



OFFICE OF THE LEGISLATIVE AUDITOR
STATE OF MINNESOTA

EVALUATION REPORT

MnSCU Occupational Programs

MARCH 2009

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OFFICE OF THE LEGISLATIVE AUDITOR

STATE OF MINNESOTA • James Nobles, Legislative Auditor

March 2009

Members of the Legislative Audit Commission:

Two-year colleges in the Minnesota State Colleges and Universities (MnSCU) system offer a wide range of occupational programs to prepare students for skilled employment. Last year, the commission directed OLA to evaluate how well these programs are meeting the needs of students and employers.

We found that MnSCU generally does a good job of assessing economic conditions, but colleges have not consistently considered the needs of employers or the job prospects for graduates. We make recommendations to the MnSCU Board of Trustees, Office of the Chancellor, and two-year colleges. They all cooperated with our evaluation, and we thank them for their assistance.

Our evaluation was conducted by Jody Hauer (manager) and Valerie Bombach.

Sincerely,

James Nobles
Legislative Auditor

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Summary

Generally, MnSCU colleges respond well to economic conditions and workforce needs, but they should also more routinely assess job prospects for their occupational program graduates.

Major Findings:

- The Minnesota State Colleges and Universities (MnSCU) system generally does a good job of assessing economic conditions and workforce needs, but two-year colleges do not consistently consider market needs for workers when managing existing programs (p. 17).
- MnSCU colleges use various approaches to identify the skills and workers that employers need, but not all are uniformly effective (pp. 19-31).
- Not all colleges have statements of mission, vision, and purpose that express the importance of meeting employers' needs (p. 33).
- In reviewing programs, several colleges conducted only a limited analysis of job prospects for graduates (pp. 36, 37).
- MnSCU's 2007-2008 cap on electrician program enrollment was based on a documented surplus of workers, but it lacked sufficient consideration of local economic conditions (p. 42).
- MnSCU's surveys of graduates regarding jobs have limitations, and little else is done to understand whether graduates find relevant jobs. Some colleges had job placement rates for graduates from all programs, including occupational programs, that fell below MnSCU standards (pp. 45, 48, 51).

- MnSCU has no centralized oversight of colleges' information on career exploration and job opportunities, and variation has led to gaps in information on job prospects for students (pp. 68, 70).

Key Recommendations:

- All colleges' statements of mission, vision, and purpose should reflect priorities in state law and board directives, and the Office of the Chancellor should monitor the statements (p. 63).
- When reviewing occupational programs, all colleges should assess how well the supply of graduates and workers matches the demand for employees (p. 64).
- MnSCU should explore improvements to how it assesses graduates' success at finding jobs related to their programs (p. 65).
- When reassessing its enrollment cap on electrician programs, MnSCU should take local economic conditions into greater account (p. 65).
- Colleges should improve program advisory committees that are not fulfilling their potential (p. 66).
- MnSCU's Board should by policy require colleges to ensure that information on careers and job opportunities is getting to students who need it (p. 74).

Report Summary

Occupational programs prepare postsecondary students for skilled occupations, such as carpentry and law enforcement. With 75 percent of the state's occupational program awards conferred to students in the Minnesota State Colleges and Universities (MnSCU) system, MnSCU is the largest educator of this type in Minnesota. MnSCU's 30 technical colleges, community colleges, and combined colleges, which are located on 45 campuses around the state, offer the programs.

A 15-member Board of Trustees, appointed by the Governor with Senate consent, governs MnSCU. Trustees appoint a chancellor who is chief executive officer for the system, and they select college presidents. For fiscal year 2008, operating expenses for the MnSCU system amounted to \$1.6 billion. Most revenues come from state appropriations and tuition.

As part of its strategic plan, MnSCU's Board of Trustees has set a direction of providing programs and services that enhance state and regional economic competitiveness. To identify economic needs, colleges take a variety of steps. For instance, college representatives serve as members of business alliances, such as for health care or energy needs.

MnSCU generally does a good job of understanding economic and workforce conditions, but colleges do not consistently consider market needs for workers when managing their programs.

Colleges respond to employers and economic conditions by interacting with employers in various ways, such as developing programs that meet professional standards or incorporate needed skills. But in reviewing their programs and proposing to add, change, or close programs, colleges have not consistently assessed market supply and demand for jobs.

Colleges rely heavily on program advisory committees to identify employer needs, but not all committees work effectively.

For occupational programs, colleges are required to establish advisory committees. Committees consist of employers, students, and faculty, and their chief duty is offering guidance on program design and operation.

College presidents we interviewed spoke highly of the committees' value, yet most said not every committee was working up to its potential. Most committee members we surveyed held favorable impressions of the committees, but our survey also identified problems.

Some committees meet too infrequently, and many colleges have committees that are either too large or too small. Some committees have too few employers or other professionals. Some members said their committees were inactive in undertakings typical of the committees, such as identifying retraining for instructors.

Colleges should provide better oversight of program advisory committees. They should also improve those that are not fulfilling their potential.

Colleges should improve the program advisory committees that are not working effectively.

Student enrollment and program costs, more than job prospects for graduates, drive colleges' decisions on closing programs.

Some colleges' mission statements and strategic planning documents do not address employer needs.

Board policies and other sources say it is important for colleges to express their missions with consultation from employers. Three colleges, though, have mission and vision statements that do not reflect the importance of meeting employer needs. Three other colleges have high-level planning documents with vague or indirect references to employer needs. All MnSCU college mission, vision, and purpose statements and strategic planning documents should reflect priorities in state law and board directives. The Office of the Chancellor should report on the alignment of system and college missions and consider how well college missions address economic needs.

Five colleges' policies for reviewing programs do not address employer input, and the reviews do not consistently measure job demand.

Board policy requires colleges to conduct program reviews as a way to plan for and improve their programs. Program review policies for five colleges make little mention of input from advisory committees or other professional viewpoints, although input is required.

Most of a sample of program reviews had only a limited assessment of employment prospects for enrolled students, and colleges' use of job forecasts was inconsistent. Student enrollment and program costs, more than job prospects, drive program closures.

When reviewing programs, all MnSCU colleges should assess

supply and demand for workers, and college policies should require it. To help, the Office of the Chancellor should analyze employment sectors likely to see more workers than jobs.

MnSCU based its statewide enrollment cap for electrician programs on a documented surplus of workers but lacked sufficient consideration of local economic conditions.

Following complaints about an oversupply of electricians, the Office of the Chancellor capped enrollment in electrician programs in 2007 and 2008. Some parts of the state, however, have not had the same depth of job losses as the Twin Cities region. Certain college presidents said employers in their regions continued as of fall 2008 to seek electrician program graduates. When MnSCU reassesses the caps, it should take local economic conditions into greater account.

MnSCU surveys of graduates' job placements are a potentially useful source of information on occupational programs, but the data have limitations.

Within a year of graduation, colleges contact graduates on their job status. For graduates of college programs overall in 2004-2006, nine colleges had lower-than-expected rates of related employment. For graduates of all programs in 2006, the rates ranged from 63 percent at Pine Technical College to 99 percent at Lake Superior College.

For some occupational programs, the value of related employment rates is limited because rates are based on a small number of graduates. In the survey of

MnSCU's Board of Trustees should by policy require colleges to ensure that information on career exploration and job opportunities is getting to the occupational program students who need it.

graduates from 2007, 54 percent of the programs had six or fewer graduates. Further, at some colleges, information on job placements for most graduates came from sources other than the student, such as faculty. Colleges do little else to supplement the data.

MnSCU should explore improvements to assessing graduates' success at finding relevant jobs.

Changes in some MnSCU occupational programs matched trends in statewide employment, but colleges' flexibility is limited.

As a share of all MnSCU programs from 2001 to 2008, programs on health care support services increased 17 percent. Similarly, as a share of all employment, jobs in health care support increased 18 percent, and jobs for health care practitioners increased 14 percent. Concurrently, MnSCU's manufacturing programs declined as a share of all programs, as did manufacturing/production jobs as a share of statewide employment.

Colleges face limitations in trying to meet economic and workforce needs. Several college presidents said they cannot open a new program unless they close an existing one. Program start-ups frequently require major equipment purchases, constraining flexibility.

Colleges have actively managed their occupational programs, but they rely heavily on the Office of the Chancellor to document effects on job markets.

Between 2001 and 2008, MnSCU colleges made more than 9,600 proposals to add, change, or close programs. A sample of proposals

for new programs showed that colleges were responsive to employers. Colleges consulted employers to develop curriculum and identify skills to be taught.

In 2007, the Office of the Chancellor strengthened requirements for approving new programs, in part to require quantifying job prospects. In past proposals, colleges frequently provided minimal or no information to quantify employer demand for workers. Largely because of work by the Office of the Chancellor, proposals for new programs receive extensive reviews of job prospects.

MnSCU has no centralized oversight of information from colleges on career exploration and job opportunities, and there are gaps in student information on job prospects and related topics.

MnSCU's Board of Trustees has not adopted policies governing information on career exploration and job opportunities. Colleges take steps to inform students about job prospects, but student leaders we surveyed and some college representatives we interviewed said not enough is being done about getting information to all students who may need it.

Information on careers and job opportunities is available, but few colleges require students to use it. Faculty often provide job information, but their involvement varies by program and may leave some students uninformed. MnSCU's Board of Trustees should by policy require colleges to ensure that career and job information is getting to students who need it. All colleges need ways to systematically inform students about job prospects.

Introduction

Occupational programs provided by the Minnesota State Colleges and Universities (MnSCU) system help prepare students for skilled occupations. MnSCU's technical colleges, community colleges, and consolidated colleges provide occupational programs around the state.

In testimony before legislative committees during 2007 and 2008, the International Brotherhood of Electrical Workers Local 292 questioned whether, during a time of high unemployment, MnSCU should continue enrolling students in electrician programs at the same pace as in previous years. MnSCU had responded in early 2007 by issuing a statewide moratorium on adding new construction electrician programs and requiring colleges to freeze program enrollments below fiscal year 2007 levels.

Although the electrician program issue initially sparked legislative interest in the topic, legislators voiced concerns over broader questions regarding MnSCU's responsiveness to labor market demands. In March 2008, the Legislative Audit Commission directed the Office of the Legislative Auditor to evaluate MnSCU's occupational programs. The evaluation was undertaken to answer the following questions:

- **How well does MnSCU's occupational programming respond to employers' needs and market conditions?**
- **How well do MnSCU colleges help students explore careers and understand job opportunities?**
- **How successfully have graduates of MnSCU's occupational programs found work related to their programs of study?**

To answer these questions, we reviewed relevant state and federal laws as well as policies set by MnSCU's Board of Trustees. We interviewed 7 trustees and examined mission statements and strategic plans of the board and of the 30 two-year colleges.

We interviewed staff in MnSCU's Office of the Chancellor who evaluate and approve college proposals for occupational programs. Using MnSCU data, we analyzed the proposals that colleges submitted since 2001 to add, redesign, or close occupational programs. We also examined in depth a stratified, random sample of 182 of the proposals that had been reviewed by the Office of the Chancellor between 2005 and 2007.

For the purpose of interviewing college presidents and other college leaders about the issues in this evaluation, we selected a cross section of 13 colleges. These colleges represented a mix of sizes, geographic locations, and types (that is, technical colleges, community colleges, and consolidated colleges). Our

selection was also based on obtaining a mix of colleges in terms of mission statements, strategic plans, availability of electrician programs, and whether the college was represented on the workforce investment board in its region.

For all 30 colleges, we assessed college policies on requirements for conducting academic reviews, which board policy requires for the purpose of program planning and improvement. We analyzed the content of a sample of 43 program reviews completed in 2008; the sample came from the 13 colleges we had visited. To learn more about how colleges have responded to employers' needs for training their existing workforce, we analyzed data from the Office of the Chancellor on customized training, which is provided by contract with employers. This also involved data on grants colleges had received, in partnership with specific employers, from the state's Job Skills Partnership Board.

We analyzed data from MnSCU's Office of the Chancellor to understand outcomes of occupational programs. One data set was MnSCU's inventory of programs since 2001. Using data on occupations from Minnesota's Department of Employment and Economic Development, we compared the mix of MnSCU's programs with employment trends. A second set of MnSCU data was information collected by colleges regarding the employment status of their graduates.

For viewpoints from employers on the evaluation's issues, we surveyed two groups. One was a sample of employers who served on program advisory committees, which colleges are required to convene for their occupational programs. Using rosters of advisory committee members supplied by MnSCU colleges, we randomly selected from each committee two members representing employers. We received responses from 619 people, for a 56 percent response rate. A second group of employers we surveyed included the chairs of Minnesota's 16 workforce investment boards. By law, all chairs are employers in their respective regions of the state. We also included in that survey the 16 directors of the workforce service areas. The response rate for this survey was 88 percent. In addition, we interviewed the head of the Minnesota Chamber of Commerce, who, at the time, also served as chair of MnSCU's Board of Trustees.

To learn about the information and services colleges provide to students regarding careers and job opportunities, we surveyed chief academic officers at the 30 colleges. At 12 of the 13 colleges we visited, we interviewed personnel involved with career centers. For student perspectives, we surveyed student leaders serving on the Governing Council of the Minnesota State College Student Association. We also interviewed two student trustees from MnSCU's Board of Trustees. For background purposes, we interviewed Office of the Chancellor staff involved with student services.

We interviewed and received data from others with an interest in occupational programs. This included union and electrical contractor association representatives, Minnesota's boards of Nursing and Electricity, and a representative of the Dunwoody College of Technology. To understand MnSCU's occupational programs in the context of higher education in the state, we analyzed data from MnSCU and Minnesota's Office of Higher Education.

Beyond these data, we did not examine occupational programs provided by private nonprofit or for-profit postsecondary institutions in Minnesota.

An appendix with additional materials related to this evaluation is available on our website at www.auditor.leg.state.mn.us/ped/2009/mnscu.htm. It includes summary survey results and a description of MnSCU's process and requirements for proposing changes to occupational programs.

Background

Occupational programs prepare students for particular jobs requiring specific skills that can be acquired, at least in part, through higher education. The Minnesota State Colleges and Universities (MnSCU) system offers numerous occupational programs around the state.

Our evaluation focused on how well MnSCU's occupational programs respond to the needs of employers and how well the programs result in practical applications of student skills in work settings (either for an employer or in self-employment). As background, this chapter describes (1) how we defined occupational programs, (2) the organization and governance of MnSCU, including basic financial information about the system, (3) how MnSCU's occupational programs fit in the context of higher education in the state, and (4) general trends on job growth and decline in Minnesota.

DEFINITION OF OCCUPATIONAL PROGRAMS

For this evaluation, occupational programs refer to postsecondary education offered through MnSCU to prepare students for employment in skilled occupations. For example, occupational programs train individuals to be carpenters, nursing assistants, dental hygienists, computer programmers, law enforcement officers, graphic design technicians, medical laboratory technicians, and auto body repair technicians.

Because our focus was on occupational education, we limited the scope of our evaluation to the two-year colleges in the MnSCU system.¹ This includes community colleges, technical colleges, and consolidated colleges (which are combined community and technical colleges). The evaluation excludes MnSCU's state universities, which offer mostly four-year and graduate programs.

Within the colleges, certain programs were of greatest interest during the evaluation. Our study focused on programs that may result in the following awards: diploma, certificate, associate in fine arts degree, associate in science degree, and associate in applied science degree. We excluded associate of arts degrees because they are commonly used for general education leading eventually to a four-year degree, such as a bachelor of arts.

Occupational programs prepare students for employment in skilled occupations.

¹ Although we use the term "two-year" colleges to distinguish them from the four-year state universities, MnSCU colleges offer some programs that exceed two years and others as short as three months.

A 15-member Board of Trustees has strong statutory authority to govern the system.

The Board of Trustees hires a chancellor to manage the MnSCU system.

MNSCU'S ORGANIZATION

In 1991, the Legislature passed a law to merge under one governing board what had been separately managed networks of technical colleges, community colleges, and state universities.² The merged system began operations in July 1995.

MnSCU consists of 7 state universities and 30 colleges, of which 25 colleges have their own presidents. For this evaluation, we focused on these 30 colleges even though some share a president with another institution.³ Several of the 30 colleges have multiple campuses located in separate cities. For instance, South Central College has one campus in North Mankato and a second in Faribault. Figures 1.1 and 1.2 show locations of the 30 colleges and their campuses.

Governance

A 15-member Board of Trustees is authorized by law to govern the state colleges and universities.⁴ The Governor appoints the trustees with the advice and consent of the Senate. Members serve six-year terms, with the exception of three student trustees who each serve two-year terms. Besides the student members, statutes require the board to include a trustee from each of the state's eight congressional districts and, beginning in 2010, a member representing labor organizations.⁵

State law grants MnSCU's Board of Trustees all powers necessary to govern the member colleges and universities and all related property.⁶ The board's authority to operate the system is limited only when prohibited by law or when decisions are specifically delegated to a different state agency. The board adopts policies for MnSCU institutions, sets tuition levels and budgets, conducts planning, sets admission and program completion requirements, and selects the system chancellor.

By law, the chancellor possesses powers and performs duties as delegated by the Board of Trustees.⁷ Board policies give the chancellor responsibility as chief executive officer for the MnSCU system and make the chancellor responsible for

² *Laws of Minnesota* 1991, chapter 356, art. 9, sec. 5, subd. 1.

³ Northwest Technical College shares a president with nearby Bemidji State University. Five colleges (Hibbing Community College, Itasca Community College, Mesabi Range Community and Technical College, Rainy River Community College, and Vermilion Community College) make up the Northeast Higher Education District, which is governed by one president.

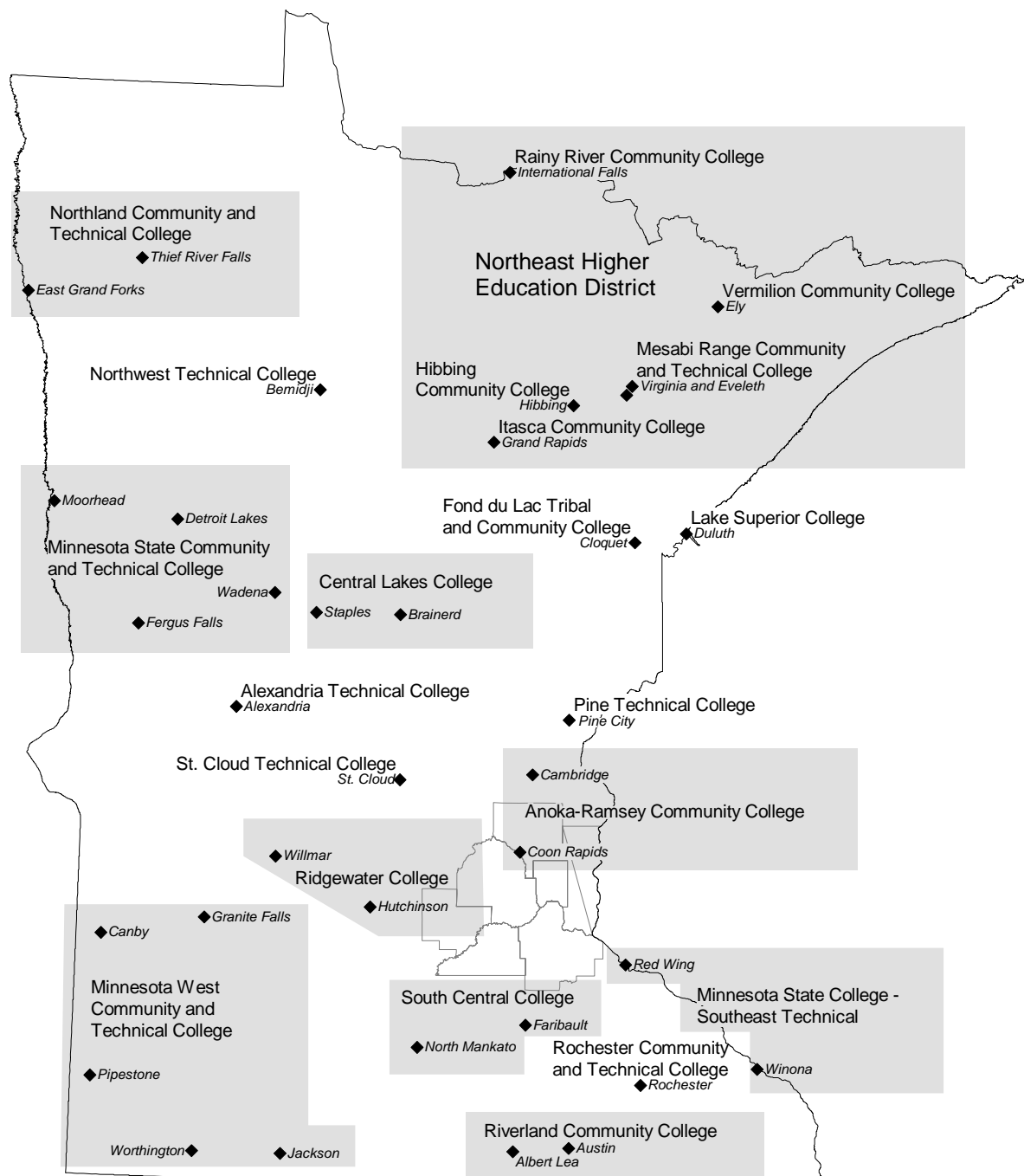
⁴ *Minnesota Statutes* 2008, 136F.06.

