution is determined by a federal methodology based on information reported on student financial aid applications, such as income and number of household members attending college.

building and expansion in STEM-related teacher education, computer science, and engineering. All three grant recipients have secured future funding for these STEM programs. It is too soon to evaluate how these grants impact student outcomes (e.g. graduation, employment, earnings).

Legislative Auditor Recommendations

The Legislative Auditor makes two recommendations to improve legislative reporting.

1. WSOS should develop and implement a plan to coordinate with state agencies such as the Office of Financial Management's Education Research and Data Center, the Washington Student Achievement Council, and the Employment Security Department to provide additional information in its annual legislative reports. Planning efforts should focus on how to compile, protect confidentiality, and include financial aid and employment data on Opportunity Scholars. WSOS should include updates on its plan implementation and any additional metrics in its annual legislative reports.
2. WSOS should include its overall non-scholarship costs, including the total cost to administer the Opportunity Scholarship program, in its annual legislative report.

WSOS, the Office of Financial Management, and the Washington Student Achievement Council concur with these recommendations. You can find additional information on the Recommendations tab.

REPORT DETAILS

1. WSOS funds students in STEM and health care

The Washington State Opportunity Scholarship complies with statute and provides scholarships to students pursuing high-demand STEM or health care degrees

The Legislature created the Washington State Opportunity Scholarship (WSOS) Program in 2011. WSOS provides scholarships to low- and middle-income students pursuing bachelor's degrees in high-demand science, technology, engineering, mathematics (STEM) and health care fields (ESHB 2088).

WSOS is not a state government agency. It is an entity governed by a board appointed by the Governor, and it is staffed by a non-profit administrator. WSOS receives both public and private funding for the scholarship program. The legislation creating WSOS also directed a review by the Joint Legislative Audit and Review Committee (JLARC).

The 2018 Legislature expanded WSOS to include scholarships for students who pursue professional technical certificates or associate degrees in high employer demand fields, or advanced degrees in the health professions. Due to this timing, these new scholarship programs were not part of JLARC's study directive and are outside the scope of this report.

Students must meet residency, income, and education criteria to qualify for scholarships

WSOS began awarding scholarships in academic year 2012-13 based on eligibility requirements set by [statute](#)³ and the WSOS Board of Directors. Opportunity Scholars must:

- Be a Washington resident who received their high school diploma or equivalency degree in Washington and have not yet earned a bachelor's degree.
- File a Free Application for Federal Student Aid (FAFSA) or Washington Application for State Financial Aid (WASFA).
- Have a family income at or below 125% of the median family income in Washington adjusted for family size.
- Have a cumulative minimum GPA of 2.75.
- Pursue an eligible education program defined by the WSOS Board at an eligible Washington college or university ([link to list of eligible majors](#)).
- Have an [eligible class standing](#)⁴ (e.g. high school senior at time of application).

WSOS provides students up to \$22,500 in scholarship funds over a maximum of five years. The amount awarded each year depends on how many credits the student has completed.

Opportunity Scholars typically receive up to:

- \$2,500 in their first or second year of college.
- \$5,000 in their third year if they have been accepted into an eligible major.
- \$7,500 in their fourth year.
- \$5,000 in their fifth year (if necessary).

WSOS also offers professional development, industry mentoring, and skill building workshops to prepare Opportunity Scholars for the workforce. In addition, WSOS has developed two student support programs that all Scholars must participate in as of academic year 2018-19: the Scholar Lead Program offers peer mentoring to newly selected students, and the Skills that Shine program connects third-year Scholars to industry mentors.

Private donations and state matching dollars have funded more than 10,000 Opportunity Scholars

WSOS is funded through a combination of private contributions and state matching dollars. As statute directs, WSOS established two accounts to operate the program. One provides

³RCW 28B.145

⁴This requirement did not apply to the first cohort of Opportunity Scholars.

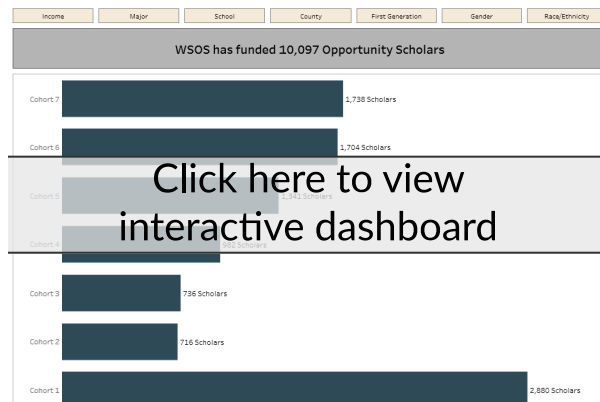
scholarships, and the second is used to build an endowment for future expenditures. To date, WSOS has received a total of \$175 million. This includes:

- \$88 million in private donations. Four donors have contributed 93% of these private funds. Only one private donor has contributed to the endowment account, which had a balance of \$28 million at the end of 2018. WSOS reports they also have approximately \$12 million in pledged private donations not yet received.
- \$87 million in state matching funds.

The WSOS Board and program administrator have not set annual fundraising goals, as directed by [statute](#)⁵. WSOS reported they have focused on soliciting large, private donations, and have set a \$1 million goal for one annual fundraising event. WSOS also indicated that they have received enough funds overall to provide scholarships and awards at the current level for Scholars beginning in academic year 2025 through their graduation.

WSOS provides scholarships to low- and middle-income Washington residents

Between academic year 2012-13 and 2018-19, WSOS spent \$64 million on more than 21,000 annual scholarships to over [10,000 students](#)⁶. Opportunity Scholars are low- and middle-income Washington residents pursuing a high-demand STEM or health care major. Nearly 70% of the Scholars have attended a public four-year college or university. Additional Scholar information is available in the Tableau dashboard below.



⁵RCW 28B.145.020(6) directs the WSOS Board and the program administrator to solicit funds and set annual fundraising goals.

⁶A student may receive a scholarship more than once (e.g. in consecutive years).

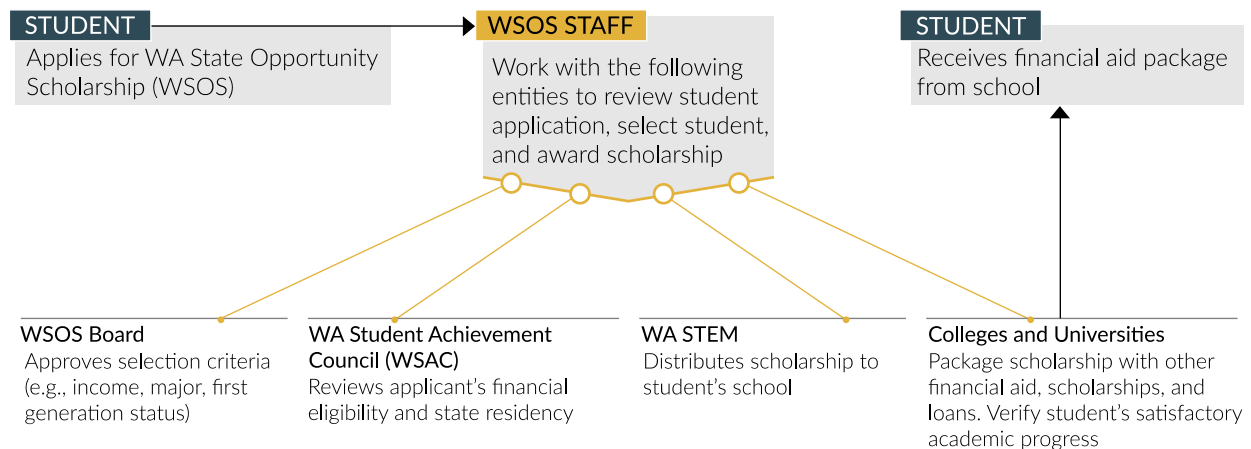
WSOS and partners work together to manage and administer the Opportunity Scholarship

Statute and contracts between partners outline the roles and responsibilities for the WSOS Board, the Washington Student Achievement Council (WSAC), and a nonprofit program administrator.

- WSOS is established in law and managed by an 11-member, governor-appointed Board of Directors (Board). The Board sets WSOS's overall strategic direction, determines eligible education programs, approves selection criteria, and sets the annual scholarship award amount.
- WSAC is a separate state agency that reviews certain student eligibility requirements. It also confirms the amount of private donations that WSOS receives and distributes the state matching funds equal to the private donations.
- Washington STEM is currently the private nonprofit program administrator that provides administrative support to WSOS, distributes scholarships, manages WSOS's finances, and coordinates with WSAC to receive state matching funds.

