

RESULTS FIRST

HIGHER EDUCATION SUMMARY



Higher education summary

December 2018

Minnesota Management and Budget (MMB) recently completed an analysis of programs and practices offered by Minnesota's public colleges and universities and the Minnesota Office of Higher Education with the goal of increasing student enrollment, persistence, and attainment of associate and bachelor's degrees. This analysis is among the first of its kind in the country.

MMB conducted this work in partnership with state, local, and national organizations. Previously published findings include adult and youth substance use, adult criminal justice, adult mental health, child welfare, and juvenile justice.

Program inventory

MMB began by identifying existing, publicly funded higher education programs and reviewing the evidence of effectiveness for each. Each program is rated Proven Effective, Promising, No Effect, or Theory Based.

For a program to receive a Proven Effective, Promising, or No Effect rating, it must have been studied using a randomized control trial or quasi-experimental design, meaning there is a treatment and control group to test the causal impact of the program.

The higher education program inventory contains 61 programs and practices, many of which are available across the state while others are unique programs created as campuses explore new ways to support students.

- 5 programs are **Proven Effective** (multiple qualifying studies show favorable impact)
- 5 programs are **Promising** (at least one qualifying study shows favorable impact)
- 1 program is **No Effect** (multiple qualifying studies show no impact)
- 50 programs are **Theory Based** (qualifying evidence is not currently available)

Five programs in the higher education inventory (8 percent) are rated Proven Effective, meaning they have a strong base of research supporting their favorable impact on higher education enrollment, persistence, or attainment. An additional 5 programs are Promising and 1 program is rated No Effect based on the current available research. The remaining programs and practices identified in Minnesota are Theory Based.

As compared to analyses in other policy areas like mental health, higher education lags in the amount of rigorous research available. Therefore, most of the research on higher education programs is Theory Based. Theory Based programs are generally developed using a sound logic model for effectiveness, but adequate high-quality research does not yet exist to identify program effectiveness. This is consistent with the national higher education evidence base.

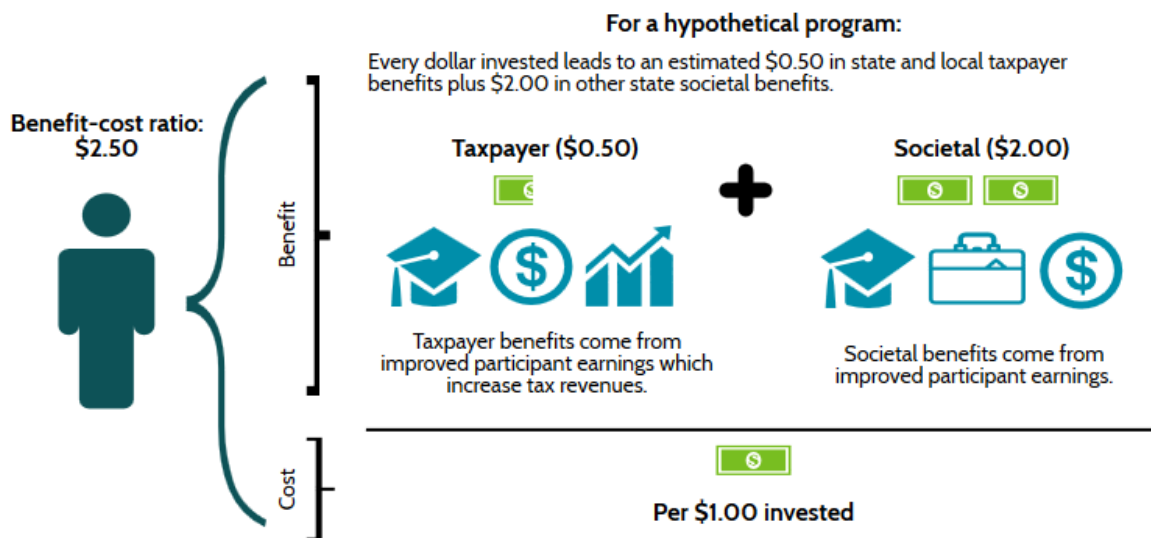
State spending on proven practices

General fund appropriations for higher education were \$1.54 billion in fiscal year 2017. Approximately 85 percent of that is appropriated to the University of Minnesota and Minnesota State Colleges and Universities for general operations, some of which is used for Proven Effective and Promising practices. The Office of Higher Education (OHE) administers \$237 million to make higher education more accessible and affordable. In fiscal year 2017, nearly 80 percent of OHE’s budget was appropriated for Proven Effective practices like need-based grants.

Benefit-cost analysis

For three services, adequate research and cost data is available to conduct a benefit-cost analysis (see Figure 2). To estimate the ratios, MMB uses a statistical model that assigns dollar values to the benefits of increasing enrollment, persistence, and graduation.

Figure 1: Explanation of a benefit-cost ratio



The benefit-cost ratios reflect a statewide average of costs for selected programs at public institutions in the University of Minnesota system and the Minnesota State Colleges and Universities system. The benefit-cost ratio for Need-based grants reflects students – at public or private institutions – who participate in programs funded through the Office of Higher Education.