⁵ *Minnesota Statutes* 2008, 136F.02, subd. 1; and 136F.045.

⁶ *Minnesota Statutes* 2008, 136F.06, subd. 1.

⁷ *Minnesota Statutes* 2008, 136F.07.

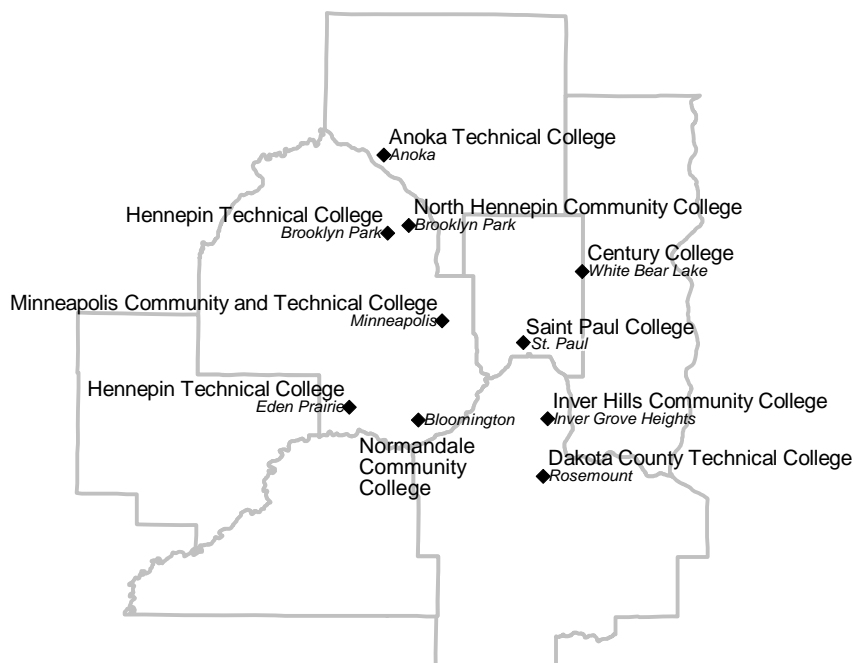
Figure 1.1: MnSCU Two-Year Colleges Outside the Twin Cities Metropolitan Area, 2008



NOTES: Shading marks the locations of colleges with multiple campuses. The map includes the Coon Rapids campus of Anoka-Ramsey Community College because the college has one campus in the metropolitan area and a second outside it.

SOURCE: Office of the Legislative Auditor, analysis of Minnesota State Colleges and Universities, *Amazing Facts* (St. Paul, May 2008).

Figure 1.2: MnSCU Two-Year Colleges Inside the Twin Cities Metropolitan Area, 2008



NOTE: The map does not include the Coon Rapids campus of Anoka-Ramsey Community College because that college is displayed on the statewide map in Figure 1.1.

SOURCE: Office of the Legislative Auditor, analysis of Minnesota State Colleges and Universities, *Amazing Facts* (St. Paul, May 2008).

planning, budgeting, educational leadership, and implementation of all board policies.⁸ The board appoints college and state university presidents upon recommendation of the chancellor, and the chancellor evaluates presidents' performance annually.

Funding

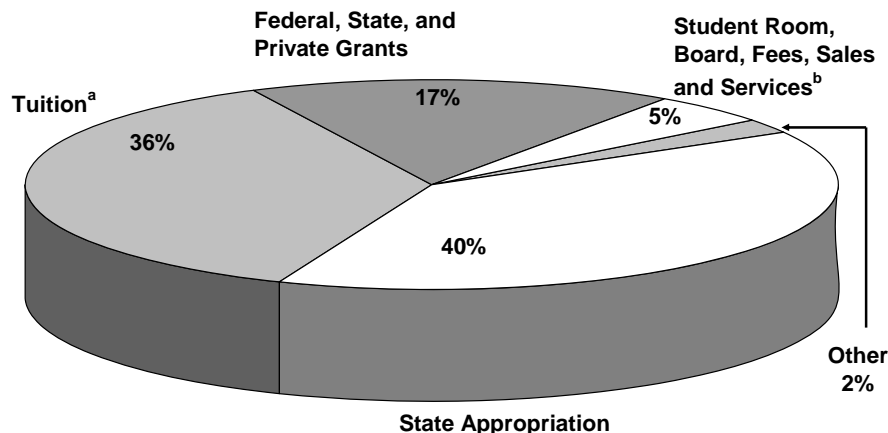
State appropriations and tuition make up the two largest sources of funding for MnSCU operations.

MnSCU's operating expenses in fiscal year 2008 were \$1.6 billion. Its revenues for operations come chiefly from state appropriations and tuition and fees. Figure 1.3 breaks down the sources of revenues for systemwide operations for fiscal year 2008.

State appropriations to MnSCU were originally \$689.3 million for fiscal year 2009 and totaled \$665.9 million for fiscal year 2008. The 2009 appropriation,

⁸ Minnesota State Colleges and Universities, *Board Policies, Chapter 1, Section A.3 System Administration, Chancellor; Part 2* (St. Paul, May 17, 1994).

Figure 1.3: MnSCU Revenue Sources, Fiscal Year 2008



^a Includes auxiliary and sales, net of scholarship allowances and net of the costs of goods sold.

^b The amounts are net of the costs of goods sold.

SOURCE: Minnesota State Colleges and Universities, *Annual Financial Report for the Years Ended June 30, 2008 and 2007* (St. Paul, November 2008), 25.

however, was reduced by the 2008 Legislature in the amount of \$6.8 million and recently further reduced by \$20 million when Governor Pawlenty announced unallotments to balance the state's General Fund budget deficit.⁹ The original state appropriation to MnSCU for fiscal year 2009 represented an increase of about 3 percent over the previous year. The legislative reduction followed by the unallotment at the end of 2008 resulted in a 0.5 percent decrease in the fiscal year 2009 appropriation compared with the previous year.

By law, the Board of Trustees has authority to set tuition and fees.

Tuition amounted to about \$659.8 million for fiscal year 2008.¹⁰ MnSCU's Board of Trustees has statutory authority to set tuition and fees.¹¹ While the board approves the tuition structure, colleges and universities set their own tuition amounts, which may vary by course and program as well as by resident or nonresident status. The board approves fee maximums, within which colleges and universities set their fees. For fiscal year 2008, annual resident tuition and fees averaged \$4,446 at the two-year colleges and ranged from \$4,015 at Anoka-Ramsey Community College to \$4,799 at Northland Community and Technical

⁹ Minnesota State Colleges and Universities, *Board of Trustees Agenda Item Summary Sheet, FY2009 Unallotment Action* (St. Paul, January 2009).

¹⁰ Minnesota State Colleges and Universities, *Annual Financial Report for the Years Ended June 30, 2008 and 2007* (St. Paul, November 2008), 48.

¹¹ *Minnesota Statutes* 2008, 135A.04; and 136F.06, subd. 1.

MnSCU uses a set of formulas to allocate the state appropriation among colleges and universities.

College.¹² The board held tuition increases to 2 percent for colleges (and 3 percent for state universities) for fiscal year 2009.

Allocation Framework

To allocate the state's appropriation among MnSCU colleges and universities, the Office of the Chancellor developed a set of formulas referred to as the allocation framework. In dividing the appropriation, the framework relies heavily on enrollment, but other factors come into play. First, before allocating amounts to colleges and universities, certain amounts are taken from the appropriation for two categories of spending. One is "set asides," and it includes spending for the Office of the Chancellor, debt service, and other items that cut across the system as a whole, such as services from the Office of the Attorney General. The second is "priority funds," which are more discretionary and reflect current educational interests of the Board of Trustees or legislative priorities. For example, the MnSCU system's Centers of Excellence have received appropriations since 2005 to develop particular program areas including engineering and health care.

After set asides and priority funds, the remaining state appropriation is allocated among colleges and universities. Half of the allocation is based on a college's or university's base funding for the prior year. The second half is allocated by formulas in MnSCU's allocation framework. The framework has formulas for five areas of spending: instruction and academic support, administrative support and student services, facilities, library, and research and public service. Enrollments drive much of the allocations.

Among the five spending areas for which allocations are calculated, the largest is instruction and academic support, at about 57 percent of total allocations for fiscal year 2009. Although more complex than described here, allocations for instruction recognize that some programs are more costly to operate than others. For instance, occupational programs, such as diesel mechanics, that depend on major pieces of equipment or specialized facilities tend to cost more than courses in history. Instruction allocations depend on enrollment, but they also depend on average systemwide costs for a program and how a college's spending compares with that average.¹³ For colleges with similar costs for specific programs, the formula allocates similar per student amounts, resulting in larger amounts going to colleges with higher enrollments.

Administrative support and student services is the second largest spending area, accounting for 27 percent of allocations in fiscal year 2009. Allocations for administrative support and student services are based on enrollment and a

¹² Minnesota State Colleges and Universities, *Tuition and Fees Study* (St. Paul, September 2008), 57.

¹³ Costs per student for a given program may range within 10 percentage points higher or lower than systemwide average costs per student for that program. If a college's costs per student are higher than that range, the formula will reduce the allocation to an amount that is precisely 10 percent higher than average costs. Conversely, if costs per student are lower than the range, the calculation raises the allocation to a point that is 10 percent below average costs.

MnSCU represents a significant share of the state's occupational programs and students.

formula that looks at spending by similar public two- and four-year institutions around the country. For the remaining three spending areas, MnSCU uses separate formulas that account for specific factors related to each area, such as enrollment, facility square footage, and national spending patterns, among others.

OCCUPATIONAL PROGRAMS IN HIGHER EDUCATION

Minnesota has numerous institutions of higher education, both public and private, but MnSCU represents a significant share of the state's occupational programs and students. The MnSCU system accounted for 68 percent of Minnesota's occupational programs in the fall of 2007, based on data from the U.S. Department of Education and analyzed by MnSCU. This is a significant share, but MnSCU's proportion of occupational programs in Minnesota has declined over the last five years, as shown in Table 1.1.

Table 1.1: Minnesota's Occupational Programs, by Provider, Fiscal Years 2003-2007

	2003		2004		2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
MnSCU ^a	1,668	79%	1,540	77%	1,504	73%	1,490	71%	1,495	68%
Other	<u>446</u>	<u>21</u>	<u>470</u>	<u>23</u>	<u>565</u>	<u>27</u>	<u>623</u>	<u>29</u>	<u>699</u>	<u>32</u>
Total	2,114	100%	2,010	100%	2,069	100%	2,113	100%	2,194	100%

NOTES: Occupational programs are defined here as any programs, other than liberal arts programs, that offer awards other than bachelors' degrees and are designed to take less than four years to complete.

^a Most programs were at MnSCU two-year colleges, but between 12 and 26 a year were at MnSCU four-year universities.

SOURCE: Minnesota State Colleges and Universities system analysis of the Integrated Postsecondary Education Data System completions data collected by the U.S. Department of Education's National Center for Education Statistics.

The same pattern is true for numbers of students enrolled in occupational programs across the state, according to data from the Minnesota Office of Higher Education.¹⁴ About 72 percent of the 73,371 students in occupational programs in Minnesota for 2007 were enrolled at MnSCU colleges. Over the previous five years, however, the proportion enrolled at MnSCU has decreased. Table 1.2 shows the change. During that time span, the total number of students enrolled in these occupational programs across Minnesota has gone up and down somewhat

¹⁴ The Minnesota Office of Higher Education defined occupational programs as any programs, other than liberal arts programs, that offer awards other than bachelors' degrees and are designed to take less than four years to complete. Its data are based on reports from 131 postsecondary institutions. About 90 other institutions, including private career colleges such as the Center for Massage Therapy, did not report to the office and, thus, are not included in data reported here.

Table 1.2: Enrollees in Minnesota's Occupational Programs, by Provider, 2003-2007

	2003		2004		2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
MnSCU ^a	62,121	84%	60,427	81%	56,962	79%	57,481	75%	52,674	72%
Other	<u>11,536</u>	<u>16</u>	<u>14,076</u>	<u>19</u>	<u>15,197</u>	<u>21</u>	<u>19,186</u>	<u>25</u>	<u>20,697</u>	<u>28</u>
Total	73,657	100%	74,503	100%	72,159	100%	76,667	100%	73,371	100%

NOTE: Occupational programs are defined as any programs, other than liberal arts programs, that offer awards other than bachelors' degrees and are designed to take less than four years to complete.

^a Most enrollees were in MnSCU two-year colleges, but a small number each year were in MnSCU four-year state universities.

SOURCE: Office of the Legislative Auditor, analysis of Minnesota Office of Higher Education data.

from year to year. Between 2003 and 2007, this number decreased minimally (less than 0.4 percent). Student enrollment data represent a count of students at one point in time and may change over time because students drop out and change majors.

The number of awards conferred to students in occupational programs is a more stable indicator of student participation. Compared with other postsecondary institutions in Minnesota, MnSCU's share of awards conferred to graduates of occupational programs increased somewhat from 71 percent in fiscal year 2003 to 75 percent in 2007. The numbers of degrees and other awards conferred by MnSCU to students completing occupational programs also increased over this period, and Table 1.3 shows the changes.

Table 1.3: Awards Conferred to Students Completing Occupational Programs, by Provider, Fiscal Years 2003-2007

	2003		2004		2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
MnSCU ^a	15,912	71%	18,815	75%	18,473	72%	19,212	74%	19,538	75%
Other	<u>6,559</u>	<u>29</u>	<u>6,222</u>	<u>25</u>	<u>7,009</u>	<u>28</u>	<u>6,770</u>	<u>26</u>	<u>6,665</u>	<u>25</u>
Total	22,471	100%	25,037	100%	25,482	100%	25,982	100%	26,203	100%

NOTE: Occupational programs are defined as any programs, other than liberal arts programs, that offer awards other than bachelors' degrees and are designed to take less than four years to complete.

^a Most awards were conferred by MnSCU two-year colleges, but between 52 and 88 each year were conferred by MnSCU four-year state universities.

SOURCE: Office of the Legislative Auditor, analysis of Minnesota Office of Higher Education data, based on the Integrated Postsecondary Education Data System completions data collected by the U.S. Department of Education's National Center for Education Statistics.

JOB TRENDS

In Minnesota, occupational demand exists statewide for some jobs, while it varies for other jobs depending on regional resources, demographics, and industrial mix. Much of our discussion of job trends focuses on changes since the beginning of the decade, but the 2008 recession changes job outlooks dramatically. Its effects will continue to play out in 2009. A section at the end of this chapter discusses the unique results of the most recent economic picture.

Variation in Jobs by Type of Job

Between 2000 and 2007 in Minnesota, demand for workers overall grew more than 2 percent. Several occupational groups also experienced statewide growth, as shown in Table 1.4. Jobs related to business and financial operations grew the most (41 percent), followed by jobs related to life, physical, and social sciences (39 percent), and community and social services (35 percent). All six Minnesota planning regions experienced overall growth in these occupations over this seven-year period.

On the other hand, some occupational groups experienced losses statewide between 2000 and 2007. These included jobs related to: farming, fishing, and forestry (-26 percent), production and manufacturing (-15 percent), and installation, maintenance, and repair (-13 percent).¹⁵

Variation by Planning Region

Employment experience between 2000 and 2007 varied considerably among the six planning regions. Jobs in production and manufacturing, for instance, decreased in five of six Minnesota planning regions during this time period. The Department of Employment and Economic Development notes that employment in this sector likely suffers because of U.S. manufacturing firms sending jobs overseas. The northwest region, with its abundance of natural resources, experienced growth in jobs related to fishing and forestry; meanwhile, the state's other five regions experienced employment losses in this industry. While Minnesota's aging population and its increased need for health care services have contributed to increased employment of health care practitioners, the southwest region has lost jobs related to health care support.

Among Minnesota's six planning regions, shifts in employment patterns were quite dramatic for certain occupational groups. For example, employment in education, library, and training services increased 18 percent in southeast Minnesota, but it decreased 24 percent in the southwest region.

Some groups of occupations, such as jobs related to business and financial operations, grew statewide between 2000 and 2007. Others, such as jobs related to fishing and forestry, grew in only certain regions during that period.

¹⁵Some forestry-related positions, such as (1) foresters and (2) forest and conservation technicians, are categorized not under "Farming, Fishing, and Forestry," but under "Life, Physical and Social Sciences." These two occupation sub-groups experienced considerable growth from 2000 to 2007 (16 percent and 138 percent, respectively).

Table 1.4: Minnesota Employment Growth, by Planning Region, 2000-2007

Occupational Group	Percentage Change in Employment						Twin Cities
	Statewide	Northeast	Northwest	Southeast	Southwest	Central	
All Occupational Groups	2.2%	-3.1%	4.7%	5.6%	1.2%	5.9%	-5.7%
Business and Financial Operations	41%	80%	189%	84%	85%	100%	23%
Life, Physical, and Social Sciences	39	93	142	60	124	198	28
Community and Social Services	35	28	36	36	79	33	26
Personal Care and Service	28	-20	9	31	-25	7	10
Healthcare Support	21	24	10	49	-5	31	9
Healthcare Practitioners and Technical	16	13	16	24	25	25	4
Protective Service	12	30	5	56	7	18	-14
Food Preparation and Serving Related	12	24	-22	31	45	-12	16
Computer and Mathematical	9	84	287	NA ^b	105	131	-6
Legal	8	-50	26	23	289	33	3
Architecture and Engineering	5	14	17	13	60	98	-9
Education, Training, and Library	2	-7	8	18	-24	-6	-2
Construction and Extraction ^a	1	-22	-12	-16	-4	-1	-18
Transportation and Material Moving	0	-26	9	-5	-9	1	-4
Arts, Design, Entertainment, Sports, and Media	-3	-8	-14	12	-10	26	-15
Management	-3	-4	12	6	3	8	-12
Office and Administrative Support	-4	-11	12	-10	-2	5	-11
Building and Grounds Cleaning/Maintenance	-6	-17	-25	17	-31	-14	10
Sales and Related	-7	-13	-10	-9	-6	1	-17
Installation, Maintenance, and Repair	-13	-23	-12	-10	-3	5	-20
Production and Manufacturing	-15	-21	1	-14	-15	-10	-23
Farming, Fishing, and Forestry	-26	-25	16	-42	-53	-57	8

^a Data from the Department of Employment and Economic Development show an increase in employment statewide for the construction and extraction occupational group. Similar data for the planning regions show employment decreased in each of the six regions during this same period. These differences are due to the methodology used to compute the statewide and regional estimates.

^b Data for 2000 were not available.

SOURCE: Office of the Legislative Auditor, analysis of the Minnesota Department of Employment and Economic Development Occupational Employment Statistics, 2000 and 2007.

Variation in the Construction Industry

Changes in state or local economic conditions tend to heavily affect the construction industry. Consequently, employer demand for jobs within the construction and related industries can fluctuate considerably among regions and over time.

According to the Department of Employment and Economic Development, employment levels in the construction industry are inherently cyclical, reacting to changes in the economy, interest rates, and even the weather. Between 2000 and 2007, construction-related jobs in the central region of Minnesota declined about 1 percent, compared with construction job losses exceeding 18 percent in the Twin Cities metropolitan region.

While the number of job openings in construction may fluctuate from year to year, the U.S. Bureau of Labor Statistics says it is rare when all segments of the construction industry are down at the same time. Workers often switch between types of construction (for instance, commercial versus residential), depending on where demand is stronger.