The WSOS Board hired an executive director in 2014 and authorized the director to hire 18 additional staff members in the following years. WSOS staff serve the Board and are employees of Washington STEM. The staff's roles and responsibilities are not defined in statute. Some are involved with fundraising, selecting scholars, and providing Scholar supports.

Exhibit 1.1: WSOS works with its partners to select and distribute Opportunity Scholarships



Source: JLARC staff analysis.

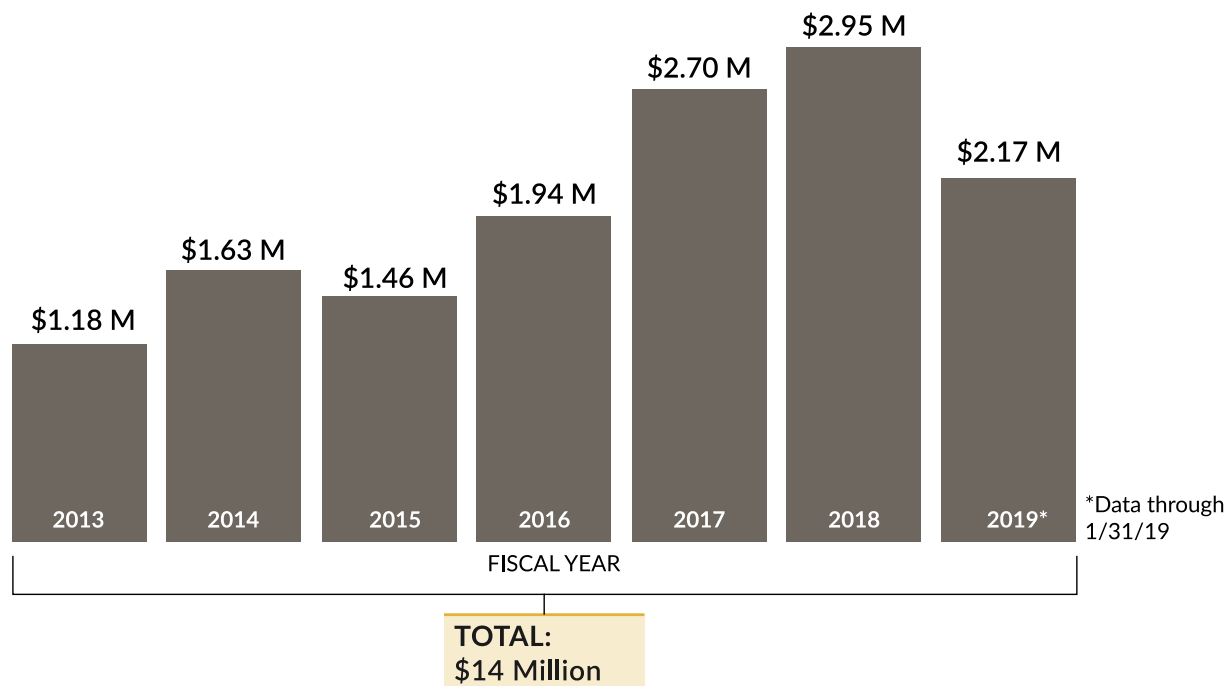
WSOS has spent \$14 million on non-scholarship costs since fiscal year 2013

The WSOS Board approves an annual operating budget for the scholarship program. As of January 2019, WSOS had spent \$14 million on non-scholarship costs. This \$14 million includes spending on:

- Salaries, taxes, and benefits for WSOS staff.
- Consultants and professional services.
- Fundraising, staff development, and lobbying.
- General operating costs.
- Program administration fees.
- Providing [direct Scholar supports](#).

These expenditures do not directly fund Opportunity Scholarships. WSOS has spent \$64 million on scholarships since academic year 2012-13. The program administration fee is just one portion of the total non-scholarship costs (see Tab 4).

Exhibit 1.2: Annual non-scholarship costs have ranged from \$1.2 million to \$3 million



Source: Washington STEM and College Success Foundation financial data for WSOS program.

2. Opportunity Scholars pay less out of pocket than peers

Compared to their peers, Opportunity Scholars pay lower out of pocket costs and borrow less

The Legislature created the Washington State Opportunity Scholarship (WSOS) to help make college affordable by "mitigat[ing] the impact of tuition increases" for students pursuing a bachelor's degree in a high-demand STEM or health care field (RCW 28B.145.005). The Legislature directed JLARC to evaluate whether WSOS is meeting this policy objective (RCW 28B.145.080).

JLARC staff identified key college affordability metrics

JLARC staff reviewed academic literature, federal and state documents, and reports from policy organizations. There is no consensus on a single definition of college affordability. Whether college is affordable or unaffordable is ultimately a policy decision informed by individual values and preferences.

However, several key metrics exist for comparing whether some students pay less than others to attend college. These metrics include:

- Out of pocket costs (net price of college).
- Percentage of students borrowing money through loans.
- Annual amount of loans for borrowers.
- Unmet need (cost of college not covered by grants, scholarships, and family contributions).
- Total grant and scholarship awards.

See Appendix B for more details.

Opportunity Scholars have lower out of pocket costs, student loans, and unmet need than their peers

JLARC staff compared Opportunity Scholars to a group of their peers who met WSOS's eligibility requirements, but did not receive scholarships. JLARC staff used data from the Office of Financial Management's Education Research and Data Center (ERDC) for this analysis. ERDC combined financial aid data from WSAC for the first five years of the Opportunity Scholarship with other data and removed confidential student identifiers.

On average, the data shows that Opportunity Scholars have lower out of pocket costs, student loans, and unmet need than their peers. While our analysis identified differences between these two groups, we did not determine the causes of those differences. **Our analysis did not establish that the Opportunity Scholarship caused any differences in college affordability between Scholars and their peers.**

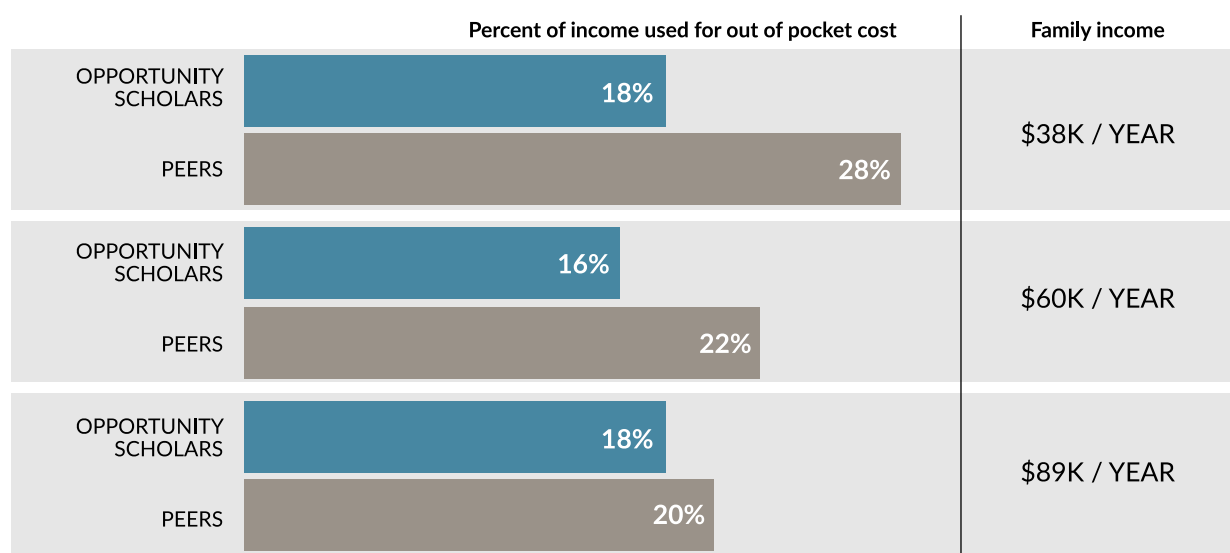
Additional information on the data and methodology used to construct the peer group is available in Appendix A.

Compared to their peers, Opportunity Scholars pay lower out of pocket costs and have lower unmet need

Both Opportunity Scholars and their peers are students with family incomes below 125% of the median family income in Washington. Opportunity Scholars, on average, used less of their family income to meet their out of pocket costs.

For example, in academic year 2016-17, an Opportunity Scholar with a family income of approximately \$38,000 would have out of pocket costs equal to almost 18% of their family income. Comparable students not receiving the Opportunity Scholarship would have costs equal to 28% of their family income. This means that Scholars, on average, used less of their family income to pay for college than their peers.