All three program produce benefits, most of which accrue to participants through future labor market earnings. Our analysis considers the cost of and time spent educating a student at an institution of higher education, and subtracts that from the estimated benefits (before dividing by the program cost). This consideration accounts for the fact that attending college is optional and has real and opportunity costs to the student.

Estimated benefits per dollar invested range from \$5.10 for First-Year Experience Courses/ Student Success Courses at 2-year institutions to \$0.40 for intrusive advising with case management.

Figure 2: Comparison of benefit-cost ratios for higher education services

Program name	Per participant benefit minus cost	Benefit-cost ratio (A+B)	State and local taxpayer ratio (A)	Other Minnesota societal ratio (B)
First-Year Experience Courses/Student Success Courses at 2-year institutions	\$458	\$5.10	\$0.00	\$5.10
Need-based grants	\$7,247	\$4.10	\$0.20	\$3.90
Intrusive Advising with Case Management	(\$958)	\$0.40	\$0.00	\$0.40

- **Per participant benefit minus cost** is the difference between the present value of cash inflows (anticipated benefits) from a given program and the present value of cash outflows (costs).
- **Benefit-cost ratio (A+B)** is the net present value of anticipated benefits to state residents for every dollar invested in the program.
- **State and local taxpayer ratio (A)** accrues from improved participant earnings which increase tax revenues.
- **Other Minnesota societal ratio (B)** accumulates to society through increased participant earnings.

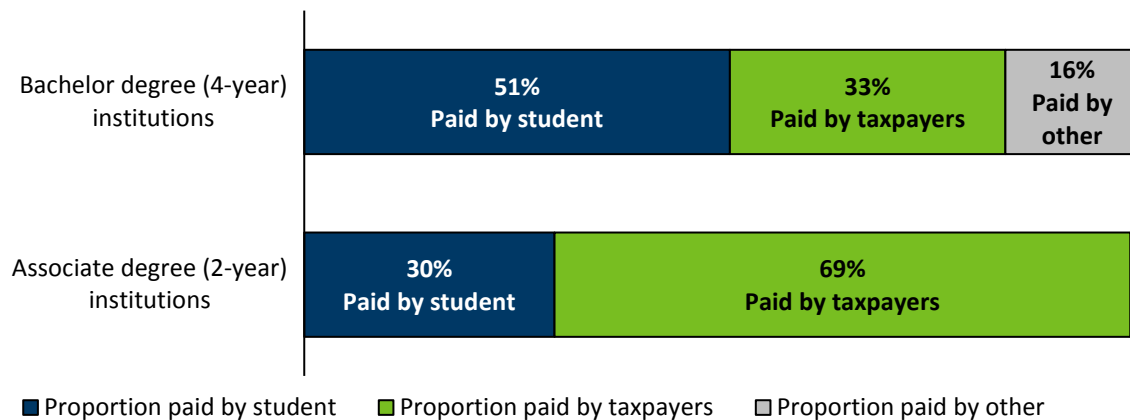
Cost of higher education

In preparation for conducting the benefit-cost analysis, MMB estimated the average annual cost of both associate and bachelor’s degree programs in Minnesota. Our analysis breaks out the proportion of these costs paid by the student, private grants and scholarships, and taxpayers. The analysis focuses on education costs and aggregates local, state, and federal costs. It is based on data reported to the National Center for Education Statistics Integrated Postsecondary Educations Data System (IPEDS).

Educational costs vary widely across Minnesota institutions. In the 2015-2016 academic year, the average annual educational costs at 2-year institutions – both public and private – were \$10,910 (standard deviation of \$2,250). At 4-year institutions – both public and private, the average annual educational costs were \$20,780 (standard deviation of \$13,590). Costs include the educational costs collected by the school for instruction, academic support, student services, institutional support, and operational expenses. This definition of costs does not include the costs not paid to the institution, for example, the costs a student incurs while in school for living expenses and transportation.

Additionally, who bears the costs of higher education varies by the type of institution. The figure below shows the proportion of educational costs at public and private institutions paid by the student, taxpayers, and other sources. On average taxpayers pay for 33 percent of a bachelor’s degree, and nearly 70 percent of an associate degree. Of the proportion paid by taxpayers at both institutions, the federal government funds about one-third, while the state covers nearly two-thirds.

Figure 3: Proportion of degree paid by student, taxpayers, and other sources



Source: Minnesota Management and Budget (IPEDS data)

Note: The analysis includes both public and private institutions. The analysis excludes Walden University and Capella University. MMB used data from IPEDS (2015). “Student” includes the student’s direct payments and loans. “Taxpayers” include government grants and other funding provided by the federal, state and local government. “Other” includes private grants and scholarships.

Results First background

Through the Minnesota Results First Initiative, MMB inventories publically funded services and estimates the extent to which they generate positive, cost-effective outcomes for Minnesotans. MMB collaborates with state, local, and national partners to identify and estimate the benefits and costs of a range of public services that support the well-being of Minnesotans. Past efforts include work in adult and youth substance use, adult criminal justice, adult mental health, child welfare, and juvenile justice. Future analyses will study children’s mental health and public health.

To learn more about the Results First Initiative and access the full higher education inventory and report, please visit mn.gov/mmb/results-first or contact ResultsFirstMN@state.mn.us.