Employment Forecasts

Economic conditions can shift very quickly from year to year, making it difficult to forecast with certainty which jobs will have good employment prospects at any point in the future. As shown in Table 1.5, employment projections published by the Minnesota Department of Employment and Economic Development show changes between the department's long-term forecasts for 2004-2014 and those for 2006-2016. The ten-year employment picture for jobs related to personal care services improved, for example, with anticipated growth increasing from 20.1 percent up to 25.2 percent. On the other hand, projected growth in transportation and material-moving jobs decreased from 10 percent in the 2004-2014 forecast to 2.1 percent in the 2006-2016 forecast.

Most Recent Forecasts

Sharp contrasts between the 2006-2016 employment projections and one-year 2008-2009 projections illustrate some of the recent changes in Minnesota's economy. During this one-year period, nearly all of the 22 occupational groups shown in Table 1.5 are expected to lose jobs.

Marginal job growth is still expected for jobs related to health care, personal care, and community and social services. Job losses are forecasted for the remaining occupational groups, although the employment outlook for some occupations within these groups is better. The 2008-2009 forecasts for each of 805 individual occupations (represented by the 22 groups displayed in Table 1.5) indicate that about 200 occupations are still expected to add jobs. Among them, the expected job growth ranges from 0.1 percent up to 3.3 percent. The occupations with the highest expected growth rates are forensic science technicians (3.3 percent) and veterinary technologists and technicians (3 percent).

Job projections between the third quarters of 2008 and 2009 are sharply lower than previous forecasts due to the economic downturn.

Table 1.5: Minnesota Employment Forecasts, by Occupational Group, 2004-2016

Occupational Group	Forecasted Change in Total Jobs		
	2004-2014	2006-2016	2008 3 rd Quarter- 2009 3 rd Quarter
All Occupational Groups	12.8%	9.8%	-1.1%
Healthcare Support	30.8%	26.5%	1.1%
Computer and Mathematical	30.8	22.8	-0.4
Healthcare Practitioners and Technical	24.7	22.4	1.0
Community and Social Services	22.5	25.6	0.4
Personal Care and Service	20.1	25.2	0.5
Business and Financial Operations	20.1	16.3	-0.5
Life, Physical, and Social Sciences	18.6	13.1	-0.6
Building and Grounds Cleaning and Maintenance	16.5	14.6	-0.6
Food Preparation and Serving Related	15.4	11.7	-0.8
Legal	13.9	10.1	-0.8
Architecture and Engineering	13.5	8.2	-1.1
Protective Service	12.6	10.8	-0.5
Construction and Extraction	12.2	7.5	-3.4
Arts, Design, Entertainment, Sports, and Media	11.8	9.6	-1.2
Education, Training, and Library	11.6	11.0	-0.1
Sales and Related	10.2	6.5	-1.1
Management	10.2	4.9	-1.5
Transportation and Material Moving	10.0	2.1	-2.5
Installation, Maintenance, and Repair	9.9	6.3	-1.6
Office and Administrative Support	5.9	5.7	-1.4
Production and Manufacturing	3.0	-2.7	-3.0
Farming, Fishing, and Forestry	2.0	1.1	-0.1

SOURCE: Office of the Legislative Auditor, analysis of the Minnesota Department of Employment and Economic Development employment projections data.

Occupational Programs and Related Jobs

For occupational programs, colleges in the Minnesota State Colleges and Universities (MnSCU) system are expected to offer training that will have practical applications in work settings, whether for an employer or in self-employment. When proposing new programs, a college is required by MnSCU system procedures to, among other things, establish that the program is needed.¹ To demonstrate need, colleges must first assess whether there is student interest. Second, they must determine that the proposed program avoids unnecessary duplication with programs offered by other nearby MnSCU colleges. Third, colleges must demonstrate need based on an assessment of labor supply and occupational demand. Over time, colleges must review their occupational programs to modify and improve them as needed. A major part of measuring the success of occupational programs is determining how well graduates find employment. Overall, we found that:

- **While MnSCU generally does a good job of understanding economic conditions and workforce needs, colleges do not consistently consider market needs for workers when managing their existing programs.**

In this chapter, we assess how well MnSCU understands economic conditions and workforce needs by first looking at how colleges determine employers' needs. We do this by examining colleges' interactions with employers and analyzing colleges' planning of their programs. Then we look at program outcomes as another measure of understanding economic conditions and workforce needs. The indicators we analyze are: job placement rates, a comparison of changes in MnSCU's occupational programs with changes in Minnesota's occupations, and how colleges have modified their occupational programs over time. In the final section of this chapter we present our recommendations.

HOW COLLEGES DETERMINE EMPLOYERS' NEEDS

Minnesota statutes on public postsecondary education list objectives for the state's investment in higher education. One objective is to "enhance the economy by assisting the state in being competitive in the world market, and to

¹ Minnesota State Colleges and Universities, *System Procedures, Procedure 3.36.1 Academic Programs, Part 5 Academic Program Approval* (St. Paul, August 1, 2007).

MnSCU's mission includes "sustaining vibrant economies throughout the state."

To guide the design and operation of their occupational programs, MnSCU colleges depend on input from program advisory committees.

prepare a highly skilled and adaptable workforce that meets Minnesota's... needs."²

MnSCU's mission includes serving state economic needs. In 2006, MnSCU's Board of Trustees adopted a mission describing an educational system that "meets the personal and career goals of a wide range of individual learners, enhances the quality of life for all Minnesotans and *sustains vibrant economies throughout the state*" (emphasis added).³ Individual trustees also told us how important they felt it was for colleges to consider the needs of employers.

To meet the objectives of state law and board plans, MnSCU colleges have to determine the needs of employers. This is necessary to, first, develop programs that provide appropriate skills and, second, understand which occupations afford reasonable opportunities for graduates' employment. Colleges determine the information in a number of ways. For discussion purposes, we grouped them below into two categories: (1) interacting with employers and (2) setting college missions and planning programs.

Interactions with Employers

To determine employer needs and better understand what their programs should encompass, colleges use program advisory committees, meet with employers and business leaders, follow industry standards to shape college curricula, provide customized training, and participate in workforce development efforts. We begin by analyzing colleges' program advisory committees.

Program Advisory Committees

MnSCU's Board of Trustees requires colleges to establish advisory committees for their approved programs that prepare students for entry into employment. Advisory committees are to consist of employers, students, and faculty, and their purpose is to guide colleges on program design, operation, accountability, and closure.⁴ Generally, faculty for an occupational program recruit committee members and oversee the committee's work.

To understand the relevance of program advisory committees, we surveyed a sample of members from advisory committees at 29 of the 30 two-year colleges.⁵ We received responses from 619 individuals, out of 1,104 surveyed, for a 56-

² *Minnesota Statutes* 2008, 135A.011.

³ Minnesota State Colleges and Universities Board of Trustees, *Designing the Future: Minnesota State Colleges & Universities Strategic Plan 2006-2010* (St. Paul, January 2006), 1.

⁴ Minnesota State Colleges and Universities, *System Procedures, Procedure 3.30 College Program Advisory Committees* (St. Paul, June 14, 2005).

⁵ Itasca Community College did not supply program advisory committee rosters. Although we requested roster information for all program advisory committees, Century College and Hibbing Community College supplied rosters for many, but not all, of their program advisory committees.

percent response rate.⁶ We also interviewed college leaders at 13 colleges about their advisory committees. Table 2.1 lists the colleges. In addition, we reviewed a program advisory committee handbook published jointly in 2004 by MnSCU's Office of the Chancellor and the Minnesota State College Faculty organization.⁷ Each college may have its own policies for guiding the operation of advisory committees; the handbook, though, was designed to "reinvigorate" program advisory committees around the state.

Table 2.1: Thirteen MnSCU Colleges Visited, 2008

College	Campus Visited
• Century College	White Bear Lake
• Dakota County Technical College	Rosemount
• Hibbing Community College	Hibbing
• Minneapolis Community & Technical College	Minneapolis
• Minnesota State College-Southeast Technical	Red Wing
• Minnesota State Community and Technical College	Fergus Falls
• Minnesota West Community & Technical College	Worthington
• North Hennepin Community College	Brooklyn Park
• Northland Community & Technical College	Thief River Falls
• Northwest Technical College	Bemidji
• Pine Technical College	Pine City
• St. Cloud Technical College	Saint Cloud
• Saint Paul College, A Community & Technical College	Saint Paul

NOTE: The Office of the Legislative Auditor visited the colleges between mid-September and late November 2008.

SOURCE: Office of the Legislative Auditor.

We found that:

- **Colleges rely heavily on program advisory committees to identify employer needs, but not all advisory committees are working effectively.**

College leaders we interviewed said program advisory committees were important in helping colleges identify needs and emerging trends among employers and industries. Committee members advise colleges when program

⁶ Our sample was targeted at the employers and other committee members with relevant professional experience; we excluded faculty, students, and other MnSCU employees. Committees vary greatly in size, but we treated all committees equally, regardless of size, and randomly selected two members from each. The sample was not chosen to be representative of all individuals serving on committees.

⁷ MnSCU Office of the Chancellor and Minnesota State College Faculty, *Program Advisory Committee Handbook* (St. Paul, March 2004).

curricula need updating or there is a need for new programs. They may also be a source for internships, jobs, and equipment or help identify practicum sites.

Although program advisory committees are important, there are problems with the administration of some of them. Inattention by faculty members has led to inactive or inconsequential committees, according to some college representatives. Another college leader said some members lack a clear understanding of the committee's role. Plus, during our survey, a substantial share of people who colleges listed on committee rosters told us they are, in fact, not members. Of the 619 people who responded to our survey, 8 percent questioned whether they were actually members.⁸ Despite all of the respondents being listed on rosters provided by the colleges, some said they had never served (and were surprised to learn from our survey request that they were considered members).⁹ Others had not been a member for years. Still others had agreed to be a member at some past point but had never received further information about committee meetings.

Representatives of every college we visited spoke of the value of program advisory committees, but most also said at least some of the committees were not working up to their full potential. From our survey, we learned that committee members hold generally favorable attitudes about committees; at the same time some responses suggested troubling areas. Based on our interviews, survey results, and analysis of advisory committee rosters, improvement is needed in two areas: (1) the organization or structure of some committees and (2) activities in which some are less active. The areas are explained below.

Committee Structure

Based on benchmarks in MnSCU's *Program Advisory Committee Handbook (Handbook)*, there are problems with the structure of certain advisory committees. Specifically, there are problems with meeting frequency, turnover rates, committee size, and committee composition.

First, not every advisory committee meets frequently enough to be effective. The *Handbook* says that committees should meet as frequently as needed to manage their work plan, but most meet twice a year. Not all do. For example, a member of the Small Business Management program at South Central College said the committee met just once per year. A member of the Law Enforcement committee at Riverland College said the advisory committee did not meet in some years.¹⁰ In our survey, just 39 percent of respondents strongly agreed that

**Not every
program advisory
committee meets
frequently enough
to be effective.**

⁸ Forty-two people selected from committee rosters were not reachable by mail, telephone, or e-mail because contact information from colleges was incorrect or outdated. It is unknown whether these potential respondents were actually involved with a MnSCU advisory committee.

⁹ One individual filled out our questionnaire based on his experience as an advisory committee member for Dunwoody College of Technology. When contacted, he said he had never served on an advisory committee for the MnSCU college that had listed him on its roster.

¹⁰ Committee minutes verified that the committee did not meet in 2003 or 2005, but it did meet once each academic year since 2000.

The size of many program advisory committees is either unwieldy or unreasonably small.

the committee holds a sufficient number of meetings.¹¹ Meeting more often or more regularly was the most frequent improvement cited by respondents when asked what changes they would suggest. Another frequent suggestion was for the college to communicate with members throughout the year, not just at the one or two meeting times.

Second, there is inadequate turnover of some committee members. MnSCU's *Handbook* says each committee should establish its own criteria for members' terms of office but suggests a maximum term of three years. Several college presidents we interviewed expressed concern about lack of turnover among members, which can inhibit fresh perspectives on the committee.¹² Among the respondents to our survey, 54 percent had been members for more than three consecutive years; 37 percent had served for five or more years.¹³

Third, the size of many committees is either unwieldy or unreasonably small. MnSCU's *Handbook* says that the appropriate size of committees varies, but committees with fewer than 5 members could have limited perspectives and more than 18 members can become unmanageable.¹⁴ Not counting members who were MnSCU employees or students, the size of committees ranged from 2 to 72 members. The average size was 13. Some were very small: 29 of the 561 advisory committees (5 percent), from 14 different colleges, had fewer than five nonMnSCU members. Some were very large: 64 committees (11 percent), from 22 different colleges, had more than 20 nonMnSCU members. Table 2.2 illustrates this.

Finally, some committees had too few employers or business people with relevant experience. Among the survey respondents who offered suggestions for improving committees, the second most frequent suggestion was to add more employers and industry professionals or those with appropriate experience. In addition, 29 of the 561 committees for which we received rosters had four or fewer employers or others with relevant experience. Four committees had just one or two professionals represented. Even in a smaller community, it would be difficult for committees with such a small number of employers to represent the full scope of an industry's needs.

¹¹ The analysis excluded respondents who said they were not members of advisory committees or had never attended a meeting, leaving a total of 533 respondents.

¹² Colleges in smaller communities may have more recruiting difficulties than colleges elsewhere.

¹³ For this question, the number of respondents was 524.

¹⁴ Certification processes for certain occupational programs set standards on the size of advisory committees. For instance, the National Automotive Technicians Education Foundation, which certifies instructional programs for automobile technicians, requires advisory committees to have a minimum of five industry members (besides college instructors).

Table 2.2: Small and Large Program Advisory Committees at MnSCU Colleges, 2008

	Fewer Than 5 Members		More Than 20 Members		Total Small or Large Committees		Total	
	#	%	#	%	#	%	#	%
Committees	29	5%	64 ^a	11%	93	17%	561	100%
Colleges with at least one committee of this size ^b	14	48	22	76	24	83	29	100

NOTES: MnSCU colleges provided rosters of program advisory committees. The analysis excluded committee members who were MnSCU employees or students. MnSCU's *Program Advisory Committee Handbook* (St. Paul, 2004) says committee size will vary but suggests committees should have neither fewer than 5 nor more than 18 members. Itasca Community College did not send rosters of program advisory committees.

^a Eighteen committees (3 percent of the total), from 14 colleges, had more than 30 members.

^b Twelve colleges had both at least one committee with fewer than 5 members and at least one with more than 20.

SOURCE: Office of the Legislative Auditor, analysis of MnSCU colleges' program advisory committee rosters.

Committee Activities

MnSCU's *Handbook* says advisory committees should be connected with other organizations, such as high schools, economic development councils, and collegewide advisory councils, when such groups have undertaken initiatives related to the occupational program. Between 22 and 27 percent of respondents reported that their advisory committees are strongly connected with related groups, as is displayed in Table 2.3.

For other activities that MnSCU's *Handbook* says usually make up advisory committees' work, most, but not all, committee members reported that their committees are very or somewhat active. For some typical activities, such as reviewing course content against industry standards, at least 80 percent of respondents said their committees are somewhat or very active. But for others, such as helping instructors identify retraining to maintain their technical skills, at least a quarter of respondents indicated their committee is somewhat or very inactive. Table 2.4 shows members' responses for each activity.

Table 2.3: Program Advisory Committee Opinions on Strength of Connections to Related Groups, 2008

Group	Strength of Advisory Committee Connection to the Group				
	Strongly	Moderately	Somewhat	Little or Not at All	Not Applicable
Economic development initiatives in the area (N=522)	27%	33%	15%	16%	9%
Area high schools and their students (N=522)	27	27	20	19	6
The general collegewide advisory committee (N=518)	26	28	20	19	8
Workforce Center programs and activities (N=520)	22	30	22	18	9

NOTES: The question read “How strongly connected is the advisory committee to the following?” In some parts of the state, groups may not have initiatives related to each occupational program. Rows may not sum to 100 percent due to rounding.

SOURCE: Office of the Legislative Auditor, analysis of MnSCU colleges’ program advisory committee member survey, October 2008.

While most committee members we surveyed said colleges respond well to their committees, some said colleges should be more open to committee recommendations.

Finally, MnSCU’s *Handbook* describes the importance of college efforts to sustain advisory committees by giving feedback on committee recommendations, but our survey revealed conflicting opinions on how well this is done. Large majorities of our survey respondents said colleges responded very or somewhat well to advisory committee recommendations. At the same time, in answer to an open-ended question about how they would improve the committee, several respondents said that the college should listen better to committee recommendations. Further, in answer to the open-ended questions, several committee members said their committees were underutilized and seemed to exist only because of the requirement to have one.

Meetings with Employers

Another type of interaction between MnSCU colleges and employers results from meeting with employers in the community. While most of the meetings are at the college’s own initiative, some occurred in the last year as a result of a Board of Trustees initiative. We look at that board initiative and then describe some of the other relationships colleges have developed.

Table 2.4: Program Advisory Committee Member Opinions on Committee Activities, 2008

Activity	Program Advisory Committee Was:			
	Very Active	Somewhat Active	Somewhat Inactive	Very Inactive
Reviewing course content against industry standards (N=516)	61%	26%	9%	4%
Assessing the occupational programs' strengths and weaknesses and suggesting improvements (N=518)	55	35	6	3
Identifying needs for tools, supplies, equipment, or facilities (N=515)	48	34	13	5
Identifying new or emerging career and technical fields (N=543)	45	37	13	5
Helping instructors identify retraining or other opportunities to maintain their technical skills (N=514)	31	40	20	9
Directly recruiting students for jobs (N=510)	29	37	22	13
Explaining or promoting the programs to the broader community (N=510)	28	42	21	9
Participating in activities such as job fairs or industry tours (N=515)	25	35	24	17

NOTES: The question read, "In the most recent year of your membership on the advisory committee, how active was the committee in the following?" Rows may not sum to 100 percent due to rounding.

SOURCE: Office of the Legislative Auditor, analysis of MnSCU colleges' program advisory committee member survey, October 2008.

One strategic direction set by the MnSCU Board of Trustees is to "provide programs and services integral to state and regional economic needs."

Board of Trustees Strategic Planning

In the MnSCU Board of Trustees' strategic plan for 2006 to 2010, the board specifies four strategic directions. The third direction is to "provide programs and services integral to state and regional economic needs."¹⁵ To achieve this direction, the board's 2009 action plan lists six strategies, which are displayed in Table 2.5 and are in various stages of completion. With the intent of learning how the MnSCU system can gain better insights into economic and workforce conditions, one strategy required college and university presidents and the chancellor to each meet in 2008 with ten business leaders in the state.

¹⁵ The Board of Trustees' 2008-2012 strategic plan carries a similar direction but expresses it as "programs and services that enhance the economic competitiveness of the state and its regions." We focused on the 2006-2010 plan because the board's 2009 action plan was tied to it.

Table 2.5: MnSCU Board of Trustees 2009 Action Plan Strategies

Strategy	Status
Conduct 10 “CEO to CEO” visits to provide insights into economic and workforce conditions.	All but 7 percent of the chancellor’s and presidents’ visits were completed as of January 27, 2009. Results are being analyzed by the Office of the Chancellor; a report is expected by March 2009.
Develop portal for manufacturing and engineering firms to find employees and access training opportunities.	Eleven MnSCU colleges are working with the National Association of Manufacturers to identify skill sets that manufacturers need for their employers.
Redesign web interfaces to improve customer satisfaction and facilitate customized training.	Work on a MnSCU Business and Industry web site is complete. Additional work is underway to allow a centralized electronic location for registering and billing for customized training.
With outside assistance, develop and implement an integrated marketing and public relations plan targeted to Minnesota employers.	As part of its marketing and public relations plan, MnSCU developed a component on “Connecting with Business.” Implementation has begun and will continue through 2009.
Develop catalogue of services for employers to increase education and training service delivery.	Office of the Chancellor published and distributed an <i>Open for Business</i> guide, explaining how businesses can connect with MnSCU training resources.
Coordinate with external partners, such as the Minnesota Chamber of Commerce, the Department of Employment and Economic Development, the University of Minnesota, and with internal partners, including the Centers of Excellence, customized training, and academic specialists.	Work is ongoing; no specific measures are in place to gauge the outcomes of the partnerships.

NOTE: These strategies were set by MnSCU’s Board of Trustees and are related to the board’s strategic direction of providing programs and services integral to state and regional economic needs.

SOURCES: Office of the Legislative Auditor, analysis of Office of the Chancellor staff interviews; Minnesota State Colleges and Universities Board of Trustees, *2009 Action Plan for the Minnesota State Colleges and Universities* (St. Paul, May 2008), www.mnscu.edu/about/workplan/08-09_actionplan/09_system_action_plan.pdf, accessed December 1, 2008.