Exhibit 2.1: Opportunity Scholars use less of their family income to pay out of pocket costs

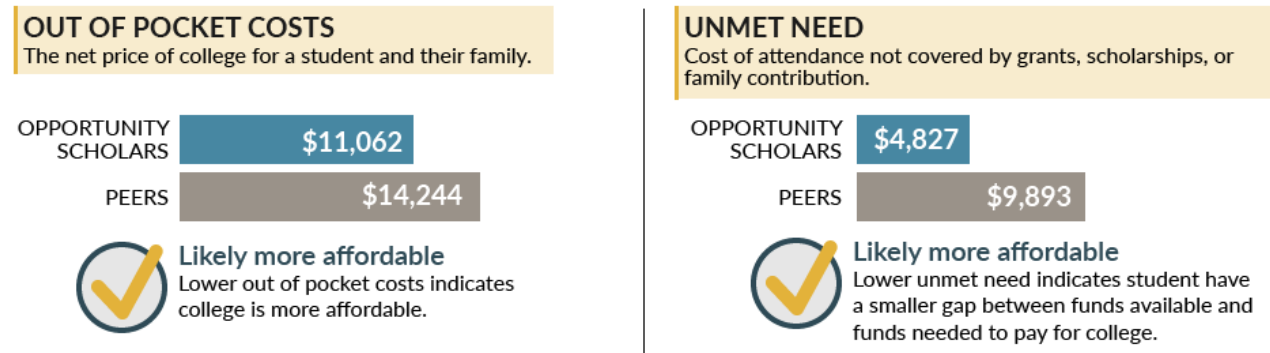


Source: JLARC staff analysis of data from the Office of Financial Management's (OFM) Education Research and Data Center (ERDC) for academic year 2016-17.

Overall, the average out of pocket costs (net price of college) for students receiving Opportunity Scholarships were lower than their peers in each of the first five years of the program (Exhibit 2.2).

When compared to their peers, Opportunity Scholars, on average, have lower unmet need when it comes to college costs that are not covered by grants, scholarships, and family contributions (Exhibit 2.2). Students with higher need may need to use savings, work income, loans, or other sources to pay the cost of attendance.

Exhibit 2.2: Opportunity Scholars have lower out of pocket costs and unmet need



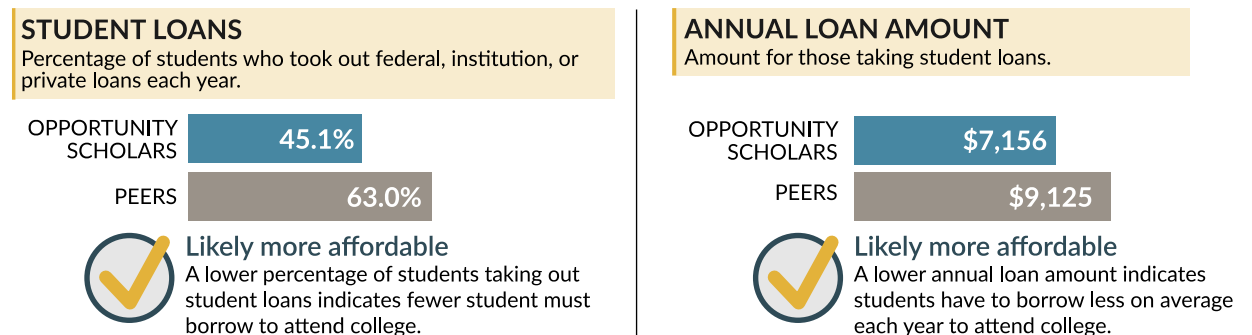
Source: JLARC staff analysis of data from the Office of Financial Management's (OFM) Education Research and Data Center (ERDC) for academic years 2012-13 through 2016-17.

Compared to their peers, Opportunity Scholars take out fewer loans and borrow less each year

As Exhibit 2.3 shows, on average, Opportunity Scholars took out fewer loans and borrowed less than their peers for each of the first five years of the program.

Opportunity Scholars also reported via interviews and surveys that the Scholarship helped to minimize the amount of money they borrowed for college.

Exhibit 2.3: Opportunity Scholars took out student loans at a lower rate and have a lower annual loan amount



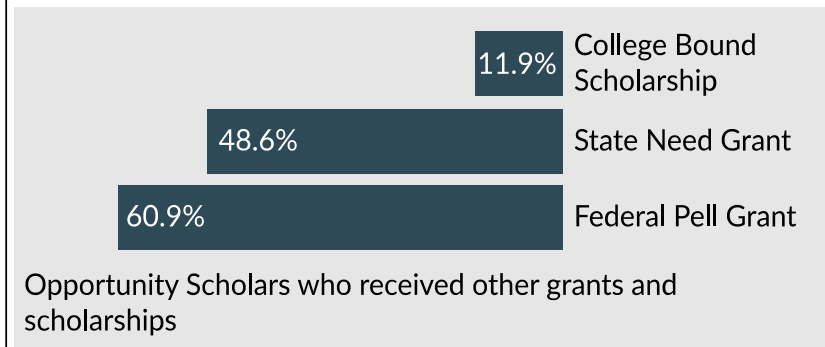
Source: JLARC staff analysis of data from the Office of Financial Management's (OFM) Education Research and Data Center (ERDC) for academic years 2012-13 through 2016-17.

WSOS is only one piece of a student's overall funding package

Opportunity Scholars also receive state, federal, and institutional grants and scholarships (Exhibit 2.4). These are packaged by the students' individual colleges and universities. WSOS does not have access to information about additional financial aid that Scholars may receive (see Tab 4 for more information).

Since WSOS is only one piece of a Scholar's overall funding package, it is difficult to make definitive statements about its affect on college affordability. When Scholars receive more funds from one source, it is possible that they will receive less from another. In addition to receiving grants, scholarships, and loans, approximately 52% of the Scholars worked while in school during the first five years of the program.

Exhibit 2.4: Opportunity Scholars receive state and federal grants and scholarships



Source: JLARC staff analysis of data from the Office of Financial Management's (OFM) Education Research and Data Center (ERDC) for academic years 2012-13 through 2016-17.

3. Opportunity Scholars graduate in high-demand fields

Opportunity scholars are more likely to continue their education than their peers. Early recipients have graduated with degrees in high-demand fields.

One purpose of the Washington State Opportunity Scholarship (WSOS) is to increase the number of high-demand degrees earned in STEM and health care (RCW 28B.145.005).

While over 1,900 Opportunity Scholars have graduated from the first five cohorts, most Opportunity Scholars are still pursuing their degrees. It is therefore too early to analyze graduation rates for most of the program's scholars. JLARC staff analyzed education records for scholarship awards for academic years 2012-13 through 2016-17. This analysis includes the graduation rates of early scholarship recipients and the rate that first year students returned for their second year of school. Data is not yet available for students who received scholarships between 2017 and 2019.

Opportunity Scholars return to school in their second year at higher rates than their peers

For the first four years that the Opportunity Scholarship was offered, 96% of award recipients returned to school between their first and second academic years. This compares to 89% of their peers (see Appendix A).

Federal and state agencies use the rate in which first year students return for a second year as an early indicator of whether a student will graduate. Although many Opportunity Scholars have not yet graduated, a first year student who returns for their second year of college is more likely to graduate than a student who does not return.

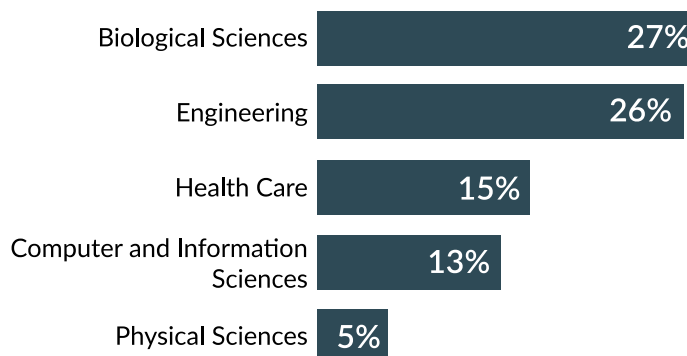
The first group of Scholars graduated at higher rates than their peers. Most graduates earned degrees in STEM or health care.

Students who received Opportunity Scholarships as freshmen in academic years 2012-13 and 2013-14 have graduated within four years at higher rates than their peers.

For example, 49% (227) of the initial group of Scholars have graduated in four years compared to 19% of their peers. This does not include students who graduated after the 2016-17 academic year.

Of all Scholars who graduated, regardless of the year they received a scholarship, 84% earned a degree in a high-demand STEM or health care major. These degrees were concentrated in five main fields of study.

Exhibit 3.1: Top 5 fields of study for Opportunity Scholar graduates



Source: JLARC staff analysis of data from the Office of Financial Management's (OFM) Education Research and Data Center (ERDC).