Most, but not all, college presidents completed their visits with CEOs in 2008, according to the Office of the Chancellor. Near the end of January 2009, about 7 percent of the college visits remained to be conducted. College presidents we interviewed generally said they agree with the board’s initiative to have college leaders visit business CEOs, although many said such visits were something they customarily did anyhow. A report with results from the visits is expected in March 2009.

College administrators we interviewed said they participate in civic organizations, such as Rotary Clubs, as a way of developing relationships with employers.

Formal College Partnerships and Alliances

Colleges often interact with employers through industry alliances. As one example, Pine Technical College is an active member in a healthcare alliance and a manufacturing alliance (focused on the quality and quantity of the regional workforce in those respective industries). As another example, St. Cloud Technical College is one of several college members of a Minnesota Energy Consortium designed to identify workforce needs in the energy industry.

Other interactions include regular meetings with local employers and businesses. Examples are Minnesota State Community and Technical College's president's council, which meets with area employers, and Century College's "sector meetings" with representatives from four key business sectors, including manufacturing and technology. College officials also gain information about market and workforce conditions by participating in workforce development partnerships.

Informal College Relationships

All college leaders we interviewed told us about the importance of personal networks they and other college personnel have built. They said that such networks help the colleges identify employers' needs and emerging trends. Networks evolve from participation in civic organizations, such as local chambers of commerce, hospital boards, Kiwanis and Rotary Clubs, and economic development organizations.

Curriculum Development

A third type of interaction with employers is the input colleges receive when they develop curricula and programs to meet industry standards. One way to do this is through certification or accreditation provided directly by an industry or industry association. Certification requirements are intended to ensure that programs teach the skills that professionals have deemed necessary based on current industry standards. Colleges view certification as a visible imprimatur of quality programs and meeting industries' needs.

St. Cloud Technical College and Pine Technical College are two of several MnSCU colleges that meet the certification process developed for automotive programs by the National Automotive Technicians Education Foundation (NATEF). NATEF is a nonprofit organization that evaluates technician training programs against standards developed by the automotive industry. NATEF sets standards in 10 subjects, such as instruction, equipment, facilities, and staff competency. To be certified by NATEF, instructional programs have to meet these standards and provide a minimum of 1,080 hours of instruction on certain tasks, including brakes, electrical systems, and engine performance. For certification, program leaders conduct a self study, submit self-study materials to NATEF, and receive an on-site review by NATEF evaluators. Programs must be recertified every five years.

Some colleges try to ensure educational quality through quality improvement programs, which include measuring colleges' success in building external relationships with employers and industries. One such program used by several

For some occupational programs, colleges develop curricula to meet professional certification standards.

State licensing boards, such as the Minnesota Board of Nursing, will approve MnSCU occupational programs that meet industry standards.

colleges we visited, including Saint Paul College and St. Cloud Technical College, is the Academic Quality Improvement Program (AQIP). AQIP is a product of the Higher Learning Commission, which is the regional accrediting body for higher education institutions, and the quality program is designed for colleges to maintain their accreditation. AQIP requires strategic planning and assessments of academic achievement and institutional effectiveness. Within one of AQIP's categories for self-assessment, colleges must assess how they build relationships with employers of their graduates, the results of those relationships, and how to improve them.

Occupational programs approved by Minnesota state licensing boards also provide a means for colleges to ensure their students are provided the skills necessary to meet industry needs. These types of programs typically must undergo rigorous college and clinical site reviews by board staff as part of the approval process. In addition, similar periodic reviews are required to ensure that the programs and curriculum continue to conform to industry standards.

The Minnesota Board of Nursing, as one example, is extensively involved in approving programs for licensure of registered nurses and practical nurses in the state.¹⁶ Colleges wishing to offer board-approved programs must have advanced standing and accreditation for practical nursing, either with the National Learning Education Commission or the Commission on Collegiate Nursing Education. To maintain board approval, colleges make annual reports, including verifying graduates' satisfactory completion of the program, and colleges undergo site reviews every 10 years.

Minnesota's Board of Electricity approves occupational programs for electricians, and it has approved all of MnSCU colleges' electrician programs in the past.¹⁷ Colleges that want to offer electrician programs certified by the board must offer a curriculum that incorporates industry standards for the profession, such as the National Electrical Code. Every five years, colleges must resubmit their program for board review.

Customized Training

In response to economic and workforce needs, MnSCU colleges offer customized training. These courses are generally paid for on a contract basis by employers who seek short-term training tailored specifically to their workers' needs. By definition, customized training requires colleges to determine employers' needs. We found that:

¹⁶ In Minnesota, individuals seeking to become registered nurses or licensed practical nurses must successfully complete a board-approved program. Currently, 23 MnSCU colleges offer programs to prepare graduates for practical nurse licensure, and 20 colleges offer programs in preparation for licensure and leading to an Associate Degree.

¹⁷ The state's administrative rules do not apply to programs such as the International Brotherhood of Electrical Workers' (IBEW) apprenticeship program except indirectly; by completing the IBEW program, applicants will have time offset from the state's required minimum training experience.

- **Customized training affords opportunities for colleges to respond nimbly to employers' needs for workers' training, but certain factors limit its use.**

College presidents told us that, because no degrees or other awards are attached, customized training is very flexible and adapts readily to evolving training needs. At some colleges, information learned from employers who purchase customized training is used in the planning for occupational programs. Further, many colleges apply for grants from the state's Job Skills Partnership Program, which requires colleges and employers to form partnerships to develop customized training.¹⁸

The number of students registered for MnSCU's customized training courses increased nearly 5 percent between 2003 and 2007.

The number of students registered for customized training provided through MnSCU colleges has increased over the span of 2003 through 2007, as shown in Table 2.6.¹⁹ At the same time, customized training represents a small share of all MnSCU programming and expenditures. Of MnSCU's systemwide \$1.6 billion in operating expenses in fiscal year 2008, customized training at the colleges accounted for \$42.4 million (or less than 3 percent) of the total.

Certain factors limit how much colleges can use customized training. First, college leaders we interviewed said that MnSCU colleges have to compete among numerous public- and private-sector providers of training for workers. According to college leaders, a second set of limitations arises from labor contract provisions, equipment expenses, the need for instructors, or the constraints of colleges' geographic locations. Labor contracts contain a time threshold that prohibits faculty from providing more than 925 hours of customized training instruction per fiscal year. Plus, the statewide contract requires all colleges to pay the same salaries; one president said this drives up costs to a level where the college cannot use its own faculty to provide the training.

Some college leaders said the high costs of equipment needed for certain types of training can limit what a college offers. Others said it can be difficult finding instructors from certain industries or with appropriate credentials. Some metropolitan-area colleges reported that they limit customized training to certain sectors because training needs are so diverse they cannot possibly fill them all. At the same time, some colleges in Greater Minnesota said they are limited because of difficulties reaching employers spread across a wide geographic area.

¹⁸ *Minnesota Statutes* 2008, 116L.02(a). Program partnerships may be between employers and any accredited higher education institution, but MnSCU colleges receive most of the grants. About \$7.3 million, or 91 percent of all Job Skills Partnership grants in fiscal year 2008, went to MnSCU colleges working in partnership with employers.

¹⁹ Data for 2008 are excluded because they are not comparable with earlier years. In its 2009 Action Plan, MnSCU's Board of Trustees included a target of increasing the number of students enrolled in customized training by 10.5 percent between fiscal years 2005 and 2009. The system had reached 66 percent of the target as of the end of 2008.

Table 2.6: Customized Training Courses, Students, and Hours, Fiscal Years 2003-2007

	2003	2004	2005	2006	2007	Percent Change 2003-07
Unique courses offered ^a	3,652	3,262	3,187	3,213	3,317	-9.2%
Total courses offered ^b	9,580	8,965	9,111	9,163	9,570	-0.1%
Student course registrations ^c	141,800	143,798	132,013	139,487	148,710	4.9%

NOTES: The numbers reflect only the customized training provided by two-year MnSCU colleges on a contract basis with employers. They include both for-credit and noncredit courses, but they exclude courses that were open to the public. Data for fiscal year 2008 are excluded because they were not comparable with earlier years.

^a The count of unique courses does not include multiple offerings of a single course at the same college during the school year, but similarly titled courses at different colleges are included.

^b The total courses count includes multiple offerings of a single course at the same college during the school year.

^c Students taking multiple courses were counted for each course in which they were registered.

SOURCE: Office of the Legislative Auditor, analysis of Minnesota State Colleges and Universities Research Unit data.

Chairs of the state's workforce investment boards generally consider their interactions with MnSCU colleges to be good, but they see room for improvement.

Involvement with Workforce Development Initiatives

A final form of interaction between colleges and employers comes from workforce development initiatives. To develop appropriate programs that respond to the marketplace, colleges should have connections to businesses and workforce investment boards, according to suggested practices from a study for the U.S. Department of Education.²⁰ To better understand some of these connections, we surveyed Minnesota's workforce investment board chairs—all of whom are employers—and the directors of the workforce service areas.²¹ These individuals are in charge of planning and overseeing workforce development services in their areas, among other duties.²² We also interviewed college leaders about their involvement with workforce development.

We learned that MnSCU college interactions with workforce investment boards are generally considered to be good but could improve. While our survey respondents tended to agree that MnSCU two-year colleges work well with the

²⁰ U.S. Department of Education, Office of Vocational and Adult Education, *Documented Characteristics of Labor Market-Responsive Community Colleges and a Review of Supporting Literature* (Washington, D.C.: U.S. Department of Education, 2003), 12.

²¹ We received responses from 28 of the 32 people surveyed, for a response rate of 88 percent.

²² *Workforce Investment Act of 1998*, Public Law No. 105-220, Title I, Chapter 2, Section 117 (a) and (d)(1)-(8).

workforce investment boards, far fewer agreed that the colleges respond nimbly to change programs as business needs change. Table 2.7 shows these opinions. Many of the respondents said they had positive, even strong, relationships with MnSCU colleges, but improvements would be beneficial. Several wrote of the need for colleges and the workforce investment board to develop stronger partnerships, if the state is to develop its human capital and meet business needs.

Table 2.7: Workforce Investment Board (WIB) Chairs' and Workforce Service Area Directors' Opinions on MnSCU Two-Year Colleges, 2008

	Strongly Agree	Some-what Agree	Some-what Disagree	Strongly Disagree	Don't Know
The WIB and MnSCU representatives have worked well together in recent times ^a	75%	18%	4%	0%	4%
MnSCU representatives are generally active participants in WIB activities ^a	68	25	4	0	4
Establishing and maintaining contacts with area businesses and industries ^b	43	50	4	0	4
Responding nimbly to modify vocational programs as businesses' needs change or new technologies emerge ^b	21	39	29	7	4

NOTES: Rows may not sum to 100 percent due to rounding. *N*=28.

^a The question read, "Please indicate how much you agree or disagree with the following."

^b The question read, "Based on your knowledge of businesses in your area, indicate how much you agree or disagree that the MnSCU college(s) you identified are effective in the following."

SOURCE: Office of the Legislative Auditor, analysis of workforce service area directors and workforce investment board chairs survey, November 2008.

Further, some MnSCU colleges are not participants in workforce investment board activities. Although most colleges had representatives on the workforce investment board in their areas as of mid-2008, nine MnSCU colleges did not. Most of the 13 college presidents we interviewed said working with the workforce investment boards was beneficial for their colleges, although in some cases they considered the benefits limited. Table 2.8 lists the advantages presidents most frequently described. Some presidents said having workforce centers located on campus makes additional collaborations possible. Six

Table 2.8: College Presidents' Opinions on Advantages of College Membership on Workforce Investment Board, 2008

- College receives information about the needs of certain employers
- College's customized training staff work closely with workforce center staff on a regular and ongoing basis
- Contacts with workforce investment board members expand the college's networks
- Interactions with the board and staff enhance college's ability to apply for grants to provide training for workers or retraining for laid-off workers
- Workforce center programs have become familiar with the college and refer their clients to enroll in college programs
- Awareness of the college and its programs is expanded
- College receives information on labor force needs and trends

SOURCE: Office of the Legislative Auditor, analysis of interviews with college leaders at 13 MnSCU colleges.

workforce centers were located on campuses as of 2008, and we learned of two others that were being planned.²³

Colleges interact with workforce centers even when the college is not a member of the workforce investment board, but this may not be sufficient. Some college representatives acknowledged that additional involvement with workforce development efforts could be beneficial. When we surveyed MnSCU colleges' chief student affairs officers, we asked what necessary employment-related information or job-placement assistance was not available at the college. Two officers whose colleges are not members of workforce investment boards said they thought a stronger link to the local workforce center would be very helpful.

MnSCU College Missions and Educational Planning

Colleges also determine economic and workforce needs through their planning processes. Promising practices from the U.S. Department of Education suggest that if colleges are to be responsive to employer needs, current information and solid data on local, regional, and national economic trends are critical parts of strategic planning and program decision making.²⁴ We look first at MnSCU

²³ The six were in Austin, Hutchinson, International Falls, St. Cloud, Thief River Falls, and Winona; the two being planned were in Detroit Lakes and Rochester.

²⁴ U.S. Department of Education, Office of Vocational and Adult Education, *The 21st-Century Community College: A Strategic Guide to Maximizing Labor Market Responsiveness, Volume 1 Unleashing the Power of the Community College* (Washington, D.C.: U.S. Department of Education, 2004), 13; U.S. Department of Education, Office of Vocational and Adult Education, *The 21st-Century Community College, Volume 2 Promising Practices and Lessons from the Field* (Washington, D.C.: U.S. Department of Education, 2004), 41, 43-45, 48, 60.

State law allows MnSCU colleges to set their own missions, subject to approval by the Board of Trustees.

MnSCU policy requires colleges to develop their mission statements with consultation from faculty, students, employers, and others.

colleges' mission statements and strategic plans and then assess their academic program reviews. Lastly, we look at intervention by the Office of the Chancellor in program planning.

Missions and Strategic Plans

Each MnSCU college sets its own mission within certain parameters. State statutes allow colleges to develop a distinct campus mission within the framework outlined in law and subject to approval by the Board of Trustees.²⁵

A 1999 Board of Trustees policy requires the Office of the Chancellor to report at least every five years on the alignment of college missions with the system mission and higher education needs, but this has not been done consistently. The board reviews and approves college mission, vision, and purpose statements, although, until January 2009, not all colleges had submitted a mission for board review. Two colleges (Century College and Ridgewater College) submitted missions for review at the board's January 2009 meeting—nearly ten years after the board adopted its policy. Four other colleges submitted mission statements for the first time in the last quarter of 2008, and the board approved them in November 2008.²⁶ Further, not all of the reports to the board from the Office of the Chancellor specifically address how well a college's mission aligns with the components of the system's mission. While more recent reports have done this, reports from earlier years for eight colleges have not.

Although colleges have latitude to develop the content of their mission, vision, and purpose statements, board policy says the statements are to be developed “with consultation from faculty, students, employers and other essential stakeholders.”²⁷ Further, promising practices in studies by the U.S. Department of Education say identifying market needs as a core part of a college's mission is one of the characteristics community colleges should have to be successfully responsive to employers.²⁸

We examined colleges' mission, vision, and purpose statements and looked for the extent to which the documents address meeting employers' needs. We found that:

²⁵ *Minnesota Statutes* 2008, 136F.05.

²⁶ The four are: Alexandria Technical College, Anoka-Ramsey Community College, Minnesota State Community and Technical College, and Minnesota West Community and Technical College. Only one, Minnesota State Community and Technical College, recently became a college; it was officially established in July 2003.

²⁷ Minnesota State Colleges and Universities Board of Trustees, *Board Policies, Policy 3.24, Part 2: Review and Approval of MnSCU Institutional Missions* (St. Paul, June 16, 1999).

²⁸ U.S. Department of Education, *The 21st-Century Community College, Volume 2*, 6; U.S. Department of Education, *Documented Characteristics of Labor Market-Responsive Community Colleges*, 1, 7.

- **Most MnSCU colleges' statements of mission, vision, and purpose reflect the importance of meeting employer needs, but three colleges' statements did not.**

Mission, vision, and purpose statements for three colleges (Fond du Lac Tribal & Community College, Minneapolis Community & Technical College, and North Hennepin Community College) had only indirect or no references to employer needs. Colleges with little or no mention of employer needs focused largely on students' needs and the educational experience. On the other hand, those with strong references focused on meeting a combination of student and employer needs.

As with mission statements, the U.S. Department of Education's promising practices suggest that colleges' strategic planning should reflect a commitment to labor market responsiveness. Although MnSCU's Board of Trustees does not require colleges to develop strategic plans, most have strategic plans, annual work plans, or other planning documents. Some colleges use the board's strategic directions as a base for developing their own strategic planning documents. We examined planning documents for 28 colleges that had plans available in the summer of 2008. We found that:

- **Most colleges' planning documents addressed meeting employers' needs, but three colleges made only vague or indirect references to employer needs.**

Planning documents for Hibbing Community College, Itasca Community College, and Lake Superior College did not directly refer to meeting employer needs. For instance, fiscal year 2008 plans for Lake Superior College included a priority of "excelling in community responsiveness."²⁹ Whether this means being responsive to employers is not clear. Because the reference is vague, it could also be interpreted as being responsive to other entities, such as area high schools. The objectives detailed in this college's plan refer to business and industry only in the context of providing customized training, not in planning for occupational programs.

By contrast, Northwest Technical College is one example of a college with a strong emphasis on planning for insight on economic and workforce conditions. It set a goal of growth through partnerships, as demonstrated by several objectives. The objectives included "gaining targeted input on business and industry needs regarding skill sets needed by graduates" and "expanding faculty opportunities for identifying current business needs and upgrading their technical skills."

²⁹ Because Lake Superior College did not have a strategic plan, we analyzed its "Institutional Effectiveness Plan" for fiscal year 2008. Similarly, for Hibbing Community College we analyzed the "FY 2008 Provost Workplan."

MnSCU colleges are required to regularly review their occupational programs for the purposes of planning and improvement.

In their program reviews, colleges are to seek industry or other professional input.

Academic Reviews of Occupational Programs

MnSCU's Board of Trustees requires colleges to regularly review their credit-based academic programs, including occupational programs, for academic planning and improvement purposes.³⁰ The policy requires each college to submit an annual summary of its program review activity to the Office of the Chancellor. Staff there told us that although they annually collect letters from presidents summarizing colleges' program review activity, they do not monitor or critique colleges' program review processes. Each MnSCU college has its own policies and procedures governing its academic reviews, and each uses whatever measures and data sources it deems appropriate, but official MnSCU system procedures require the reviews to address certain criteria, which are listed in Table 2.9.³¹

Table 2.9: MnSCU Criteria for Colleges' Academic Reviews of Programs, 2008

- Contributions to the mission and plans of the college
- Assessment of student learning outcomes
- Effectiveness measures
- Compliance with accreditation, licensure, or certification requirements, or other requirements
- Advisory committee or other appropriate industry or professional input as determined by the college through established procedures
- Compliance with Minnesota Transfer Curriculum requirements
- Other factors as appropriate

NOTE: MnSCU system procedures require colleges to address these criteria.

SOURCE: Minnesota State Colleges and Universities, *System Procedures, Procedure 3.36.1 Academic Programs, Part 7 Academic Review, Subpart A Academic Review Criteria* (St. Paul, August 1, 2007).

We examined colleges' policies on academic reviews in place as of August 2008 and looked for several of the required criteria. We also analyzed examples of program reviews from the 13 colleges we visited. Because program reviews are

³⁰ Minnesota State Colleges and Universities Board of Trustees, *Board Policies, Policy 3.36 Academic Programs, Part 7 Academic Review* (St. Paul, June 20, 2007). In addition, promising practices from the U. S. Department of Education emphasize that it is important for community colleges to assess their labor market responsiveness through program reviews. See: U.S. Department of Education, *The 21st-Century Community College: A Strategic Guide to Maximizing Labor Market Responsiveness, Volume 2*, 44-45.

³¹ Minnesota State Colleges and Universities, *System Procedures, Procedure 3.36.1 Academic Programs, Part 7, Subpart A, Academic Review Criteria* (St. Paul, August 1, 2007).

a primary means for deciding program closures, we also analyzed proposals for closing programs. We found that:

- **Despite Board of Trustees requirements, five college policies for reviewing programs did not address input from industry representatives. Neither the reviews nor colleges' other analyses consistently measured market needs for jobs.**

In the next sections, we present our assessment of colleges' policies regarding program reviews. Then we analyze a sample of 43 program reviews from the 13 colleges we visited; specifically, we looked for evidence of labor market data. Finally, we analyze a sample of 51 proposals colleges submitted for closing occupational programs.

Program Review Policies

We looked at the extent to which college policies on program reviews required advisory committee or other industry or professional input, which MnSCU system procedures require. Program review processes for five colleges make no mention of input from advisory committees or other industry representatives.

As part of their program reviews, some colleges use input from program advisory committees, but others involve advisory committees only minimally.

The extent to which colleges use advisory committee input as part of their program reviews varies from extensive to none at all. Advisory committee input per se is not required by board policy or system procedure, although it is one indication of input from industry or professional sources. Further, promising practices highlighted by the U.S. Department of Education suggest that advisory committees should be key players in program review for colleges striving to be responsive to employers.

An example of extensive involvement of advisory committee input is Lake Superior College, where college procedures require the advisory committee to review a self-study of the program and submit a report. In the same vein, Northwest Technical College's procedures require faculty to develop a three-year action plan based on program review data and input from program advisory committee members. On the other hand, several colleges have nothing in their policies and procedures that require program reviews to incorporate advisory committee input. Some colleges involve advisory committees minimally. At some colleges, the policy requires copies of minutes or information on dates of advisory committee meetings but not committee input into the program review. In other cases, committee members receive a report with results of the program reviews but are not involved with determining the results.

Content of a Sample of Program Reviews

Labor market data and economic analyses should help inform and guide colleges' academic program reviews. We wanted to know whether colleges, in reviewing their programs, analyzed employment opportunities for their graduates by looking at (1) past employment trends, (2) current industry needs, and (3) projections for jobs. To do this, we reviewed a sample of 43 program reviews

from the 13 colleges we visited.³² In addition to program reviews, some of the colleges conduct efficiency reviews, and we included them in our analysis. Colleges use their efficiency reviews to supplement information in program reviews, especially when the latter are not conducted annually. We found that:

- **As part of their program reviews, most colleges assessed employment prospects for graduates by considering only past employment trends, and most did not analyze employment forecasts.**

All thirteen colleges looked at rates of graduates' placement into related employment, as reported by the MnSCU graduate follow-up survey.³³ Graduate placement rates provide partial insight into how well a program has met labor market needs in the past, however, these data are not without problems as we discuss later. Some reviews from seven of the colleges also reported anecdotal information on local employers hiring past students as evidence of need for workers.

In reviewing their programs, some colleges assessed employment forecasts, but others did not.

Only 6 of the 13 colleges referenced current and forecasted job openings as reported in state labor market projections on job openings and hires. St. Cloud Technical College, for instance, conducted a comprehensive analysis of regional, state, and national employment demand for its Culinary Arts program. Not all of the program reviews for these six colleges, though, contained this information, and the extent of their analysis ranged considerably. One of the six colleges used considerably outdated labor market projections for its efficiency reviews. Overall, while most reviewers described program responsiveness to industry need—perhaps by describing employer participation in advisory committees or the availability of internships—most reviews did not include information on the number of current and forecasted jobs openings.

Most of the colleges also examined student learning outcomes and the relevance of the curriculum to industry practices, but all relied consistently on two measures—student enrollment and program costs. All 13 colleges looked at student enrollment, either by headcount or full-year-student equivalent, and they analyzed enrollment trends. All 13 colleges also evaluated student retention, and graduation or program completion rates.³⁴ Seven colleges also had enrollment goals or used criteria to rate enrollment.

³² Our sample was not a representative sample.

³³ MnSCU colleges survey graduates within a year of graduation to obtain information on their success at finding employment related to their education, as discussed later in this chapter.

³⁴ These indicators may be of limited value without better tracking of the reasons why students enroll in a program. The percentage of students completing programs can be a problematic measure for some occupational-technical programs; one recent study reported only 4 percent of students entering the programs did so with the intent of earning a certificate. See: Elizabeth M. Lohman and Michael R. Dingerson, "The Effectiveness of Occupational-Technical Certificate Programs: Assessing Student Career Goals," *Community College Journal of Research and Practice*, No. 29 (2005): 339-355. In its program review of an accounting program, Minnesota West Community and Technical College noted similar concerns about its completion rates and the high number of students completing only part of the program.

All of the colleges measured costs to assess the viability of their programs. In particular, nearly all colleges compared program costs per student to the overall average costs per student for similar MnSCU programs. Some colleges compared program revenues to expenses, while others also analyzed future capital costs and the impact of donations on expenses. As with other measures, some colleges had specific performance benchmarks to assess whether costs were acceptable.

Although colleges focused mostly on program efficiencies and effectiveness in their reviews, we found that reviewers' recommended actions for low-enrollment programs rarely involved closing the program. Reviewers sometimes suggested updating curriculum to reflect industry needs or consolidating key courses with other programs to gain efficiencies. Some reviewers, however, advised ramping up marketing and recruitment to increase enrollment in struggling programs. For a handful of program reviews, these recommendations were made in the absence of any labor market analysis or despite declining graduate placement rates or weak job prospects in the region.

For instance, the October 2008 review of the construction electrician program at Saint Paul College observed problems with enrollment, job placements, and costs. Enrollment had decreased, graduate placement in related employment was down to just 45 percent in fiscal year 2007, and costs were higher than the MnSCU average. Further, job openings were expected to remain flat or decrease by 1 percent from fiscal year 2006 to fiscal year 2018. To fix the problems, the review focused on two strategies. One was to increase enrollment, such as expanding the recruiting and marketing services. The second was to reduce costs by reducing staffing. While those tactics may help in the short run, they do not sufficiently address the longer term job outlook for students.

Closing Occupational Programs

According to Office of the Chancellor staff, the academic program review process is the primary mechanism used by colleges to identify programs for closure. To understand why colleges close or suspend programs, we reviewed a sample of 51 colleges' requests for program suspensions and closures reviewed by the Office of the Chancellor from 2005 through 2007.³⁵ Our review included examining the initial application, supporting documentation, and file correspondence between colleges and the Office of the Chancellor.

We noted previously that colleges focused consistently on enrollment and costs in their program reviews. We also found that:

- **Student enrollment and program costs, more than job prospects for graduates, drive colleges' decisions on program closures.**

³⁵ For our analysis of program proposals, we reviewed a stratified, random sample of 182 requests to add, redesign, reinstate, suspend, or close programs that were submitted by the 30 colleges and reviewed by the Office of the Chancellor during 2005, 2006, or 2007.

MnSCU's Board of Trustees has delegated authority to the Office of the Chancellor for approving occupational programs.

Minnesota statutes grant oversight of programs to MnSCU's Board of Trustees and require that colleges obtain board approval for program closures.³⁶ Board members told us they are no longer much involved with the process for closing (or approving) programs. Since 2002, board policy has fully delegated that authority to the chancellor. The Office of the Chancellor has only rarely exercised its authority to close a program without the college first initiating the action, and then only under certain conditions. Central office staff told us they are not in the best position to independently make closure decisions as they do not have access to college program data and do not have the same relationships colleges do with local employers and their communities.

MnSCU policies prescribe minimal conditions under which colleges must suspend or close their programs, and colleges have wide latitude to make such decisions.³⁷ The Office of the Chancellor has an application and program review process for colleges to follow when proposing program closures or other changes; Table 2.10 describes the types of proposals. The procedures that colleges must follow also differ depending on the type of proposal. This process has been mostly in place since the MnSCU merger in 1995, although the office has strengthened the requirements in recent years (discussed later in the chapter).

The files we reviewed contained little data on labor market demands, which can be explained in part by two reasons. First, MnSCU Board of Trustees policy prior to August 2007 did not require colleges to document labor market demands in support of their requests for program closures.³⁸ Colleges had only to notify the Office of the Chancellor when they were suspending a program. (We outline program requirements in more detail in Appendix A, which is available on our website at www.auditor.leg.state.mn.us/ped/2009/mnscu.htm). Second, colleges had in previous years delayed closing their programs by first suspending them. Doing so allowed the college additional time to research program improvements or wait for renewed student interest in a program. When programs were eventually closed, colleges' rarely provided any supporting documentation and rationale to the Office of the Chancellor.

Overall, in the files we reviewed, enrollment and costs, and not job prospects, were the most frequent reasons colleges cited for suspending or closing programs. Competition from other colleges or market saturation was cited as a reason in only 2 of 18 program suspensions, and 4 of 33 program closures. At

³⁶ *Minnesota Statutes* 2008, 136F.30. The statute also requires board approval for proposals to add or substantially change programs.

³⁷ Effective August 2007, *MnSCU System Procedure 3.36.1, Part 5, Subpart B 1*, states that colleges must obtain approval from the Office of the Chancellor to close a program. Closure is granted if (1) the college requests the closure and the chancellor finds that documentation supports it, (2) the chancellor finds closure is warranted, or (3) the program has not been reinstated following suspension.

³⁸ All but one of the 51 program proposals we reviewed were subject to the requirements in place prior to the August 2007 revisions.

Table 2.10: Types of MnSCU Proposals to Change Programs, 2008

Program Change Proposal Type	Description
Close	Close an existing program.
Emphasis	Add a new emphasis (a specific area of study within an occupational program), or modify or close an existing emphasis.
Institution	Set and approve a college's or university's online accreditation status.
Approve Location	Add a program offering at a location where a college or university has not previously offered a program.
Remove Location	Discontinue a program location because no programs are offered there.
New	Add a new program not previously provided. Program changes that involve modifying more than one-half of the existing curriculum are considered to be new programs.
Redesign	Redesign an existing program by: <ol style="list-style-type: none"> 1) Modifying an attribute of a program, such as a program's credit length or name. 2) Enabling a new program to be created from an existing program when over 50 percent of the new program's technical credits already exist in a current program, and the new program does not result in a more advanced award. 3) Closing a program due to curriculum restructuring among two or more related programs.
Reinstate	Change the status of a suspended program to active, thereby allowing students to enroll.
Relocate	Change a program's delivery site to a different location.
Replicate	Add a program by offering an existing program at an additional location.
Suspend	Change a program status from active to suspend, meaning the program no longer accepts students.

SOURCE: MnSCU Office of the Chancellor correspondence, 2008.

the same time, colleges cited inadequate enrollment as a factor in 14 of 18 program suspensions, and 8 of 33 program closures we reviewed. High costs or inadequate revenues were referenced in 5 of 18 suspensions and 3 of 33 program closures. Because student tuition helps cover costs, enrollment and costs tend to be closely linked.

Most of the closures (23 of 33) appeared to have been initiated by Office of the Chancellor staff, who closed the programs following e-mail correspondence with the college, and in accordance with board policies limiting suspensions to four years. Due to lack of supporting documentation in the files, we were unable to verify why colleges suspended 2 programs and closed 23 others.

The way colleges are funded creates incentives to increase enrollment, which can affect colleges' reviews of their occupational programs.

One reason colleges may monitor enrollment and costs more closely than job prospects is that the amount a college receives in state appropriations is largely driven by the number of students enrolled. According to Office of the Chancellor staff, the allocation framework for instructional costs uses a formula that creates incentives for colleges to increase enrollments while controlling costs.³⁹ Revenues generated by tuition are another incentive for colleges to increase enrollment.

Even though colleges used little labor market data in their program reviews and proposals to close programs, labor market data are widely available. Minnesota has a wide range of such data to help colleges understand job prospects while planning their programs, although for some programs the data provide only part of the picture on the supply of workers and employer demand. Table 2.11 describes these and other labor market data resources, many of which are available via the Internet.

The Office of the Chancellor has undertaken several initiatives to help colleges access and use labor market data. One is MnSCU's involvement in the Internet System for Education and Employment Knowledge (ISEEK), a web-based resource for Minnesota employment and education information.⁴⁰ A second initiative is MnSCU's investment in two separate information systems to help colleges assess the labor market supply and demand for their programs. One is the College and University Program Planning System (CUPPS), a system developed by MnSCU and available online for use by colleges. Using data from nine education and labor sources, CUPPS allows MnSCU users to query current and projected worker supply, employer demand, and the impact of additional program graduates on the workforce.

The Office of the Chancellor has undertaken initiatives to help colleges assess labor market needs.

The second information system is Strategic Advantage, a system owned and maintained by a national vendor. Strategic Advantage was developed primarily as a planning tool for education institutions, and it has been available to MnSCU colleges on a pilot basis since 2006 for a fee. Strategic Advantage compiles data from over 80 data sources, updates job forecasts twice yearly to reflect current data, and allows for a flexible range of analysis, including beyond Minnesota. A

³⁹ The following hypothetical example explains why the allocation framework creates incentives to increase enrollment. Consider two colleges with equivalent costs for their automotive technician programs. College A has more full-year equivalent (FYE) students than College B, and its cost per FYE is lower than the system average for automotive tech programs. Under MnSCU's allocation framework, College A's allocation will be increased to a point that is at 91 percent of the systemwide average costs for automotive tech programs. At the same time, College B, with fewer students enrolled in automotive tech, has higher per student costs than the system average. Its allocation will be reduced to a point that is at 110 percent of the average costs for automotive tech programs until it increases enrollment or otherwise lowers its per student costs.

⁴⁰ ISEEK provides online access to comprehensive information on careers, job availability, wages, education requirements and opportunities, employer information, and workforce center services, among other items. ISEEK is a collaboration among MnSCU, the University of Minnesota, the Department of Education, the Department of Employment and Economic Development, the Office of Enterprise Technology, and the Office of Higher Education.

Table 2.11: Examples of Labor Market Data Sources

Data Sources	Description
Internet System for Education and Employment Knowledge (ISEEK) ^a	Internet-based system that contains over 400,000 interactive pages, including: <ul style="list-style-type: none"> • Career exploration for over 500 careers and 60 industries • Education information on 256 post-secondary providers, their programs, and nearly 600 areas of study • Search tools for employment and salary statistics, job openings, and job searches, such as MinnesotaWorks, a system that links employers and job seekers • Other information and resources related to career and employment counselors, unemployment benefits, transportation, and other services
College and University Program Planning System	MnSCU information system that combines data from nine education and labor market sources. Users can query the system to determine graduate and worker supply, the demand for occupations related to specific programs, or "market share" of enrolled students compared with non-MnSCU institutions.
Strategic Advantage	MnSCU information system that compiles education, labor market, tax filings, and other information from 80 different regional, state, and national data sources. Includes more advanced tools for analyzing data, such as a geographic information mapping system.
Occupational Employment Statistics ^a	The Department of Employment and Economic Development estimates of wages and employment by occupation; data are updated quarterly, and regional data are available.
Job Vacancy Survey ^a	Semiannual estimates of job vacancies by industry and occupation; regional data are available.
Employment Projections ^a	Ten-year employment projections by industry, occupation, and Minnesota Planning Region; regional and statewide high-growth and high-pay occupations and industries; one-year employment forecasts by occupation and industry, updated quarterly.
Quarterly Census of Employment and Wages ^a	Quarterly census of employment and wages by industry, with regional and local industry detail available.
Local Area Unemployment Statistics ^a	Monthly estimates of the labor force, numbers employed and unemployed, and unemployment rates.
Occupations in Demand ^a	Job opportunities currently in high demand for all Minnesota economic development regions. Includes a ranking of jobs based on wages, long-term employment outlook, and training or education required for the occupation.

^a These sources are available via the Internet.

SOURCE: Office of the Legislative Auditor, analysis of MnSCU and Minnesota Department of Employment and Economic Development materials.

third initiative of the Office of the Chancellor is the publication of periodic reports on labor market supply and demand for jobs, guidebooks and links to useful web sites, and placement data from MnSCU's graduate follow-up survey.

It is important to note that comparing occupational programs to occupations is not as straightforward as one might expect. There are potential problems because programs do not always match precisely with jobs, data do not capture new occupations, data can miss certain occupations or self-employment, and job markets can sometimes change quickly. Table 2.12 outlines these problems.

Table 2.12: Potential Issues with Comparing Occupational Groups to Education Programs

Issue	Why It Is an Issue
Lack of precise match	As defined in labor market data, occupations do not always precisely match MnSCU programs. Within a single occupation, graduates may come from different programs. Graduates from a single program may find jobs within multiple occupational groups.
New occupations	Data may not yet exist on newly emerging occupations. This precludes quantifying past employment trends, job vacancies, or job projections.
Self employment	Employment data often come from surveying employers, and they exclude self-employed occupations. Data for occupations with substantial shares of self-employment, such as construction, are incomplete.
Changing job market	The employment picture can change considerably between the time students enroll in a program and when they graduate.

SOURCE: Office of the Legislative Auditor.

Although rarely used, the Office of the Chancellor has authority to impose conditions on colleges' occupational programs.

Intervention by MnSCU's Office of the Chancellor

MnSCU system procedures allow the Office of the Chancellor to report on statewide reviews of occupational programs and impose conditions on programs when necessary. Staff there told us, however, that the Office of the Chancellor's authority is invoked as a last resort when there are significant issues at a statewide or college level. In recent years, the Office of the Chancellor stepped in twice to issue moratoriums on programs, based on comprehensive analyses it completed of statewide supply and demand for workers. One was for construction electrician programs, and the second was for law enforcement programs. Regarding the electrician programs, we found that:

- **MnSCU's statewide cap on electrician program enrollment was based on documented gaps in labor market supply and demand, but the decision lacked sufficient consideration of local economic conditions.**

MnSCU's moratorium was preceded by complaints from the International Brotherhood of Electrical Workers (IBEW) Local 292 regarding what it considered a large oversupply of electricians in the state. In March 2007, the Office of the Chancellor declared it would not approve any new electrician

MnSCU capped enrollment for all construction electrician programs, but the oversupply of electricians has been greatest in the Twin Cities region.

programs, and it capped enrollment in existing electrician programs.⁴¹ This was based on an earlier staff analysis showing an estimated net surplus of 612 electricians statewide when comparing the numbers of job seekers, recent program graduates, replacement demand due to factors such as retirement, and position openings.

Although the caps and moratorium were imposed statewide, conditions in some regions of the state suggest that this action may not have been warranted. The imbalance between the supply of and demand for electricians has been greatest in the Twin Cities metropolitan area. The Office of the Chancellor's October 2007 analysis reported that the Twin Cities area had the largest declines in construction industry jobs. It also said that rates of employment for electrician graduates from Twin Cities' MnSCU colleges had decreased from the prior year, whereas the rates for graduates of MnSCU colleges in certain other regions increased. A 2008 update to that study showed worsening conditions statewide but reaffirmed that most of the loss since 2000 in electrical contractor jobs occurred in the Twin Cities region.⁴² Further, it showed that job placement rates for MnSCU electrician program graduates tended to be far lower for colleges in the Twin Cities than elsewhere. (Minneapolis College was an exception in that its related employment rate increased from 80 percent in 2006 to 85.7 percent in 2007.)

College presidents we interviewed asserted that economic conditions in their regions did not justify a statewide enrollment cap. Some noted that enrollments in construction electrician programs had declined somewhat, but they maintained that employers were still seeking graduates, and high percentages of program graduates were finding related jobs.

MnSCU's statewide decision presumed that job openings in one region could be filled by workers elsewhere who are willing to travel or relocate. This presumption does not always hold true, however. For instance, at both Northland College and Minnesota West Community and Technical College, local employers in need of additional electricians either paid for students' education or offered tuition reimbursements to attract graduates of electrician programs. In these instances, job openings went unfilled in spite of the high surplus of workers in the Twin Cities area.

At some colleges, nearby electrical contractors have subsidized students' education to attract graduates to their company.

Moreover, representatives of an electrical association we interviewed in the fall of 2008 said its members in certain parts of the state continue to seek electricians. Although there is regional variation, association members in some areas expect sustained demand because local projects are in planning stages or significant shares of the current workforce are nearing retirement.

⁴¹ According to Office of the Chancellor staff, the moratorium, enrollment caps, and related labor market analysis apply only to traditional construction electrician programs; they do not apply to all electrician-related programs.

⁴² Between 2006 and 2007, the rate of job loss in the metropolitan area was -1.2 percent, lower than the rates of job losses in four of the five planning regions outside the Twin Cities (ranging from -1.8 percent to -9.5 percent). The southeast region was the only one to show an increase in jobs (6 percent) in the electrical contractor industry between 2006 and 2007.