Too soon for a full evaluation of the employment and earnings of graduates

Using data from the Employment Security Department (ESD), JLARC staff analyzed the first year of employment and earnings for Opportunity Scholars and peer students who graduated between 2013 and 2016. Additional data on earnings and employment is not yet available for these graduates, or for more recent Opportunity Scholar graduates.

Initial results suggest Opportunity Scholars are employed in middle-income jobs

One of WSOS's objectives is to help Scholars enter middle-income⁷ jobs to meet market demands (RCW 28B.145.005). JLARC staff analyzed employment data for scholarship graduates and their peers who have completed at least one year of employment. The Opportunity Scholars are more likely to be employed and earn higher wages than their peers.

- 83% of Opportunity Scholars (over 1,400) were employed within 1 year of graduation compared to 77% of their peers.

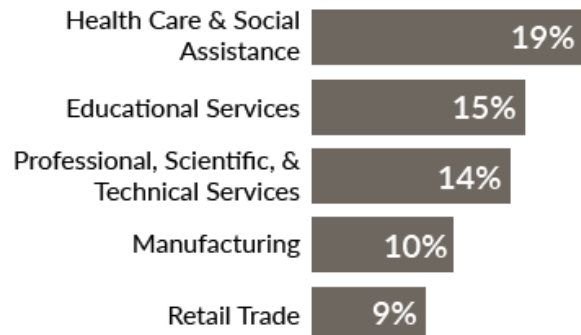
⁷Middle-income is defined as earning 200-500% federal poverty line for a family of four. In 2017, this was \$49,200 to \$123,000.

- Of those employed full-time, Opportunity Scholars earned \$66,100 on average compared to an average of \$58,200 for their peers.
- 69% of Opportunity Scholars who were employed full-time earned at least middle-income wages one year after graduation compared to 56% of their peers.

Graduates are concentrated in five industries

Of the graduates who are employed, 66% are concentrated in one of five industries. The ESD tracks data about the type of employers where individuals work, but does not collect information regarding specific job titles or occupations of employees. The graduates may work in a variety of occupations within these five industries.

Exhibit 3.2: Top 5 industries of employment for Opportunity Scholar graduates



Source: JLARC staff analysis of data from the Office of Financial Management's (OFM) Education Research and Data Center (ERDC).

4. WSOS could improve legislative reporting

WSOS's annual legislative reports contain reliable, required information. WSOS could improve the information it reports to the Legislature with additional data collected by state agencies.

The Washington State Opportunity Scholarship (WSOS) Board and program administrator are required to submit an annual report to the Legislature. The report must include the following information identified in statute (RCW 28B.145.070):

- Number of applicants and award recipients disaggregated by race/ethnicity, gender, family income, and county.
- Number and amount of scholarships awarded.
- Institution name and graduation rates of the schools where Opportunity Scholars are enrolled.
- Amount of funds raised through private sources and the state match.
- Amount spent on program administration fees.

The Legislature also directed WSOS to help make college more affordable and to help its Scholars enter middle-income jobs⁸ to meet market demands (RCW 28B.145.005). WSOS has not included information in its annual reports on whether it is meeting these goals.

WSOS's annual reports contain reliable information for statutorily required elements

WSOS collects demographic and financial information from its applicants. It supplements its own data with information it purchases from a national non-profit education organization. This supplemental data comes from the specific institutions where Opportunity Scholars are enrolled. It includes Scholars' majors and graduation status. Collectively, WSOS uses this information to confirm scholarship eligibility, distribute awards, and prepare its annual reports.

Program administration fee reported to Legislature is just one portion of the total non-scholarship costs

Per statute, WSOS also collects program financial information and reports the amount it pays to its nonprofit program administrator each year. This reported amount only reflects a portion of the total non-scholarship costs (see Tab 1 for total non-scholarship costs). For example, in fiscal year 2018, the amount paid to the program administrator was 12.5% of the total non-scholarship costs.

JLARC staff was able to replicate the data that WSOS includes in its annual reports. The reports accurately reflect the characteristics of Opportunity Scholars and program finances.

Exhibit 4.1: WSOS complies with statutory requirement to issue annual legislative reports



Source: WSOS legislative reports.

⁸Middle-income is defined as 200-500% of the federal poverty level for a family of four. In 2017, this was \$49,200 to \$123,000.

WSOS could improve its annual legislative reporting with state financial aid and employment data

Multiple state agencies currently collect financial aid and employment information on students and recent graduates. JLARC staff utilized this data to display specific aggregate information about Opportunity Scholars for this report. This report demonstrates that this data can be informative for exploring whether the Opportunity Scholarship helps make college more affordable and improves the employment and earning outcomes of its graduates.

The Office of Financial Management's Education Research and Data Center (ERDC) combined data and information from multiple sources to assist JLARC staff in its analysis for this report. The data includes:

- Financial aid data from the Washington Student Achievement Council (WSAC), which describes a student's finances, grants, scholarships, and loans.
- Public higher education information from the Public Centralized Higher Education Enrollment System (PCHEES) and the State Board for Community and Technical Colleges (SBCTC), which identifies information on courses and degrees completed.
- Employment and earnings data for Washington workers from the Employment Security Department (ESD).
- Enrollment information from private colleges and universities such as major and degree information.

WSOS does not have direct access to the data collected by these state agencies, which is confidential under state and federal laws. WSOS has attempted to collaborate with certain state agencies for specific student-level demographic and outcome information. However, WSOS could further engage with state agencies to discuss whether there are methods to collaborate on data analysis and data sharing in order to provide non-confidential aggregate information in their future legislative reports.

- Financial aid data would allow WSOS to update the Legislature on key affordability metrics for Opportunity Scholars and whether the program continues to help make college more affordable.
- State employment and earnings data would allow WSOS to update the Legislature on the employment and earnings of Opportunity Scholars who graduate. WSOS has collected limited information on Scholars' employment and earnings through surveys. Its last follow-up survey in 2018 included a random sample of 431 graduates and had a response rate of 51%. This reflects about 6.5% of the nearly 3,400 Scholars who have graduated since the program began.
- Any efforts to obtain aggregate results for the Legislature would need to be designed to ensure the ongoing protection of personally identifiable information that is currently managed by multiple state agencies.

WSOS could also improve the understanding of its program costs by including the overall non-scholarship costs and the total amount it spends to administer the Scholarship in its annual legislative reports.

The Legislative Auditor makes two recommendations to improve information reported to the Legislature

1. WSOS should develop and implement a plan to coordinate with state agencies such as ERDC, WSAC, and ESD to provide additional information in its annual legislative reports. Planning efforts should focus on how to compile, protect confidentiality, and include the following types of data on Opportunity Scholars:
 - Financial aid and key affordability metrics such as out of pocket costs (net price of college), unmet need, and student loans.
 - Employment rates and earnings.
 - Whether they are employed in market demand fields or industries.

WSOS should include updates on its plan implementation and any additional metrics in its annual legislative reports.

2. WSOS should include its overall non-scholarship costs, including the total cost to administer the Opportunity Scholarship program, in its annual legislative report. As required by statute, WSOS currently includes the amount it pays to its nonprofit administrator in its annual legislative reports. This amount only reflects a portion of the total costs to administer the program.

WSOS, the Office of Financial Management, and the Washington Student Achievement Council concur with these recommendations. You can find additional information on the Recommendations tab.

5. Opportunity Expansion Program funded 3 universities

Three universities received WSOS grants to support STEM programs and each has secured ongoing funding

The Opportunity Scholarship Act (ESHB 2088) that created the Opportunity Scholarship also included the Opportunity Expansion Program (OEP). Through the Expansion Program, WSOS provides funds to college and university programs that are focused on increasing the number of students pursuing bachelor's degrees in STEM and health care fields. The WSOS Board is authorized to select and award opportunity expansion grants to institutions of higher education.

Initial awards went to three public university programs focused on STEM education

In 2016, the Board awarded \$6 million in expansion grants to three state universities. The Board formed a working group to develop a process for seeking and evaluating OEP grant proposals

from colleges and universities. In the initial round of applications, 20 institutions submitted proposals and five of these schools were asked to provide additional information.

The Board awarded grants to Central Washington University (CWU), Western Washington University (WWU), and the University of Washington (UW).

The working group and Board chose to focus the awards on capacity building and expansion in STEM-related teacher education, computer science, and engineering. The Board's emphasis was to provide one-time initial grant funding for initial development and implementation of programs, but not funding for ongoing program delivery.

The original fund source for the Expansion Program has expired

The Opportunity Expansion Program was designed to be funded by private Washington companies that agreed to donate all or a portion of a research and development business and occupation tax credit. Microsoft was the only company that donated its credits, which totaled \$6 million. The tax credit expired in 2015 and the state has not identified a new source of funding for the Expansion Program.