Other factors beyond MnSCU's control also affect the supply of electricians in some parts of the state. For instance, the Dunwoody College of Technology has an electrician program. The college had reported a 30 percent decrease in the number of its electrician graduates from 2006 to 2007. Dunwoody's president of academic affairs told us the college's enrollment is based on information from the Joint Apprenticeship and Training Committees (JATCs) in Minneapolis and St. Paul regarding how many new apprentices will likely be accepted.⁴³

According to data shared by the IBEW, the number of apprentice electricians indentured by the Minneapolis JATC increased from 90 in 2007 to 123 as of November 2008. The number of indentured apprentices had decreased from 106 in 2005 to 77 in 2006 but climbed in both 2007 and 2008.

INDICATORS OF PROGRAM SUCCESS

In this section we discuss outcomes of MnSCU occupational programs. We analyze three indicators of success: job placements for graduates, how well changes in MnSCU's occupational program inventory compare with changes in Minnesota's occupations, and how colleges have modified their occupational programs over time. We start by discussing job placement data.

Job Placements

Ultimately, the measure of successful occupational programs is employment of graduates in relevant jobs, including self-employment. Various methods may be used to measure this, but two primary ones are (1) surveying graduates and employers and (2) tracking graduates' job placements with state employment and wage records. In Minnesota, MnSCU surveys graduates to find out whether they are employed and, if so, whether their jobs are related to their fields of study. MnSCU also combines data from this survey with data from the state's unemployment insurance program to report wage rates and job retention rates for certain graduates at six months and two years following graduation. It reports these calculations on the ISEEK web site. We focus on MnSCU's survey of graduates, which is designed to indicate whether graduates have found employment in their chosen field.

Since 1998, MnSCU has surveyed graduates within a year of graduation. According to Office of the Chancellor staff, survey results serve several purposes. One purpose is to help colleges evaluate how well their programs lead to viable jobs for students. Second, MnSCU uses the information in its program planning to help decide which programs to offer or discontinue.⁴⁴ A third purpose is to provide consumer information on related employment rates of

MnSCU colleges survey graduates within a year of graduation to determine their employment status.

⁴³ JATCs in the Twin Cities are associated with the IBEW. They provide apprenticeship training to those interested in an electrical career and who need on-the-job training prior to taking the examination for licensure.

⁴⁴ For example, the Office of the Chancellor's Academic Program Review Unit compares employment rates, number of degrees conferred, and other information with data on occupations to understand which programs can expect workforce shortages.

MnSCU graduates. For instance, the Office of the Chancellor includes survey results on the ISEEK web site for public view.

Each MnSCU college is responsible for surveying its graduates and reporting results to the Office of the Chancellor.⁴⁵ Colleges may survey using the mail, phone, or e-mail; most end up calling graduates who fail to respond initially. The colleges do not have to obtain information directly from the graduate, however. Other individuals, such as a spouse, parent, employer, or college faculty, may answer survey questions on behalf of the graduate. Regardless of who responds, the respondents themselves decide whether the jobs are “related” to a graduate’s program. MnSCU assists respondents who may be uncertain about this or whose jobs are not those conventionally associated with a given educational program. On the questionnaire, MnSCU suggests criteria, such as whether graduates are using on the job those skills acquired through the program.

After survey data are collected, the Office of the Chancellor groups information on graduates into one of eight categories. The categories depend on factors such as whether graduates are available for work, whether they are working, and whether the job is related to the graduate’s program. Table 2.13 lists the categories.

In calculating the related placement rate, MnSCU looks at the number of graduates reported as employed in related work—full-time or part-time and including self-employment—as a proportion of all graduates reported as available for related work. The rate excludes graduates unavailable for work, continuing their education, or employed in unrelated work but not seeking related work. It also excludes graduates whose status is unknown.

We looked at the data on graduate placement rates published by MnSCU in its online “accountability dashboard,” a recently-implemented system that reports colleges’ performance on several measures.⁴⁶ For each college, the Office of the Chancellor calculates an “expected” related employment rate that takes into account the college’s mix of programs. When a college’s related employment rate falls within a range around that expected rate, no action is required. But when a college’s placement rate falls below that range, the college is required to make plans to improve the rate. We found that:

- **For some colleges, overall related employment rates fell below expected results in at least one of the last three years, and MnSCU graduates’ success at finding employment related to their chosen occupation varied.**

⁴⁵ Colleges must survey all graduates, regardless of the program in which they were enrolled. Colleges use a standard survey instrument, but they may choose to add questions.

⁴⁶ The accountability dashboard reports related employment rates by college but not by program.

Table 2.13: Groupings of Graduates Based on MnSCU Graduate Follow-up Survey, 2008

Group	Definition
Related Work Full-time	The graduate worked full-time in a job related to the program of study. Graduate was not pursuing further education or, if so, preferred to be classified as employed.
Related Work Part-time	The graduate worked part-time in a job related to the program of study. Graduate was not pursuing further education, or, if so, preferred to be classified as employed.
Unrelated Work Seeking Related	The graduate worked in a job unrelated to the program of study and was pursuing a related job. If also pursuing further education, the graduate preferred to be classified as employed or, if no preference was indicated, the graduate was not in a higher-level program and was seeking a related job.
Unrelated Work, Not Seeking Related	The graduate worked, but the job was unrelated to the program of study, and the graduate was not seeking a related job.
Continuing Education	The graduate pursued further education; if also employed, graduate preferred to be classified as continuing education. If no preference was given, (1) the education was in a higher-level program or (2) the job was unrelated to the former program, and the graduate was not seeking related employment.
Available for Work but Unemployed	The graduate did not work or pursue further education but was seeking work.
Unavailable for Work	The graduate did not work and was neither seeking work nor pursuing further education. ^a
Status Unknown	The graduate provided no information, the responses came from an unacceptable respondent, ^b or the survey had no responses.

^a Includes graduates who were deceased, unable to work due to medical conditions or incarceration, or from foreign countries and had returned.

^b Acceptable respondents were the graduate, college staff, employer, spouse, parent, or other family member.

SOURCE: Office of the Legislative Auditor, analysis of Minnesota State Colleges and Universities, *MnSCU Graduate Follow-up Handbook* (St. Paul, August 8, 2001), Part 3.2.

Based on the 2004-2006 survey results, the overall rates of related employment were sometimes lower than the expected rates set by the Office of the Chancellor for nine colleges, as Table 2.14 shows.⁴⁷ For two of the nine colleges, this occurred in more than one year over that period. Because a college's overall rate of related employment (which includes all academic programs) may not reflect the performance of occupational programs alone, we analyzed rates for just occupational programs. Table 2.14 shows that the classes of 2006 and 2007 from

⁴⁷ The overall rates reported here include all programs, not just occupational programs.

Table 2.14: MnSCU Colleges' Related Employment Rates, 2004-2007

College	Placement Rates of Graduates in Related Work				
	All Programs			Occupational Programs	
	Class of 2004	Class of 2005	Class of 2006	Class of 2006	Class of 2007
All MnSCU Colleges	87.6%	90.0%	88.3%	89.1%	89.1%
Alexandria	94.2%	95.7%	94.7%	94.7%	96.4%
Anoka Technical	91.3	95.9	92.5	92.9	79.2
Anoka-Ramsey	85.8	92.9	88.6	90.6	96.9
Central Lakes	91.5	86.3	91.1	92.5	89.5
Century	82.0	89.0	84.8	87.6	90.0
Dakota County Technical	93.8	80.8	87.0	84.5	90.4
Fond du Lac	37.1	78.8	77.5	78.0	71.9
Hennepin Technical	95.2	99.6	98.5	98.6	98.5
Hibbing	76.0	85.5	83.7	84.7	78.7
Inver Hills	93.9	81.7	81.0	84.6	84.6
Itasca	74.4	71.9	74.1	80.3	79.1
Lake Superior	95.4	96.4	98.7	98.5	94.0
Mesabi Range	88.5	95.0	95.8	95.6	89.5
Minneapolis	73.6	73.6	65.2	64.0	88.7
Minnesota State	91.6	92.7	91.2	91.4	91.7
Minnesota State-Southeast Technical	93.5	94.4	96.1	95.7	93.6
Minnesota West	87.8	86.4	82.7	82.9	86.1
Normandale	71.5	74.4	71.4	79.0	76.9
North Hennepin	78.4	82.8	78.0	78.9	80.9
Northland	98.0	97.8	97.1	97.3	98.0
Northwest Technical	80.1	76.6	89.2	89.2	83.3
Pine Technical	72.1	85.5	62.9	62.9	78.7
Rainy River	75.0	NA	76.0	75.0	57.1
Ridgewater	96.8	96.3	89.9	90.0	96.3
Riverland	83.5	88.6	87.2	88.9	81.8
Rochester	84.9	84.9	86.9	88.1	77.8
St. Cloud Technical	92.7	93.1	96.8	96.8	93.7
Saint Paul College	83.0	87.7	84.2	84.0	84.8
South Central	85.6	91.4	91.6	91.6	86.7
Vermillion	68.8	75.9	66.7	69.0	62.8

NOTES: Shading indicates that the related employment rate fell below an "expected" related employment rate, which varies by each college depending largely on the mix of its programs. Occupational programs exclude programs that result in an Associate of Arts degree.

SOURCES: Office of the Legislative Auditor, analysis of 2006 and 2007 MnSCU Graduate Follow-Up survey results; Minnesota State Colleges and Universities, *Accountability Dashboard*, <http://www.mnscu.edu/board/accountability/index.html>, accessed January 29, 2009.

occupational programs at most colleges had related employment rates that were similar to or better than the rates for their programs as a whole.

Comparing colleges' overall related employment rates showed considerable variation among the 30 colleges for graduates in each of 2004, 2005, and 2006. For instance, related employment rates for the class of 2006 ranged from 62.9 percent for Pine Technical College to 98.7 percent for Lake Superior College, some of which reflects differences in those colleges' mix of programs. Overall placement rates also varied from year to year for some colleges, such as Century

According to MnSCU data, about 89 percent of occupational program graduates from the classes of 2006 and 2007 found employment related to their chosen fields.

College, with 82 percent for its 2004 graduates, 89 percent for 2005, and 84.8 percent for 2006. We note that factors such as graduates' work history and other characteristics affect their employability and, therefore, play a role in colleges' related employment rates.

When colleges analyze their programs, such as in the program reviews described earlier, they use a related employment rate for a single occupational program, which for these purposes is more meaningful than an overall rate. Some colleges break down the rates by type of award; for a Computer Network Engineer program, for instance, the college analyzes one placement rate for an Associate in Science degree and another for an Associate in Applied Science degree. Other colleges use one rate to analyze all awards for a program area.

We also looked at whether MnSCU's follow-up survey data are sufficient to understand how successful graduates are in finding jobs. We found that:

- **MnSCU's surveys of graduates are a potentially useful source of information on occupational programs, but questions about the accuracy of the surveys limit their value.**

The Office of the Chancellor expects each college to achieve at least an overall response rate of 85 percent to the survey.⁴⁸ Individual programs, however, are not required to meet the 85-percent benchmark. Many MnSCU programs have only a handful of graduates each year. Programs with six or fewer graduates would not be able to meet an 85-percent response rate for that program if any one graduate fails to respond. To protect the identity of graduates, MnSCU has publication guidelines to avoid disclosing information that can be linked to an individual, such as when programs have small enrollment.

Many colleges use related employment rates, in part, to advise prospective students about employment outlooks. In our survey of MnSCU's chief student affairs officers, 80 percent said the graduate follow-up survey was somewhat or very useful when working with new or prospective students. At the same time, representatives from three colleges we surveyed or interviewed expressed serious reservations about using the placement rates for this purpose and several others raised questions about the data. They said that, under some conditions, the rates may not present an accurate assessment of employment outcomes for program graduates. Especially for the smaller programs, unless a college obtains a 100 percent response rate, the data are incomplete. In addition, the placement rates may be based on a small number of respondents.

Using data from the Office of the Chancellor, we looked at occupational programs with small numbers of graduates. As shown in Table 2.15, out of a total 1,527 occupational programs for the class of 2007, 54 percent had six or

Although many colleges share rates of related employment with prospective students, some colleges hesitate to publish the rates broadly due to data limitations.

⁴⁸ Colleges face no negative consequences for failing to meet this benchmark.

fewer graduates, while 46 percent had more than six graduates.⁴⁹ Response rates for the small and large programs, however, were about the same (85.7 percent versus 83.8 percent).

**Table 2.15: MnSCU Graduate Follow-Up Survey
Response Rates, by Program Size, Graduates in 2007**

Program Size	Programs with Response Rates Less Than 85 Percent		Programs with Response Rates 85 Percent or Greater		Total	
	Number	Percent	Number	Percent	Number	Percent
Six or fewer graduates	118	14.3%	705	85.7%	823	53.9%
More than six graduates	<u>114</u>	16.2	<u>590</u>	83.8	<u>704</u>	<u>46.1</u>
Total	232	15.2%	1,295	84.8%	1,527	100 %

NOTE: Analysis represents results from the MnSCU follow-up survey of graduates in the class of 2007 from occupational programs offered by two-year colleges.

SOURCE: Office of the Legislative Auditor, analysis of 2007 MnSCU Graduate Follow-Up survey results.

Questions have been raised about the validity of some responses because faculty and others respond to the graduate follow-up survey on behalf of graduates.

Also, we heard concern from outside MnSCU that responses are not always obtained directly from the graduate, and that graduates and college staff sometimes interpret related employment differently. Some people expressed concern about survey responses obtained from college faculty because they have a self interest in promoting their program. As such, faculty may be more likely to interpret a graduate's employment as related to the program. On the other hand, one college told us that graduates sometimes incorrectly report they are employed in a job not related to the program only because the job is not their "dream job."

We looked at who had provided responses to MnSCU's 2007 follow-up survey and found that colleges vary considerably on the sources they use. For instance, Table 2.16 shows that graduates accounted for a much higher share of respondents for some colleges than for others. Overall, graduates in 2007 accounted for 58 percent of respondents for all MnSCU programs. Graduates accounted for 75 percent of Ridgewater College's survey respondents and 73 percent of Minnesota State College-Southeast Technical's respondents, compared with 30 percent of Itasca Community College's respondents and just 7 percent of Mesabi Range Community and Technical College's respondents. Some colleges appear to rely considerably on their faculty and staff for information about their graduates' employment status.

⁴⁹ The analysis includes all occupational programs leading to an AAS, AS, AFA, Certificate, or Diploma award. These MnSCU data are from a different source than the data in Chapter 1 on occupational programs in Minnesota; the two are not comparable.

Table 2.16: Graduate Follow-up Survey Respondents by Type, Graduates in 2007

	Type of Respondent			Total Respondents
	Graduate	College Staff	Other ^a	
All MnSCU Colleges				
Number of Respondents	10,812	6,499	1,326	18,637
Share of Respondents	58%	35%	7%	100%
Average All Colleges	56	37	7	100
Median All Colleges	60	35	6	100
Select Colleges				
Ridgewater	75%	20%	5%	100%
Southeast Technical	73	17	9	100
Rochester	70	13	17	100
Hennepin Technical	68	31	1	100
Vermillion	33	63	4	100
Saint Paul	32	63	5	100
Itasca	29	61	10	100
Mesabi	7	82	11	100

NOTES: Analysis represents results from the MnSCU follow-up survey of graduates in the class of 2007 from occupational programs offered by two-year colleges. Percentages are based on the total number of respondents to the survey, and exclude information for 1,228 graduates for whom there was no response. Total percentages may not sum to 100 due to rounding.

^a Includes employer, parent, guardian, spouse, partner, roommate, or other family member.

SOURCE: Office of the Legislative Auditor, analysis of 2007 MnSCU Graduate Follow-Up survey results.

For nearly one-third of programs with high placement rates for graduates in 2007, responses to the survey came from three or fewer respondents.

Career center personnel voiced concerns that information about the related employment rates is often confusing to prospective students. The following scenario illustrates this concern. A program has 20 graduates, 12 of whom have gone on to further education, while just 8 are interested in actually pursuing employment related to the program. Of these 8 graduates, only 5 respond to the survey and report that they have obtained work related to their studies. This results in a relatively high related placement rate of 100 percent, even though the percentage represents only 5 people, or just one-fourth of the graduates.

To further assess the challenges of interpreting placement rates for small programs, we looked more closely at MnSCU programs with relatively high placement rates according to the 2007 survey. Out of 1,527 occupational programs with graduates in 2007, 1,001 programs reported placement rates of 80 percent or greater.⁵⁰ For nearly one-third of these programs (314 of 1,001), the 80 percent placement rate was based on information about three or fewer respondents, as shown in Table 2.17. Of these 314 programs, total class sizes ranged from 1 to 7 students. Further, the graduate was frequently not the source

⁵⁰ The 1,001 programs represent occupational programs with related placement rates of 80 percent or greater and at least one graduate available for related employment.

Table 2.17: MnSCU Occupational Programs with High Placement Rates, Graduates in 2007

	Programs	
	1 to 3 Survey Respondents	4 or More Survey Respondents
Number of programs	314	687
Graduating class size	1 to 7 students	4 or more students
Programs with no graduate respondents	49	20
Programs with one graduate respondent	159	32
Programs with two or more graduate respondents	106	635
Programs where college staff or faculty accounted for all responses	29	15

NOTES: Analysis represents results from the MnSCU follow-up survey of graduates in the class of 2007 from occupational programs offered by two-year colleges. Of 1,527 programs with graduates in 2007, the 1,001 analyzed here had reported placement rates of at least 80 percent and at least one student available to seek related employment.

SOURCE: Office of the Legislative Auditor, analysis of 2007 MnSCU Graduate Follow-up Survey results.

of the information. For 49 of these 314 programs, all of the responses were based on information obtained from someone other than the graduates.

We also found that:

- **Colleges have had difficulties compiling the follow-up survey data, and little else is done to understand how successfully graduates find related work.**

Most of the colleges we interviewed described problems locating graduates to determine their employment status. Some students change their place of residence following completion of their coursework or perhaps in search of better employment opportunities. Staff in the Office of the Chancellor suspect that students deliberately avoid attempts by the college to contact them, asserting that many students have cell phones with caller identification and do not answer when they see that the college is calling them.

Many colleges take steps to increase the likelihood of reaching the graduates, or have turned to other sources of information, such as faculty, but doing so has been labor intensive and time consuming. Because of tighter budgets and fixed staff resources, the follow-up survey is not a high priority for some colleges. Some colleges assign this task to individuals with other responsibilities, who have to balance the amount of time they spend on the survey with the amount of time spent on other activities, such as helping students find jobs. On some campuses, there may be only a single person conducting the survey, and this person may have many other responsibilities.

Despite the survey data problems, colleges typically do not take additional steps to improve the data or verify graduates' job placements. Neither the Office of

MnSCU's graduate follow-up survey tracks students only the first year following graduation, even though some occupations require additional years of apprenticeships to qualify for licensure.

the Chancellor nor the colleges verify responses to employment questions by independently checking graduates' work status. A few colleges described other initiatives or surveys done of graduates, but the surveys were limited to a single program, and they were often done on a one-time only basis.

Another important limitation of the follow-up survey is that it tracks only students' success at finding related employment within the first year following graduation. Some occupations, however, require additional apprenticeships or work experience before qualifying for licensure. The survey does not reveal whether graduates of these programs are able to obtain enough work experience to gain licensure in the profession related to the program. To date, MnSCU has not systematically conducted a follow-up survey beyond one year, although it has used unemployment insurance data to analyze job retention for occupational program graduates at 24 months following graduation.⁵¹

The Office of the Chancellor has recognized the intensive resources required to conduct the survey and has looked into other means for determining graduates' employment status. There are no legal requirements for MnSCU to survey its graduates; MnSCU can use other means to obtain this information.

Additional data sources are available to help assess whether graduates are successful in finding work related to their occupation, but these data are not without problems either. One involves matching information on graduates with data the Department of Employment and Economic Development (DEED) collects on employment and wages.⁵² The database does not contain precise information on an individual's job; instead, employees are assigned the same industry code as their employer. For instance, if an electrician is employed by a mining company, the individual is reported as a mining industry employee. Also, the DEED employment database cannot determine employment status for those who are self-employed, working for the federal government, or residing in another state. These are significant limitations for certain occupational programs.

Certain employment data kept by other state agencies could be useful for obtaining graduates' employment information. The Minnesota Department of Labor and Industry, in its role of overseeing apprenticeship programs in the state, compiles information on employers and certain types of apprentices.⁵³ For occupations where apprenticeships are common following completion of MnSCU programs, apprenticeship information could be useful for verifying whether graduates have obtained employment related to their chosen occupation.