Statute permits the Board to make recommendations to the Legislature for sources of funding (RCW 28B.145.020). The Board and program administrator have not raised funds or promoted the tax credit option to businesses since the program began, and the Board has not made any recommendations to the Legislature on new funding sources for the Expansion Program.

CWU, WWU, and UW have all secured funding for future years

The following three universities received Opportunity Expansion grants in 2016 and have secured future funding for their programs:

- **Central Washington University (CWU)** received \$2.2 million to adopt the UTeach curriculum developed by the University of Texas to address the shortage of STEM teachers in Washington. CWU's Teach STEM program allows students to earn both their STEM degree and teaching certification in four years. The OEP grant covered the initial start-up costs of the program and funded advisers, faculty, and interns through academic year 2018-19. Deans from the University's College of Education and Professional Studies and College of Sciences have committed to fund 3.5 Teach STEM full-time employees to continue the program after the OEP grant ends. Program staff are also working with the CWU Foundation to create an endowment that will help fund the program in the future.
- **Western Washington University (WWU)** received \$1.6 million to expand capacity for students seeking computer science degrees as well as develop a new program offering computer science teaching certifications. The grant allowed WWU to hire four computer science faculty to serve more computer science students each year. The University's Provost has committed to permanently fund the faculty positions after the OEP grant expires.
- **The University of Washington (UW)** received \$2.2 million to expand capacity of the Washington State Academic RedShirt program (STARS). The program enrolls engineering

students from low-income families and gives them an additional year of academic prep work to help them succeed in the College of Engineering. The OEP grant covered funding for the STARS program for three years, ending in academic year 2019. The grant allowed the program to hire new advisers and offer more workshops in math and science. During the 2019 legislative session, the Legislature appropriated \$500,000 in fiscal year 2020 and another \$500,000 in fiscal year 2021 to support the program (ESSHB 2158).

Too soon to determine grant program impact on student outcomes

The three university programs created pathways to high-demand STEM degrees. Initial data suggests that more students will graduate with STEM degrees with the help of these programs. However, it is too soon to determine the total impact the grants have on student outcomes (e.g. graduation, employment, earnings) because many of the students have been enrolled for three years or less. WSOS has required periodic updates from the three grant recipients, but it is not tracking individual students benefiting from these programs.

Appendix A: Peer group methodology

JLARC staff used an analytical approach called machine learning to identify the group of peers who were compared to Opportunity Scholars

The peer group consists of all students who met the WSOS eligibility requirements but did not receive a scholarship

The WSOS eligibility requirements are:

1. Be a Washington resident who received their high school diploma or equivalency degree in Washington and have not yet earned a bachelor's degree.
2. File a Free Application for Federal Student Aid (FAFSA) or Washington Application for State Financial Aid (WASFA).
3. Have a family income at or below 125% of the median family income in Washington adjusted for family size.
4. Have a cumulative minimum GPA of 2.75.
5. Have an eligible class standing⁹.
6. Pursue an eligible education program defined by the WSOS Board at an eligible Washington college or university ([link to list of eligible majors](#)).

⁹This requirement did not apply to the first cohort of Opportunity Scholars.

Reliable data about intended major was unavailable for many students

The Washington State Office of Financial Management's Education Research and Data Center (ERDC) provided data for JLARC staff's analysis. ERDC compiles data from multiple sources, including the Washington Student Achievement Council (WSAC), the public higher education institutions (PCHEES), the State Board for Community and Technical Colleges (SBCTC), and the Employment Security Department (ESD). ERDC links individuals across the sources, assigns each individual a unique identifier, and removes personal identifying information (e.g. SSN, date of birth). ERDC can also link data from non-state sources, such as private colleges and universities.

Data provided by ERDC contained information about the first four eligibility requirements. However, the data did not reliably indicate a student's major, or whether a student was planning to pursue a high-demand STEM or health care degree.

JLARC staff developed a predictive model using machine learning to determine which peer students are pursuing a STEM or health care degree

To predict whether a student who has not yet graduated is pursuing a high-demand STEM or health care degree, the model compares the student's classes to those taken by others who graduated with a degree in STEM or health care (see [list of eligible majors](#)). If the course load is similar, the model predicts that the student is pursuing a STEM or health care degree.

What is machine learning?

Machine learning means programming a computer so it can learn from data. For example, the spam filter on your email is a machine learning program. Using an algorithm, it learns to flag spam emails from samples (e.g., those that you or others have flagged as spam).

While simple in principle, the model is complex. The general steps below describe how machine learning was applied in this study:

1. Identify STEM and health care graduates: flag each graduate as STEM/health care or not based upon their degree at graduation.
2. Place all classes into four groups (Exhibit A1) based upon the percent of students that took the class and earned a STEM or health care degree.
3. Build the model: count the number of classes among the four groups for each student. Apply binomial generalized linear model (GLM) on a training set, then apply said model to a testing set of students.
4. Test the model's accuracy: establish a threshold for the model and compare the model's outputs for students in the testing set to their known degree (STEM/health care or other).

Identify STEM and health care graduates

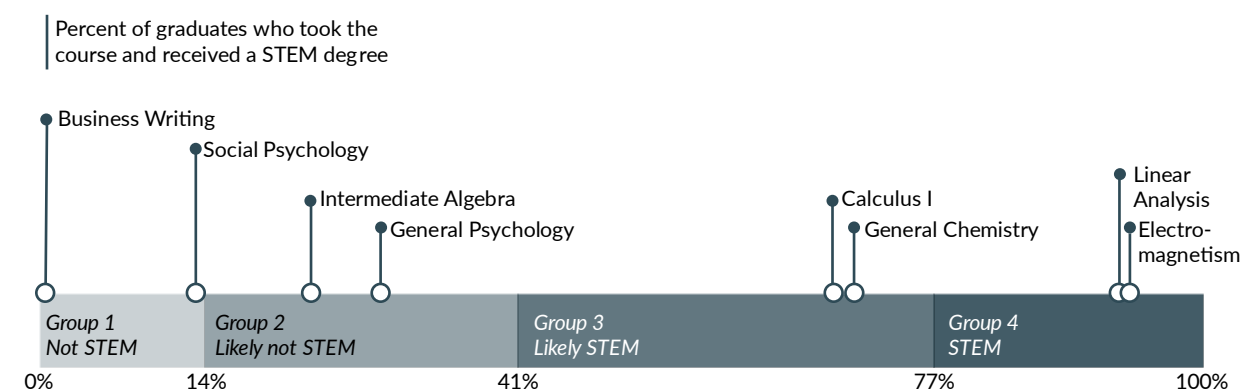
The graduate data is from the PCHEES system and was provided by ERDC. There were 110,088 total graduates used to develop the model, 35,640 of which graduated with a STEM or health care degree.

Group classes

JLARC staff compiled the course loads for all graduates. Classes were then grouped based on the percentage of students who took the class and graduated with a high-demand STEM or health care degree. This approach identifies the classes that can be used to predict high-demand STEM or health care degrees or predict non-STEM or health care degrees. For example:

- 93% of graduates that took electromagnetism and 94% of those who took linear analysis (94% STEM) earned STEM degrees. These classes are good indicators of STEM degrees.
- In contrast, 29% of graduates that took general psychology earned a STEM degree. This means that it is likely not a good indicator of a STEM degree, but may be a good indicator of a non-STEM degree.

Exhibit A1: Groups of all classes at universities



Source: JLARC staff analysis of data from the Office of Financial Management's (OFM) Education Research and Data Center (ERDC).

Build the model

The algorithm uses class data from a subset of graduates (the "training set"). The algorithm uses a binomial generalized linear model (GLM):

- JLARC staff input the number of classes, by group, that each student in the testing set took.
- The model output shows how much the classes in each group contributed to a STEM degree. The range is 0 to 1 (0 means not STEM and 1 means STEM).

As shown in Exhibit A2, Groups 1 and 2 are negatively associated with a student pursuing a STEM degree and Groups 3 and 4 are positively associated.

Exhibit A2: Only classes in Groups 3 and 4 are positively associated with STEM degrees

Independent Variable	Estimate	Standard Error
Group 1	-0.40	0.005
Group 2	-0.03	0.001
Group 3	0.17	0.003
Group 4	0.41	0.005

Source: JLARC staff analysis of data from the Office of Financial Management's (OFM) Education Research and Data Center (ERDC).

Test the model's accuracy

JLARC staff used data about the graduates who were not in the training set as a testing set. The graduates' class data was entered into the model and the output was compared to their known degree (STEM/health care or other).

As shown in Exhibit A3, the model accurately showed that students who had higher scores (more classes in Groups 3 and 4) also earned STEM/health care degrees.