Another possible data source is licensure examination data, but obtaining such information for individuals is problematic. Looking at who takes exams could be useful in determining whether graduates have gained the necessary employment

⁵¹ The data on job retention are not reported for programs with six or fewer graduates.

⁵² These data are compiled from employer reports to Minnesota's unemployment insurance tax system.

⁵³ *Minnesota Statutes* 2008, 178.03, establishes a division of labor standards and apprenticeship in the Department of Labor and Industry and gives authority to the commissioner to supervise it.

experience to qualify for licensure. Using these data would require MnSCU and the Department of Labor and Industry to review the nature and scope of the data needed for analysis and consider data practices restrictions. It may also require some additional investment of resources by the agencies. Certain Minnesota state boards, such as the Nursing Board, oversee occupational licensing and maintain these data. Summary data can be reported, and MnSCU has reported summary licensure exam pass rates for several occupations—nurses, teachers, peace officers, and radiographers—on its accountability dashboard. Current data practices laws restrict licensing agencies from sharing more than nominal information on licensed individuals, making it difficult for MnSCU to sufficiently assess outcomes for its graduates.⁵⁴ MnSCU has tried to obtain such information in the past from several boards, including the Board of Dentistry, but has been refused access to data.

Office of the Chancellor staff told us they are considering looking into other data sources with which to match MnSCU data on program graduates to better understand program outcomes. However, an advisory group set up to oversee the graduate follow-up survey has not yet discussed this issue.

Matching Changes in Program Mix to Changes in Occupations

A 15 percent decline in the share of MnSCU programs represented by sales and related services programs occurred at a time when the share of Minnesota's jobs in sales and related services also declined.

A second indicator of the success of occupational programs is how well MnSCU's inventory of programs matches Minnesota's mix of available occupations. To evaluate this, we compared changes in MnSCU occupational programs to employment data compiled by DEED.⁵⁵ In addition, we interviewed college presidents on the extent of their colleges' flexibility in responding to employers' needs. Based on our analyses, we found that:

- **Changes in some MnSCU occupational program areas generally matched shifts in statewide employment, but certain factors limit colleges' flexibility to respond to market demands.**

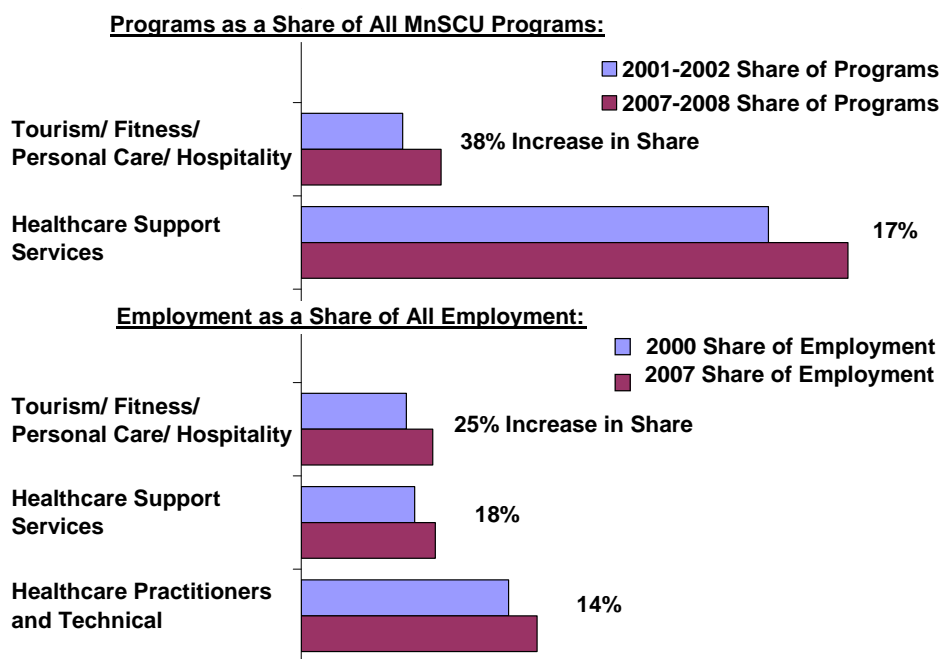
When comparing the mix of MnSCU occupational programs in 2001 to 2008, two MnSCU program areas with large increases in their share of overall programs were related to tourism, fitness, personal care, and hospitality services, with a 38 percent increase, and healthcare support services, with a 17 percent

⁵⁴ *Minnesota Statutes* 2008, 13.41, subd. 1-2.

⁵⁵ Programs include multiple awards available, such as a certificate and an AAS degree in law enforcement.

increase, as Figure 2.1 shows.⁵⁶ Similarly, the figure shows upward trends in statewide employment for related occupational areas between 2000 and 2007.⁵⁷

Figure 2.1: Percentage Increases in MnSCU Program Mix and Minnesota Employment Mix, by Select Programs, 2000-2008



NOTES: For the category "Tourism, Fitness, Personal Care, and Hospitality," MnSCU programs include certain programs assigned to the "Hospitality and Tourism" and "Wholesale/Retail Sales and Services" program clusters, and employment data represent DEED employment data for the "Personal Care and Service" occupational group. For the category "Healthcare Support Services," MnSCU programs include those assigned to the "Health Services" program cluster, and employment data represent DEED employment data for the "Healthcare Support" occupational group.

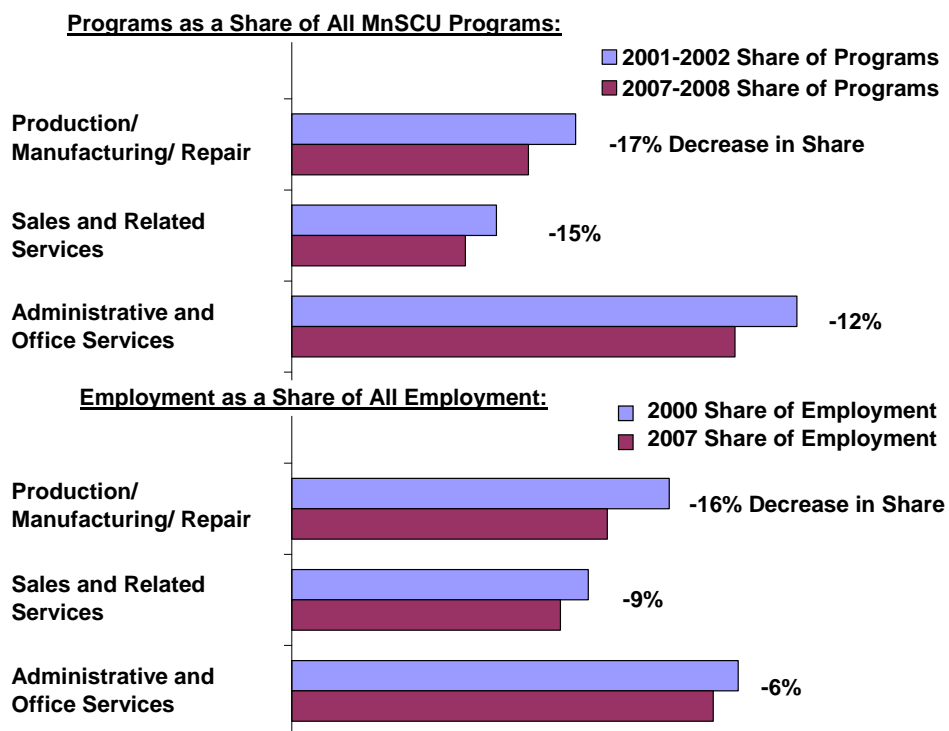
SOURCES: Office of the Legislative Auditor, analysis of MnSCU occupational program data as of August 1, 2001-2002 and 2007-2008; Department of Employment and Economic Development's Occupational Employment Statistics data, 2000 4th Quarter and 2007 2nd Quarter.

Some MnSCU program areas represented a much smaller share of overall programs in 2008 than they did in 2001, as shown in Figure 2.2. During this time period, three MnSCU program areas with large declines in their share of all

⁵⁶ For the category "Tourism, Fitness, Personal Care, and Hospitality," MnSCU programs include certain programs assigned to the "Hospitality and Tourism" and "Wholesale/Retail Sales and Services" program clusters. For the category "Healthcare Support Services," MnSCU programs include those assigned to the "Health Services" program cluster.

⁵⁷ For the category "Tourism, Fitness, Personal Care, and Hospitality," employment data represent DEED employment data for the "Personal Care and Service" occupational group. For the category "Healthcare Support Services," employment data represent DEED employment data for the "Healthcare Support" occupational group.

Figure 2.2: Percentage Decreases in MnSCU Program Mix and Minnesota Employment Mix, by Select Programs, 2000-2008



NOTES: For the category "Production, Manufacturing, and Repair," MnSCU programs include those assigned to the "Manufacturing" program cluster, and employment data represent DEED employment data reported for both the "Production and Manufacturing" and "Installation, Maintenance, and Repair" occupational groups. For the category "Sales and Related Services," MnSCU programs include certain programs assigned to the "Wholesale/Retail Sales and Services" program cluster, and employment data represent DEED employment data reported for the "Sales and Related Services" occupational group. For the category "Administrative and Office Services," MnSCU programs include those assigned to the "Business and Administrative Services" program cluster, and employment data represent DEED employment data reported for the "Office and Administrative Support" occupational group.

SOURCES: Office of the Legislative Auditor, analysis of MnSCU occupational program data as of August 1, 2001-2002 and 2007-2008; Department of Employment and Economic Development's Occupational Employment Statistics data, 2000 4th Quarter and 2007 2nd Quarter.

programs were: production, manufacturing, and repair (-17 percent), sales and related services (-15 percent), and administrative and office services (-12 percent).⁵⁸ These changes in MnSCU programs closely matched related

⁵⁸ For the category "Production, Manufacturing, and Repair," MnSCU programs include those assigned to the "Manufacturing" program cluster. For the category "Sales and Related Services," MnSCU programs include certain programs assigned to the "Wholesale/Retail Sales and Services" program cluster. For the category "Administrative and Office Services," MnSCU programs include those assigned to the "Business and Administrative Services" program cluster.

Some occupational programs that grew while related employment declined were for occupations, such as farming, that are underrepresented by employment data due to high rates of self-employment.

employment trends in Minnesota between 2000 and 2007. As a share of overall employment, three occupational areas experiencing declining employment during this same time period included: production, manufacturing, and repair (-16 percent), sales and related services (-9 percent), and administrative and office services (-6 percent).⁵⁹

For certain programs where the growth in programs greatly exceeded the change in jobs, the difference can be expected because of the nature of the data. For instance, MnSCU programs in agricultural and natural resources, as a share of all programs, grew 10 percent between 2001 and 2008, while employment declined 28 percent in these occupational areas between 2000 and 2007. The difference is explained in part by the fact that students enrolled in these programs are often self-employed workers, such as farmers, that are either excluded or significantly underrepresented in labor data. Similarly, comparisons for another occupation where workers are often self-employed—construction—showed that the change in MnSCU program mix did not match changes in employment. Between 2001 and 2008, the share of MnSCU’s construction-related programs increased by 1.8 percent, while the share of employment in construction and extraction occupations declined by 1.1 percent between 2000 and 2007.⁶⁰

In making these comparisons, we acknowledge limitations to our analysis and conclusions. Specifically, we cannot conclude whether MnSCU colleges made changes to their programs (1) based on reviews of labor market projections and weakening job prospects, (2) in response to declining student interest and enrollment, or (3) for both reasons. Our analysis is also imprecise; for instance the MnSCU programs we looked at included only occupational programs, while the labor market data contains information for jobs requiring a range of educational programs.

MnSCU’s “Centers of Excellence” represent initiatives that may enhance MnSCU’s ability to affect employment and economic activity, but a recent evaluation of the centers’ initial years says it is too early to tell. In 2005 the Legislature authorized the program Centers of Excellence.⁶¹ The centers were intended as focal points for particular program areas, such as in engineering, that integrate with businesses having a “significant multiplier effect on the state’s economy.”⁶² MnSCU’s Board of Trustees subsequently established four Centers of Excellence, each led by a state university in partnership with certain colleges: (1) HealthForce Minnesota, (2) Center for Strategic Information Technology and

⁵⁹ For the category “Production, Manufacturing, and Repair,” employment data represent DEED employment data reported for both the “Production and Manufacturing” and “Installation, Maintenance, and Repair” occupational groups. For the category “Sales and Related Services,” employment data represent DEED employment data reported for the “Sales and Related Services” occupational group. For the category “Administrative and Office Services,” employment data represent DEED employment data reported for the “Office and Administrative Support” occupational group.

⁶⁰ MnSCU’s construction-related programs included those for carpenters, electricians, and plumbers, among others.

⁶¹ *Laws of Minnesota* 2005, chapter 107, art. 1, sec. 3, subd. 3.

⁶² *Laws of Minnesota* 2005, chapter 107, art. 2, sec. 31, subd. 2.

Security, (3) 360° Manufacturing and Applied Engineering Center of Excellence, and (4) Minnesota Center for Engineering and Manufacturing Excellence.⁶³

At its January 2009 meeting, the Board of Trustees received an evaluation of the centers' first three years. Where it focused specifically on outcomes for business and industry, the evaluation concluded that the centers' measurable outcomes, such as a larger and better qualified workforce, are not yet available.⁶⁴ It expressed optimism, however, about signals of likely improvement, such as curriculum more closely aligning with industry needs and expectations, that could be expected to reap measurable benefits in the future.

Limits on Changing Occupational Programs

College presidents said funding and other issues limit their ability to respond to changing market conditions.

Many colleges face limitations on their capacity to respond to employers' needs and market conditions. Specifically, college presidents told us that funding issues, labor contract provisions, and system reviews of program proposals limit their flexibility in changing occupational programs. Each factor is described briefly here.

First, college presidents said funding issues were limiting. Several said that to develop new occupational programs, they must reallocate money from existing programs. According to these colleges, unless the college can close an existing program, it cannot open a new one. They said they have no source of revenue specifically for developing new programs, unless a special legislative appropriation is made for that purpose or a college receives initiative money awarded by the Office of the Chancellor on a competitive basis. Plus, occupational programs often require major equipment purchases, and college leaders said insufficient funding for equipment can limit a program's start-up. While many colleges have received equipment donations from business and industry, such contributions are neither steady nor assured.

Also tied to funding issues, some college leaders said a lag in the funding cycle or lack of physical space can be prohibitive. Although enrollment is the main factor used to allocate the state appropriation among colleges, enrollment data used in the calculations are two years old. Colleges with enrollment increases in 2007, for instance, will not see allocations reflecting those increases until 2009. Some college presidents said lack of space means new programs cannot start without first resolving where classes will meet and faculty will have offices.

College leaders also said labor contract provisions can limit their flexibility. They said that, for one thing, credentialing requirements inhibit hiring professionals who have not earned teaching credentials, even if they have many

⁶³ Two additional Centers of Excellence have been discussed, but not implemented, for bioscience and agri-industry.

⁶⁴ Wilder Research, *Responding to Minnesota's Evolving Workforce Needs: Final Evaluation Report on the Minnesota State Colleges and Universities Centers of Excellence, 2006-2008* (St. Paul, January 2009), 71-73.

years of experience in the field.⁶⁵ For another, they said the contract requires equivalent rates of pay for instructors with a given level of experience and training regardless of where they are located in the state or the costs of living there. At some colleges, presidents said it is difficult to afford new hires at the contract's compensation rates.

A third limitation, according to several college leaders, is the process for reviewing proposed occupational programs. The steps involve multiple entities at the college level, including, typically, the department, a curriculum committee, and a chief academic officer or president. Once approved at that level, the proposal goes to the Office of the Chancellor for extensive review. When questions from the Office of the Chancellor are answered and the proposal is considered largely complete, it is posted on an electronic listserv. Chief academic officers and presidents use the listserv to comment on proposals for new programs, especially when the proposed program is similar to one at a nearby college. When they raise objections, the Office of the Chancellor requires additional data from the proposal's originators.

For colleges in the metropolitan area, the reviews contain an additional layer. The colleges developed the "Metro Alliance," which consists of 11 colleges and universities in the seven-county metropolitan area. When one of the Metro Alliance colleges proposes an occupational program, the proposal is reviewed by others in the alliance. College personnel said they understand the need for the review process, but some believe it takes too much time and delays the start-up of programs.⁶⁶ Although the review was intended to prevent duplication among programs, some metropolitan-area colleges said programs were delayed or stopped when nearby colleges objected on the grounds that the new program would be located within a one-hour drive of another college offering the same program.⁶⁷ Colleges proposing the new programs reported that, although preventing duplication, the process can be counterproductive, especially when there are unfilled jobs related to a proposed program.

MnSCU's Inventory of Occupational Programs

A third indicator of outcomes from MnSCU occupational programs is how colleges have modified their occupational programs over time. State law imposes minimal restrictions on the programs MnSCU colleges may offer,

⁶⁵ [MnSCU Board of Trustees Policy 3.32 and system procedure 3.32.1](#) govern the credentialing of college faculty and set minimum qualifications for faculty members. The procedure includes an exemption that allows hiring personnel with special expertise as long as certain conditions are met.

⁶⁶ There is disagreement over the source of the delay. Colleges can and do submit proposals for review without first fully developing them, and review of the incomplete ideas typically takes longer than reviews for completed proposals.

⁶⁷ [Minnesota Statutes](#) 2008, 136F.30, says the MnSCU Board of Trustees shall avoid duplicate program offerings.

requiring only that the board avoid duplicative programs.⁶⁸ As noted earlier in this chapter, MnSCU Board of Trustees policies require colleges to assess and improve their academic programs.⁶⁹ We analyzed how colleges proposed to modify the inventory of occupational programs, and we examined a sample of their proposals. We found that:

- **Colleges have actively managed their occupational programs, and proposals to add or substantially modify programs showed that colleges respond to employers' needs.**

Between 2001 and early 2008, colleges proposed more than 9,600 applications to add new occupational programs or modify, suspend, or close existing ones, as Table 2.18 shows. Of the 9,600 program proposals during this seven-year period, the Office of the Chancellor approved about 8,900. Most of this program

From 2001 through early 2008, colleges initiated more than 9,600 proposals to add new programs or modify or close existing ones.

Table 2.18: Type and Disposition of Colleges' Proposals for Occupational Programs, January 2001-April 2008

Type	Program Proposals				Total
	2001-2002	2003-2004	2005-2006	2007-April 2008	
Close	169	324	202	153	848
New	196	191	202	120	709
Redesign ^a	2,271	2,558	1,257	667	6,753
Reinstate	20	31	14	13	78
Relocate	128	36	29	28	221
Replicate	144	111	83	39	377
Suspend	197	128	234	100	659
Disposition					
Approved	2,926	3,099	1,904	1,006	8,935
Canceled	197	273	109	112	691
Rejected	2	7	8	2	19
Total	3,125	3,379	2,021	1,120	9,645

NOTES: This analysis counts proposals for occupational programs by the 30 two-year colleges. Some minor changes may have been initiated by the Office of the Chancellor as part of overseeing the MnSCU program inventory and are included here.

^a Includes proposals to redesign programs or add or modify a program emphasis.

SOURCE: Office of the Legislative Auditor, analysis of MnSCU program application data.

⁶⁸ *Minnesota Statutes* 2008, 136F.30. In addition, *Minnesota Statutes* 2008, 136F.05, charges the board with facilitating system efficiencies so that students have a broader range of course offerings and coordinated degree programs across the MnSCU system.

⁶⁹ Minnesota State Colleges and Universities Board of Trustees, *Board Policies, 3.36 Academic Programs, Part 1 Purpose and Applicability, Part 7 Academic Review* (St. Paul, August 1, 2007).

activity was initiated by the colleges, although the Office of the Chancellor also made changes—mostly minor in nature—as part of overseeing the MnSCU program inventory.⁷⁰ Among the 9,600 proposals, about 700 were to add a new program or significantly redesign an existing program. It is important to note that program closures are often part of a college's larger effort to redesign programs to reflect current industry needs, and we observed this in our file review of colleges' program applications.

We also found that colleges typically were responsive to employers and industry needs in their regions as demonstrated in the proposals to add new occupational programs or substantially change existing ones. We examined the files and correspondence for 51 of these proposals reviewed by the Office of the Chancellor during 2005, 2006, and 2007. Several examples of these proposals are described in Table 2.19.

In developing their proposals for new programs, most colleges worked with employers to identify workforce needs.