Exhibit A3: Binomial general linear model results

Student	Group 1	Group 2	Group 3	Group 4	Graduated STEM	GLM Output
A	5	14	2	0	0	0.05
B	0	5	4	12	1	0.99
C	0	3	5	1	1	0.60

Source: JLARC staff analysis of data from the Office of Financial Management's (OFM) Education Research and Data Center (ERDC).

The model's output cannot classify students as STEM or not-STEM without a threshold.

- Values above the threshold are flagged as STEM.
- Values below the threshold are flagged as non-STEM.

JLARC staff used the receiver operating characteristic (ROC) curve and the Youden's index¹⁰ to determine a threshold of 0.31. Staff then used cross-validation to determine how many graduates in the testing set were correctly identified. The threshold correctly identified 82% of graduates in the testing set, 82% of the non-STEM graduates in the testing set, and 81% of the STEM graduates in the testing set. The model was also tested on Opportunity Scholars that have graduated. 88% of Opportunity Scholar graduates were correctly identified, 95% of Opportunity

¹⁰The threshold value that minimizes type I and II errors while maximizing overall accuracy.

Scholar STEM graduates were correctly identified as STEM, and only 51% of Opportunity Scholar non-STEM graduates were correctly identified as non-STEM.

Applying the model to develop the peer group

The model provides an indicator of whether each student intended to pursue a STEM or health care degree. JLARC staff cross-referenced this information with its list of public higher education students that met the first four eligibility requirements to develop the peer group used for the comparisons. A total of 29,848 students met all five requirements and were included in the peer group.

Additional information for metrics reported in Tab 2

JLARC staff used financial aid data collected by the [WSAC](#)¹¹ to compare Opportunity Scholars to the peer group on key affordability metrics (Appendix B). The [ERDC](#)¹² compiled the financial aid data with other sources, and removed confidential information identifying individual students.

WSAC requires institutions to submit a report for each student who receives need-based financial aid (e.g. State Need Grant, Federal Pell Grant). The data includes information on federal, state, private, and institutional aid distributed to need-based financial aid recipients. This means the sample of students JLARC staff used for our affordability analysis includes students who received need-based financial aid. It does not include all students attending a Washington college or university.

The financial aid data includes records for each institution a student attended each academic year. Before performing our analysis, JLARC staff aggregated the data so that each student had one record per year. For example, after aggregating the data, a student attending two universities would have a single annual cost of attendance and a total annual amount of aid received from specific sources.

JLARC staff identified and defined Opportunity Scholars as those students in the financial aid data who were recorded as having received an Opportunity Scholarship disbursement greater than zero. Opportunity Scholars attended public and private colleges and universities, and community and technical colleges.

Exhibit A4 and Exhibit A5 provide additional information for the metrics reported in Tab 2.

¹¹Washington Student Achievement Council

¹²The Washington State Office of Financial Management's (OFM) Education Research and Data Center

Exhibit A4: Opportunity Scholars also received federal and state aid

Academic Year	College Bound Scholarship		Received State Need Grant		Received Federal Pell Grant	
	Number	Percent	Number	Percent	Number	Percent
2016-17	412	14.1%	1,571	53.9%	1,772	60.8%
2015-16	356	14.6%	1,172	47.9%	1,449	59.3%
2014-15	283	12.6%	1,021	45.5%	1,348	60.1%
2013-14	301	12.2%	1,148	46.3%	1,532	61.8%
2012-13	185	6.6%	1,354	48.3%	1,747	62.4%
Total	1,537	11.9%	6,266	48.6%	7,848	60.9%

Source: JLARC staff analysis of data from the Office of Financial Management's (OFM) Education Research and Data Center (ERDC) for academic years 2012-13 through 2016-17.

Exhibit A5: Affordability metrics for Opportunity Scholars and peer group

Affordability Metric	Opportunity Scholars		Peer Group	
	Average Annual Amount	Number of Records	Average Annual Amount	Number of Records
Out of Pocket Costs (net price of college)	\$11,062	12,884	\$14,244	58,537
Unmet Need	\$4,827	12,884	\$9,893	58,537
Percentage taking out student loans each year	45.1%	12,884	63%	58,537
Annual student loan amount for those taking loans	\$7,156	5,806	\$9,125	36,902
Annual grants and scholarship amount for those receiving grants and scholarships	\$16,890	12,884	\$11,264	52,197

Note: Each record represents a student during an academic year (AY). A student may appear in multiple years. For example, a student attending college in AY 12-13 and AY 13-14 will be represented in the data twice- once for each year. For Opportunity Scholars, this means the total number of records reported in this Exhibit is greater than the total number of unique Scholars, as a Scholar may have received a Scholarship in multiple years.

Source: JLARC staff analysis of data from the Office of Financial Management's (OFM) Education Research and Data Center (ERDC) for academic years 2012-13 through 2016-17.

Additional information for metrics reported in Tab 3

JLARC staff used public higher education enrollment data (PCHEES) and Employment Security Department (ESD) employment and earnings data to compare Opportunity Scholars' retention, graduation, employment, and earnings to the peer group. Exhibit A6 provides additional information for the metrics reported in Tab 3.

Exhibit A6: Education and employment metrics for Opportunity Scholars and peer group

Metric	Opportunity Scholars	Peer Group
Number of Graduates	1,962	12,814
Number (percent) of students returning to school from their first academic year to their second academic year (also known as retention rate)	1,041 (95.9%)	8,850 (88.7%)
Number (percent) of graduates after four years in school	227 (48.8%)	1,449 (19.48%)
Number (percent) of graduates earning a degree in a high demand STEM or health care major	1,652 (84.5%)	Not Applicable
Number (percent) of graduates employed one year after graduation	1,431 (82.9%)	8,668 (77.3%)
Number (percent) of graduates employed full-time one year after graduation	391 (27.3%)	2,008 (23.2%)
Number (percent) of employed graduates working full-time one year after graduation and earning a middle income	270 (69.1%)	1,125 (56%)
Note: The numbers reported in this exhibit represent unique students.		

Source: JLARC staff analysis of data from the Office of Financial Management's (OFM) Education Research and Data Center (ERDC).

Appendix B: Affordability methodology

JLARC staff reviewed literature and interviewed experts to identify key affordability metrics

Legislature did not define college affordability

The Legislature created the Opportunity Scholarship to "help mitigate the impact of tuition increases" (RCW 28B.145.005). JLARC staff interpreted this directive as legislative intent to help make college more affordable for Opportunity Scholars. There is no legislative definition of college affordability.

Two models define college affordability, but no consensus has emerged

JLARC staff identified two models that define whether college is affordable or unaffordable. Neither model has been widely accepted in the federal, state, policy, or academic communities. The models are described below.

Lumina Rule of 10

The Lumina Foundation is a private, independent foundation that developed a model of college affordability based on a formula it calls the "Rule of 10." In this model, college is affordable if a student can pay the cost of attendance with a combination of student work, family resources, and student debt. The Rule states that a student should pay no more for college than the funds generated through:

- The sum of 10 percent of their discretionary income¹³ saved for 10 years.
- The earnings from 10 hours of work each week while in school.

The formula above also serves as a maximum amount a student should need to borrow to pay for college, if they have not saved, or cannot work. College is unaffordable if the cost of attendance exceeds the amount a student can generate from the Rule of 10.

SHEEO model

The State Higher Education Executive Officers Association (SHEEO) is a national association of state government higher education executives that serves as a liaison between state and federal governments.

The SHEEO model suggests that college is affordable if the cost to attend can be repaid using ten percent of discretionary income¹⁴ in the ten years following graduation.

College affordability is ultimately a policy decision

JLARC staff's review of literature, discussions with legislative staff, and interviews with higher education experts found there is no agreement on a common definition for college affordability, nor is there agreement on whether the two models described above are appropriate metrics. Our review did not find federal or state standards, or agreed upon best practices for determining college affordability.

There are multiple issues to consider in order to determine affordability, including whether:

- Affordability is considered from the perspective of the student or family.
- Higher education is viewed as a good to be paid for at the time of receipt, or an investment to be paid for over time.

¹³Discretionary income is defined as any income above 200 percent of the federal poverty rate for the student's family size.

¹⁴Discretionary income is defined as 150% of the federal poverty threshold for a family of three.

- The future returns of higher education outweigh the present costs.
- Student debt is acceptable, and if so, how much.
- College costs refer to just tuition and fees, or the entire cost of attending college.

These considerations and others make determining if college is affordable or unaffordable a policy decision subject to individual values and preferences.

Key affordability metrics can be used to compare Scholars to peers

JLARC staff reviewed academic literature, state and federal policies and regulations, and interviewed legislative, financial aid, and higher education professionals. Though there is no commonly accepted measurement of optimal affordability, JLARC staff identified common metrics that can help compare whether students face relatively higher or lower college affordability. These metrics allow us to evaluate whether WSOS has helped make college more affordable for Opportunity Scholars compared to other students, even if we cannot conclude whether a particular measurement level equates to being considered "affordable."

Exhibit B1: Common metrics of college affordability

Affordability Metric	Definition	Sources
Out of pocket costs (net price of college)	Cost of attendance minus total grants and scholarships from federal, state, institution, private, or other sources.	U.S. Department of Education's College Scorecard; Washington Student Achievement Council; Education Commission of the States; State Higher Education Executive Officers; academic literature
Unmet Need	Cost of attendance minus total grants, scholarships, and family contribution.	Washington Student Achievement Council; policy organizations; academic literature
Financial Aid	Total amount of financial aid a student receives that does not require repayment. Examples include: grants and scholarships received from federal (e.g. Pell Grant), state (e.g. State Need Grant), institution, and private sources. Work-Study programs are also part of a student's overall financial aid package.	Washington Student Achievement Council; Education Commission of the States; Washington State Institute of Public Policy; academic literature
Student Loans	Percent of students borrowing money through loans from federal, institution, and private sources each year.	U.S. Department of Education; Washington Student Achievement Council; Washington Attorney General; State Higher Education Executive Officers; Western Interstate Commission for Higher Education; Washington
Annual Loan Amount	Average annual loan amount for students taking out student loans from	

Affordability Metric	Definition	Sources
	federal, institution, and private sources each year.	Institute for Public Policy; academic literature
<p>Definitions:</p> <ul style="list-style-type: none"> The term "cost of attendance" is defined in the federal Higher Education Act and includes: tuition and fees, books and supplies, room and board, transportation and personal expenses. The cost of attendance can vary based on individual circumstances such as dependency status, living situation, and location. The term "family contribution" is defined as the amount a student and student's family are expected to contribute towards the cost of attendance. This is determined by a federal methodology based on information reported on student financial aid applications. 		

Source: JLARC staff literature review.

Additional affordability analysis for specific sub-groups of Scholars

JLARC staff performed additional analysis for specific sub-groups of Opportunity Scholars and their peers. The data shows that college is likely more affordable for the following sub-groups of Opportunity Scholars than it is for their peers:

- Scholars who attend one of the six Washington public colleges and universities than their peers attending these schools.
- Opportunity Scholars at various income levels under 125% of the median family income adjusted for family size than their peers at the same income level.
- Opportunity Scholars within all reported racial and ethnic groups (e.g. Asian or Hispanic) than their peers in the same racial and ethnic group.

RECOMMENDATIONS & RESPONSES

Legislative Auditor Recommendations

The Legislative Auditor makes two recommendations to improve legislative reporting

Recommendation #1: WSOS should develop and implement a plan to coordinate with state agencies such as the Office of Financial Management's (OFM) Education Research and Data Center (ERDC), the Washington Student Achievement Council (WSAC), and the Employment Security Department (ESD) to provide additional information in its annual legislative reports.

Planning efforts should focus on how to compile, protect confidentiality, and include the following types of data on Opportunity Scholars:

- Financial aid and key affordability metrics such as out of pocket costs (net price of college), unmet need, and student loans.
- Employment rates and earnings.
- Whether they are employed in market demand fields or industries.

WSOS should include updates on its plan implementation and any additional metrics in its annual legislative reports.

Legislation Required:	No
Fiscal Impact:	JLARC staff assume plan can be developed within existing resources. Other steps may require additional resources.
Implementation Date:	December 2020
Agency Responses:	WSOS concurs Office of Financial Management concurs The Washington Student Achievement Council concurs

Recommendation #2: WSOS should include its overall non-scholarship costs, including the total cost to administer the Opportunity Scholarship program, in its annual legislative report.

As required by statute, WSOS currently includes the amount it pays to its nonprofit administrator in its annual legislative reports. This amount only reflects a portion of the total costs to administer the program.

Legislation Required:	No
Fiscal Impact:	JLARC staff assume WSOS can implement within existing resources.
Implementation Date:	December 2020
Agency Response:	WSOS concurs

WSOS Response

WASHINGTON STATE OPPORTUNITY SCHOLARSHIP

October 18, 2019

Via email: keenan.konopaski@leg.wa.gov

Keenan Konopaski

Legislative Auditor

Joint Legislative Audit and Review Committee

Washington State Legislature

Dear Mr. Konopaski:

Thank you for the opportunity to officially respond to the recommendations of the Joint Legislative Audit and Review Committee (JLARC) report on the Washington State Opportunity Scholarship (WSOS). We are grateful for the professionalism and dedication of the JLARC team and have appreciated the opportunity to work with them over the course of this evaluation.

Recommendation: WSOS should develop and implement a plan to coordinate with state agencies such as the Office of Financial Management's (OFM) Education Research and Data Center (ERDC), the Washington Student Achievement Council (WSAC), and the Employment Security Department (ESD) to provide additional information in its annual legislative reports. Planning efforts should focus on how to compile affordability and employment information while protecting confidentiality of Opportunity Scholars.

Agency Position: Concur

Explanation: We welcome JLARC's recommendation for our legislative reports to provide additional data beyond the statutory requirements. We will enthusiastically develop and implement a plan to provide better outcome data in partnership with OFM, ERDC, WSAC and ESD for review by the Legislature. While we will be limited within the confines of federal and state law, we will seek aggregate, non-identifiable information from these agencies to meet the recommendation set forth by the JLARC team. At this time, we do not believe any legislative action is needed to accommodate this request. We will develop this plan in 2020.

Recommendation: WSOS should include its overall non-scholarship costs, including the total cost to administer the Opportunity Scholarship program, in its annual legislative report.

Agency Position: Concur

Explanation: WSOS currently reports only the program administrator fee, as required by statute. We will fully implement this recommendation immediately, beginning with the 2019 legislative report where we will begin reporting the program administrator fee and all non-scholarship costs.

877.899.5002
info@waopportunityscholarship.org
1414 31st. Ave. South, Ste. 302, Seattle, WA 98144
waopportunityscholarship.org

WASHINGTON STATE
OPPORTUNITY
SCHOLARSHIP

Again, thank you to the whole JLARC staff for their thorough review of WSOS over the past two years. We have appreciated the opportunity to share information about our program with the Legislature through this review process.

Sincerely,



Kimber Connors
Executive Director

Cc: Casey Radostitz, Research Analyst, JLARC
Jennifer Sulcer, Research Analyst, JLARC
Joshua Karas, Research Analyst, JLARC
Ryan McCord, Research Analyst, JLARC
Valerie Whitener, Deputy Legislative Auditor, JLARC

877.899.5002
info@wa**opportunity**scholarship.org
1414 31st. Ave. South, Ste. 302, Seattle, WA 98144
wa**opportunity**scholarship.org

OFM Response



STATE OF WASHINGTON

OFFICE OF FINANCIAL MANAGEMENT

Insurance Building, PO Box 43113 • Olympia, Washington 98504-3113 • (360) 902-0555

October 21, 2019

Mr. Keenan Konopaski
Legislative Auditor
Joint Legislative Audit and Review Committee
PO Box 40910
Olympia, WA 98504-0910

Dear Mr. Konopaski:

Thank you for the opportunity to review and provide comment on the preliminary report on Opportunity Scholarship and Opportunity Expansion Programs. We appreciate the efforts of your staff and hope that we gave them adequate support in preparing the report.

JLARC Recommendation	OFM Position	Comments
Washington State Opportunity Scholarship (WSOS) should develop and implement a plan to coordinate with state agencies such as the Office of Financial Management's (OFM) Education Research and Data Center (ERDC), the Washington Student Achievement Council (WSAC), and the Employment Security Department (ESD) to provide additional information in its annual legislative reports. Planning efforts should focus on how to compile affordability and employment information while protecting confidentiality of Opportunity Scholars.	Concur	OFM's Education Research and Data Center has already met with WSOS staff to discuss development of additional measures and indicators for students receiving financial support from WSOS. ERDC will continue those efforts.

If you have any questions, please contact Jim Schmidt at (360) 902-0595 or jim.schmidt@ofm.wa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Schumacher".

David Schumacher
Director

cc: Jim Schmidt, ERDC, Office of Financial Management
Breann Boggs, Budget Division, Office of Financial Management
Scott Merriman, Office of Legal and Legislative Affairs, Office of Financial Management

WSAC Response



October 21, 2019

Keenan Konolpaski, Legislative Auditor
Joint Legislative Audit & Review Committee
106 11th Avenue SW
Olympia, WA 9804-0910

Dear Mr. Konolpaski,

Please accept this as our formal response indicating Washington Student Achievement Council's position on the study's recommendation as follows:

RECOMMENDATION	AGENCY POSITION	COMMENTS
WSOS should develop and implement a plan to coordinate with state agencies such as the Office of Financial Management's (OFM) Education Research and Data Center (ERDC), the Washington Student Achievement Council (WSAC), and the Employment Security Department (ESD) to provide additional information in its annual legislative reports. Planning efforts should focus on how to compile affordability and employment information while protecting confidentiality of Opportunity Scholars.	Concur	We look forward to the planning process with WSOS and other agencies.
WSOS should include its overall non-scholarship costs, including the total cost to administer the Opportunity Scholarship program, in its annual legislative report.	Concur	

917 Lakeridge Way SW
PO Box 43430
Olympia, WA 98504-3430
360.753.7800
www.wsac.wa.gov

Response to JLARC Report
October 21, 2019
Page 2

Thank you for the opportunity to review JLARC's Opportunity Scholarship and Opportunity Expansion Programs Report.

If you have additional questions or comments, please contact me or Becky Thompson.

A handwritten signature in black ink, appearing to read "Michael Meotti", with a stylized flourish at the end.

Michael Meotti, Executive Director

Cc: Rachelle Sharpe, Deputy Executive Director, WSAC
Becky Thompson, Director of Student Financial Assistance
Isaac Kwakye, Director of Research, WSAC
Pam Haggard, Accounting Manager, WSAC
Casey Radostitz, Research Analyst, JLARC
Jennifer Sulcer, Research Analyst, JLARC
Joshua Karas, Research Analyst, JLARC
Valerie Whitener, Deputy Legislative Auditor, JLARC

Current Recommendation Status

JLARC staff follow up with agencies on Legislative Auditor recommendations for 4 years. Responses from agencies on the latest status of implementing recommendations for this report will be available in 2021.

MORE ABOUT THIS REVIEW

Audit Authority

The Joint Legislative Audit and Review Committee (JLARC) works to make state government operations more efficient and effective. The Committee is comprised of an equal number of House members and Senators, Democrats and Republicans.

JLARC's non-partisan staff auditors, under the direction of the Legislative Auditor, conduct performance audits, program evaluations, sunset reviews, and other analyses assigned by the Legislature and the Committee.

The statutory authority for JLARC, established in [Chapter 44.28 RCW](#), requires the Legislative Auditor to ensure that JLARC studies are conducted in accordance with Generally Accepted Government Auditing Standards, as applicable to the scope of the audit. This study was conducted in accordance with those applicable standards. Those standards require auditors to plan and perform audits to obtain sufficient, appropriate evidence to provide a reasonable basis for findings and conclusions based on the audit objectives. The evidence obtained for this JLARC report provides a reasonable basis for the enclosed findings and conclusions, and any exceptions to the application of audit standards have been explicitly disclosed in the body of this report.

Study Questions



Proposed Study Questions: Opportunity Scholarship and Opportunity Expansion Programs

State of Washington Joint Legislative Audit and Review Committee

April 2018

JLARC will evaluate two programs promoting college degrees for high-demand fields: Opportunity Scholarships and Opportunity Expansion

In 2011, the Legislature passed the Opportunity Scholarship Act (ESHB 2088). The Act was intended to mitigate tuition increases and meet market demands for skilled workers in high-demand fields. These fields include science, technology, engineering, math, and health care.



Opportunity Scholarships:

Serve low- and middle-income college students in high-demand fields (e.g., technology, health care).

Opportunity Expansion:

Fund new programs in high-demand fields at WA colleges and universities.

The Act:

- Created the Opportunity Scholarship and Opportunity Expansion programs.
- Established the Opportunity Scholarship Board to oversee the programs.
- Directed the Joint Legislative Audit and Review Committee (JLARC) to evaluate the programs.

Four study questions address program participation, funding, and outcomes

JLARC staff will address the following for the Opportunity Scholarship and Opportunity Expansion programs.

- 1) What was the approach used to select the students and institutions that received funds? How many received funds?
- 2) What were the sources and amounts of funding? How much has been spent on scholarships, expansion awards, program administration, or other costs?
- 3) How many students receiving scholarships or benefiting from expansion programs earned degrees in high-demand fields? What are their employment outcomes after graduation?
- 4) How much has the scholarship program reduced the cost of higher education for students, and how do costs compare to accepted measures of affordability?

Study team to deliver preliminary report in September 2019

Preliminary Report: September 2019

Proposed Final Report: December 2019

Team Lead:	Casey Radostitz	360-786-5176	casey.radostitz@leg.wa.gov
Research Analyst:	Jennifer Sulcer	360-786-5181	jennifer.sulcer@leg.wa.gov
Research Analyst:	Ryan McCord	360-786-5186	ryan.mccord@leg.wa.gov
Research Analyst:	Josh Karas	360-786-5298	joshua.karas@leg.wa.gov
Project Coordinator:	Valerie Whitener	360-786-5191	valerie.whitener@leg.wa.gov

Joint Legislative Audit & Review Committee, 106 11th Ave SW, Olympia, WA 98501
(360) 786-5171 • (360) 786-5180 (fax) • JLARC@leg.wa.gov • www.jlarc.leg.wa.gov
Keenan Konopaski, Washington State Legislative Auditor

Proposed Study Questions: Opportunity Scholarship and Opportunity Expansion Programs

Programs created after task force recommended public-private collaboration for higher education funding

In 2011, Governor Gregoire's Higher Education Funding Task Force issued a report that suggested public-private collaboration for higher education funding programs. The Legislature incorporated some of these ideas into the Opportunity Scholarship Act.

- The Opportunity Scholarship program is funded by a combination of private contributions and state match.
- The Opportunity Expansion program was previously funded through voluntary contributions from businesses that received a tax preference for high technology research and development. Until the preference expired in 2015, businesses could donate the amount of the credit to the Opportunity Expansion Program.

Opportunity Scholarships provided to students from low- and middle-income families who pursue certain undergraduate degrees

Eligible students must be Washington residents, meet eligibility criteria including family income limits, and be seeking a bachelor's degree in science, technology, engineering, math, or health care.

Students may receive annual scholarships for up to five years. The maximum total award amount is \$22,500. The program also offers services such as mentoring, career counseling, and professional development for students.

In 2018, the Legislature passed bills to expand the program (e.g., available to students seeking a professional or technical degree). Due to timing, the impact of this legislation cannot be evaluated in this study.

Opportunity Expansion funds awarded to colleges and universities

Colleges and universities can use Opportunity Expansion funds for new programs that offer undergraduate degrees in high-demand fields. Three institutions received awards in 2016.

Opportunity Scholarship board and program administrator oversee the programs

The Governor appoints the 11-member board of directors to oversee the Opportunity Scholarship and Expansion Programs. As set in statute, the board contracts with a private nonprofit program administrator to manage the programs. The board and program administrator provide an annual report to the Legislature that includes information such as applicant characteristics, scholarships awarded, and program funding.

JLARC Study Process



Methodology

The methodology JLARC staff use when conducting analyses is tailored to the scope of each study, but generally includes the following:

- **Interviews** with stakeholders, agency representatives, and other relevant organizations or individuals.
- **Site visits** to entities that are under review.
- **Document reviews**, including applicable laws and regulations, agency policies and procedures pertaining to study objectives, and published reports, audits or studies on relevant topics.
- **Data analysis**, which may include data collected by agencies and/or data compiled by JLARC staff. Data collection sometimes involves surveys or focus groups.
- **Consultation with experts** when warranted. JLARC staff consult with technical experts when necessary to plan our work, to obtain specialized analysis from experts in the field, and to verify results.

The methods used in this study were conducted in accordance with Generally Accepted Government Auditing Standards.

More details about specific methods related to individual study objectives are described in the body of the report under the report details tab or in technical appendices.

CONTACT JLARC Authors

[Casey Radostitz](#), Research Analyst, 360-786-5176 Valerie Whitener, Audit Coordinator
[Jennifer Sulcer](#), Research Analyst, 360-786-5181 Keenan Konopaski, Legislative Auditor
[Joshua Karas](#), Research Analyst, 360-786-5298
[Ryan McCord](#), Research Analyst, 360-786-5186

JLARC Members

Senators

Bob Hasegawa
Mark Mullet, Chair
Rebecca Saldaña
Shelly Short
Dean Takko
Keith Wagoner
Lynda Wilson, Secretary

Representatives

Jake Fey
Noel Frame
Larry Hoff
Christine Kilduff
Vicki Kraft
Ed Orcutt, Vice Chair
Gerry Pollet, Assistant Secretary
Drew Stokesbary

Washington Joint Legislative Audit and Review Committee

106 11th Avenue SW, Suite 2500
PO Box 40910
Olympia, WA 98504-0910

Phone: 360-786-5171
Fax: 360-786-5180
Email: JLARC@leg.wa.gov