In general, the program proposals and correspondence revealed that colleges interacted with employers, both regionally and nationally, although the circumstances and extent of the interaction varied. For instance, for about one-half of the new program proposals, colleges worked with employers one-on-one or through program advisory committees to identify workforce needs and skills and develop curriculum. In almost one-half of the new program proposals, colleges noted the program was for a newly-defined occupation, such as in response to new technology. More systematic approaches to quantify local or regional needs were used less frequently by the colleges. For instance, formal surveys of employers were conducted in just 7 of 39 new program proposals.

The Office of the Chancellor helps ensure that MnSCU college programs respond to employer needs. Our reviews of files showed that:

- **Colleges have relied heavily on the Office of the Chancellor to document how new programs will affect job markets.**

In mid-2007, the Office of the Chancellor strengthened requirements colleges must follow in planning academic programs. Staff there said these changes were intended to ensure that colleges more consistently consider key criteria and outcomes in their program planning, particularly when adding new programs. Ultimately, colleges should be able to quantify the need for their academic programs, which is also a promising practice reported by the U.S. Department of Education.⁷¹

The requirements for new proposals more clearly articulate what information colleges must compile and analyze, such as labor market supply and demand for

⁷⁰ For instance, the Office of the Chancellor reviewed and recoded certain medical-related programs to ensure uniformity in publications and reporting across colleges.

⁷¹ U.S. Department of Education, *The 21st-Century Community College, Volume 1*, 13; U.S. Department of Education, *The 21st-Century Community College, Volume 2*, 41-48, 60.

Table 2.19: Examples of MnSCU College Proposals for New Occupational Programs, 2005-2007

New Program Title	Description	Disposition
Professional Forest Harvester	Program trains and upgrades skills of loggers in a new method of environmentally sensitive logging using new computer technology and equipment. Program is part of an initiative by the Department of Natural Resources and U.S. logging industry.	Approved
Biotechnology Lab Technician	Program trains individuals as lab technicians in biotechnology, a relatively new and fast-developing field that integrates knowledge from several traditional sciences.	Approved
Community Health Worker	The program trains individuals to perform a broad range of health-related functions, including caring for the chronically ill, bridging the gap between cultures and the healthcare system, and promoting healthy communities by educating families about access to, and use of, health care coverage. It is a collaborative effort by private health care industry, state agencies, and MnSCU to provide training at three colleges.	Approved
Clean Energy Systems Technician	Program teaches basic clean energy information and skills needed to work in residential, small business, and tribal community environments in the rapidly developing industry of electric energy-based renewable energy systems.	Approved
Hemodialysis Patient Care Technician	Program teaches fundamental theory on hemodialysis and training on care procedures for dialysis patients.	Approved
Wind Energy Mechanic	Program teaches individuals the technical skills to assemble, troubleshoot, and repair wind energy turbines and related equipment.	Withdrawn
Therapeutic Coaching	Program trains individuals on how to coach individuals, businesses, couples, and/or groups in a therapeutic setting using techniques in Neurolinguistic Programming, Quantum Physics, and Hypnotherapy. Sometimes referred to as executive coaching in the business world.	Rejected

NOTE: A new program is defined as adding a program not previously in existence, or a program undergoing changes that alter more than 50 percent of the existing curriculum.

SOURCE: Office of the Legislative Auditor, analysis of MnSCU Office of the Chancellor documents.

occupations likely to be filled by program graduates.⁷² When proposing new programs, colleges are required to address certain key criteria, including

⁷² Office of the Chancellor staff also anticipate the changes will result in more colleges requesting a program be closed without first requesting program suspension. The more stringent documentation requirements do not apply to all program requests. For instance, to help colleges be responsive to industry needs, MnSCU's program approval process includes a "fast track" for minor program changes, such as credit changes or replicating very small programs to other campuses. Appendix A outlines these changes and is available online at www.auditor.leg.state.mn.us/ped/2009/mnscu.htm.

Colleges proposing new occupational programs frequently did not quantify either the supply of workers or demand by employers until the Office of the Chancellor directed them to.

occupational demand, student interest, program duplication, linkage with the college's mission, and program length, among other factors. Colleges must submit documentation supporting these key criteria.⁷³ When evaluating these proposals, the Office of the Chancellor analyzes the documentation with particular scrutiny of job prospects for graduates. Prior to the 2007 revisions, MnSCU policies did not explicitly require the colleges to address all of these key criteria in major program proposals.⁷⁴ For most of the files we reviewed, the colleges' documentation reflected the more lenient requirements in place at that time.

Our review of files and correspondence also showed that, largely because of requirements and analyses by the Office of the Chancellor, college proposals to open new programs received extensive review and included analyses of job prospects. Most notably, colleges frequently provided minimal or no information to quantify employer demand (such as estimates of job openings) or worker supply (including current workers and expected graduates).⁷⁵ For 29 of 35 new programs approved, the Office of the Chancellor did most or all of the labor market analysis to document supply and demand for the program. In some cases, the Office of the Chancellor directed colleges to submit labor market data in support of their proposals. In other cases, the colleges requested assistance for such analysis from the Office of the Chancellor. Staff there also conducted more comprehensive analyses of regional, statewide, and national labor market data, when appropriate. It is important to note that, for newly-defined occupations, pertinent labor market data may not be available or are imprecise. However, when adequate labor market data were lacking or revealed a surplus of workers, the Office of the Chancellor directed colleges to communicate with local employers to estimate numbers of potential job openings for graduates of the new program.

For most of the new program requests we reviewed, the Office of the Chancellor eventually judged that the proposals showed sufficient demand for jobs, either from labor market data or feedback from local employers. Some programs were approved for "serving regional needs," which recognized that local markets differed from those revealed via statewide data. Some programs were approved without labor market data because 1) they addressed cutting-edge technology or

⁷³ In describing the approval process for new programs, the Office of the Chancellor staff noted there is no precise standard for each criterion, and final approval or denial of a new program is based on the composite documentation.

⁷⁴ Repealed Board Policy 3.14, Part 2 stated: "A program or major shall be approved by the Chancellor or designee before it is offered by a college or university. Approval by the Chancellor or designee requires that the program or major proposal demonstrates: a) need and appropriate location(s) to address unmet student and occupational demand, b) resource sufficiency, i.e. capability of the systems and institution(s) to provide necessary human, physical, and financial resources to support the program or major, and c) mission relevance, i.e. contribution to the institutional and system missions."

⁷⁵ Colleges more often referred to other sources to support their requests, such as: interest surveys they conducted among high school classes, the community, professional organizations, or students at the college; and expected enrollments based on waiting lists they had accumulated. In some cases, colleges interpreted student interest, enrollments, or growing consumer use of certain products as indicators of labor market demand.

skills, such as computer network security, for which adequate labor data did not yet exist or 2) the programs were primarily intended to upgrade skills of incumbent workers, and data on job vacancies were less relevant. In a small number of cases, colleges withdrew proposals, or the Office of the Chancellor rejected them, because, at least in part, employer demand had not been demonstrated.

Some of the proposals we reviewed were initially incomplete and missing supporting documentation for other criteria, such as student interest. For instance, in 9 of 35 new program proposals, supporting information on student interest was lacking until the Office of the Chancellor prompted colleges to compile it.

Background information regarding the possible duplication of other MnSCU programs was also lacking in some proposals.⁷⁶ In other cases, colleges noted similar programs at other MnSCU institutions, but did not consider how graduates from their new programs would affect the supply of workers for related occupations.⁷⁷ As part of the review process, Office of the Chancellor staff sometimes compiled and analyzed this information on behalf of the colleges. They told us that, in some cases, a college seeks their assistance and other colleges' reactions before the college has fully developed a program; this may partially explain the incomplete documentation we observed.

RECOMMENDATIONS

In this section, we discuss five recommendations. They are based on the premise that MnSCU colleges should plan their occupational programs using a more balanced mix of what students want, what employers need, and whether graduates find related employment.

RECOMMENDATION

All MnSCU college statements of mission, vision, and purpose, as well as their high-level planning documents, should clearly reflect the priorities set in state law and decisions of the Board of Trustees.

As long as state law and board policies and strategic plans continue to reflect the importance of meeting state and regional economic needs, colleges' statements of their missions, visions, and purposes, and their strategic plans or other high-level planning documents, should as well. This is important because a college's

Our recommendations are based on the need for colleges to better balance information on what students want, what employers need, and whether graduates find related employment.

⁷⁶Duplication of programs is not prohibited. The Office of the Chancellor considers whether other MnSCU programs in a service area will be negatively affected by the new program and whether system resources are used efficiently. Generally, a service area corresponds to a likely labor market area for the occupation, and it has been defined as either a specific region, group of counties, or area within a one-hour drive of the proposed program.

⁷⁷ It is possible that colleges used other means, such as MnSCU's listserv process, to identify duplicate MnSCU program offerings.

mission and strategies lay out its priorities and indicate where it will spend its time and resources.

Each college should express how its mission and strategic planning are aligned with the board's direction for the MnSCU system. Some colleges use the MnSCU Board of Trustees' strategic plan as a base for their own planning. Others may want to consider this, but our chief concern is that colleges' strategies reflect MnSCU's strategy on the importance of meeting regional and state economic needs.

The Office of the Chancellor should report on the alignment of system and college missions every five years, as board policy requires. Especially for those colleges whose mission statements have not been reviewed since the board set its strategic directions, the Office of the Chancellor should consider how well colleges' missions address regional and state economic needs.

RECOMMENDATION

MnSCU colleges that currently do not assess labor market data when conducting program reviews should change their review policies to require assessing how well the supply of graduates and workers matches demand for occupations related to a program.

Our review of colleges' program planning and reviews suggests that colleges could do more to assess job prospects for graduates of their programs. MnSCU colleges use enrollment data for reviewing programs and will continue to do so, especially since funding formulas depend on enrollments. At the same time, they should also consider information on forecasted demand for jobs.

We think colleges should expand their use of labor market data to be able to conclude how well the supply of graduates, coupled with other workers in the field, matches the demand for an occupation. Although colleges' program reviews rely heavily on rates of related employment, these rates are incomplete indicators for gauging the job market. The rates do not measure employers' current or anticipated demand for workers. Nor do they portray the full range of job opportunities available. Because there is up to a two-year lag in the MnSCU job placement data, the rates do not account for recent changes that may affect the market.

More comprehensive labor market analyses could help colleges anticipate which industries are likely to experience an oversupply of workers in advance of a glut in the market. Such analyses would also help inform college decisions on suspending, closing, or redesigning programs, but they should add to, not supplant, economic information colleges collect locally. We think colleges should still control decisions on program suspensions and closures, and they will depend heavily on enrollment and cost numbers to do this. But they would benefit from information rarely considered for program closures today—the gap between anticipated job growth and the supply of workers.

More comprehensive labor market analyses could help colleges anticipate which industries are likely to experience an oversupply of workers before markets are glutted.

Assembling comprehensive economic data may require the Office of the Chancellor to play a larger role than in the past for proposals to suspend or close programs. Labor market analyses can be complex and time consuming, and some colleges may need to take advantage of the labor market expertise in the Office of the Chancellor.

RECOMMENDATION

MnSCU should explore improvements to assessing graduates' success at finding employment related to their chosen occupation.

MnSCU relies heavily on its annual survey of graduates to assess whether graduates are employed in relevant jobs. Because of the graduate follow-up survey's limitations, we think MnSCU should improve and perhaps supplement it. Currently, various people can respond to survey questions on behalf of graduates, but it is unknown whether a particular respondent, such as a faculty member, is likely to respond differently than graduates themselves. Gathering more information on this could help MnSCU decide on the extent to which different respondents should be allowed to speak for the graduate. One approach would involve random sampling and testing of survey results against other information sources to verify the integrity of responses by type of respondent.

Information about graduates' employment outcomes exists in other state employment and wage data sources, but it has limitations. Sharing such information would likely require additional resources as well as agreements between MnSCU and the agency compiling the data. Another limitation is that data practices laws restrict the nature and scope of information on individuals that can be shared. Further, data from other state sources would likely provide employment outcomes for only certain programs. MnSCU should test state employment data to determine whether they would offer useful information to supplement the survey. It will have to weigh the costs and benefits of analyzing these additional data sources. Given the importance of reliable outcome data, supplementary data may be valuable even if available only for certain programs. If the data prove to be beneficial, they may allow colleges to track graduates' employment successes beyond one year.

RECOMMENDATION

When reviewing its cap on enrollments for construction electrician programs, MnSCU's Office of the Chancellor should take local economic conditions into greater account.

The Office of the Chancellor should rely both on the labor market data it has compiled as well as what it can learn from the colleges. Through those colleges' personal networks, interactions with area employers, and local data analyses, they can provide input on their areas' economic conditions that may not be captured by statewide data sources.

Staff from the Office of the Chancellor told us that the initial decision to impose enrollment caps statewide was intended as an interim measure. At that time, staff felt there was inadequate local data to determine whether caps in only certain regions would mitigate the oversupply of graduates. If MnSCU decides to retain enrollment caps, it should consider imposing them in only those regions where the mismatch between the supply and demand for workers is clear.

RECOMMENDATION

Colleges should provide better oversight of program advisory committees and take steps to improve those that are not fulfilling their potential.

While many program advisory committees appear to operate well, the committees' function is too vital for some to have substandard performance. Faculty typically oversee the work of the committee, but colleges must be ultimately responsible for ensuring that board policies are met.

Several colleges we visited described processes they have underway to monitor and manage their committees. All colleges should periodically review their committees and improve those that are not fully effective. One step would be ensuring that the size and makeup of all committees are appropriate to their function. Another would be soliciting feedback from committee members on how to improve operations and then acting on their suggestions.

Student Information on Careers and Job Opportunities

For many students in occupational programs within the Minnesota State Colleges and Universities (MnSCU) system, the ultimate objective is finding a job related to their field of study. Job placements are also important to the colleges, and, as Chapter 2 described, MnSCU's Board of Trustees monitors the related employment rates as a measure of the system's performance. In this chapter, we examine the information and services that MnSCU colleges make available to students regarding career searches and job opportunities.

HELPING STUDENTS UNDERSTAND CAREERS AND THE MARKET FOR JOBS

Minnesota statutes list objectives for state investments in higher education. Among them, one objective is to “foster student success by enabling and encouraging students to choose institutions and programs that are best suited for their talents and abilities....”¹

To evaluate how well colleges help students choose programs best suited to them and identify job opportunities, we reviewed state statutes and Board of Trustees policies. We also surveyed chief student affairs officers at the 30 MnSCU colleges. When visiting campuses, we interviewed people at 12 colleges who were involved with on-campus career centers. We also interviewed 13 college presidents on the role their colleges play in informing students about job prospects.

For perspectives from students, we surveyed student leaders from the Governing Council of the Minnesota State College Student Association (MSCSA). The MSCSA is an association of public two-year college students comprised of student government representatives from MnSCU colleges.² In addition, we interviewed seven members of the MnSCU Board of Trustees, including two of the three student trustees. In this chapter, we review who is responsible for services to help students explore careers and seek employment, students' awareness of the services, and how the services vary among colleges.

¹ *Minnesota Statutes* 2008, 135A.011 (2).

² When we conducted our survey in August 2008, the Governing Council of MSCSA had three cabinet members, eight regional representatives, a student-at-large, and the Presidents' Group chair, for a total of 13 students. Ten of the 13 responded to our survey.

MnSCU colleges decide what information on career exploration and job prospects to offer to students.

MnSCU Oversight

Each MnSCU college determines what services to make available on career exploration and job opportunities. Based on our research we found that:

- **MnSCU has no centralized oversight of career and job search information made available by colleges, and it is unclear how well the information gets to students who need it.**

MnSCU's Board of Trustees has not adopted policies governing information on career exploration and job opportunities. All seven of the trustees we interviewed said they try to avoid micromanaging college operations, including student services, and prefer to protect colleges' autonomy while using accountability mechanisms for oversight.³ The board has not monitored whether information on career exploration and job opportunities is getting to the students who need it. Three of the four trustees we asked about colleges' information on careers and job prospects said that the information has been generally adequate. Two of these four acknowledged insufficiencies, such as in the availability of counselors.

Similarly, the Office of the Chancellor does not oversee college operations regarding career exploration services or identifying job opportunities. College presidents, along with their deans, are responsible for monitoring these activities and deciding how many counselors are needed in light of what best meets their campuses' needs.

Student Awareness

Some but not all students in occupational programs need assistance understanding what careers best match their interests and abilities and how to find a job. Some change their minds once they learn more about what an occupation entails. Even those who enroll with the intent of entering a specific occupation may not know what job opportunities exist or where they are located. We found that:

- **Not all students who need assistance may be fully aware of job prospects or resources available for exploring careers and identifying job opportunities.**

When visiting colleges, we asked about the availability of information on job prospects related to occupational programs, especially for students in programs where job growth was not forecasted to be strong. Many college leaders said they close programs in occupations that lack job prospects, and several pointed to their job placement statistics as evidence that they offer programs with good job prospects.

³ *Minnesota Statutes* 2008, 136F.06, subd. 1, directs the board to provide autonomy to campuses while holding them accountable, to the extent practicable while protecting statewide interests.

Not all MnSCU colleges systematically provide information on job outlooks to students who need it.

College leaders acknowledged, though, that economies can shift quickly and jobs can be cyclical, sometimes resulting in unexpected job shifts. When facing those situations, colleges use various strategies to provide information to students. They help students: (1) consider alternative jobs in related fields, (2) build job-search skills that cut across different occupations, and (3) understand that they may have to consider employment outside the region. As one example, when St. Cloud Technical College expects local job openings to be insufficient for all students planning to enroll in a program, such as has been the case for its Cardiovascular Technology Program, it requires prospective students to meet with faculty prior to enrollment. During these meetings, students are told that jobs in the field will require them to move from the region.

Although information on job prospects may be available through colleges' faculty or for students who visit career centers, it may not be systematically provided to all who need it. Some college representatives we interviewed and several of the student leaders we surveyed expressed concern that not every student who needed the information is made aware of job market conditions.

Student leaders questioned the adequacy of colleges' information on exploring careers; they were especially negative about the adequacy of information on which occupations are in demand.⁴ Table 3.1 shows their opinions.

Table 3.1: Student Leader Opinions on Adequacy of Colleges' Career and Occupation Information, 2008

	Information on Exploring Careers		Information on Occupations in Demand	
	Number	Percent	Number	Percent
More than adequate	0	0%	0	0%
Adequate	5	56	0	0
Inadequate	3	33	7	78
More than inadequate	<u>1</u>	<u>11</u>	<u>2</u>	<u>22</u>
Total	9	100%	9	100%

NOTES: The question read, "For new students or those considering MnSCU's programs, how adequate are the colleges' services and information on exploring careers and learning which occupations are in demand?" Although respondents had the option of responding "Don't Know," none did. N=9.

SOURCE: Office of the Legislative Auditor, analysis of Minnesota State College Student Association Governing Council survey, August 2008.

Student leaders also said students do not receive adequate, ongoing notification of services regarding career exploration and job opportunities. Comments from career center personnel and others indicated it can be a challenge to get students

⁴ As stated earlier, we surveyed student leaders who served on the Governing Council of MSCSA and were the official representatives of students. Opinions of those surveyed do not necessarily represent opinions of all enrolled students.

Colleges and students share responsibility for obtaining information on careers and job outlooks.

to take advantage of the services colleges have available, and both of the student trustees we interviewed agreed. Furthermore, several college representatives reported lacking a readily accessible source of localized job forecasts related specifically to the occupational programs their college provides. They said information that can be cross-referenced with other MnSCU colleges on actual job titles and starting salaries for occupations would be useful but is not available from state sources.⁵

There was general agreement that colleges and students each share responsibility for obtaining relevant information on exploring careers and job opportunities. All 13 of the college presidents we interviewed said their colleges had a duty to provide information on job prospects. On the other hand, they said students must shoulder part of this responsibility as long as the college equips them to do so. The two student trustees we interviewed agreed that both colleges and students need to play a role.

Variation in Services and Information

Because each college determines how much and what type of career and job information to provide, we found that:

- **Variation from college to college and among programs within some colleges leads to gaps in the information for students on exploring careers and identifying job opportunities.**

Colleges vary in the extent to which they integrate into occupational programs certain information on career exploration and job searches. In only limited cases are such resources mandatory for students. Century College requires all students to use the college's career and academic planning tool (called GPS LifePlan), and instructors receive training on how to incorporate the tool into lesson plans and assignments. Representatives of Century College described how this reaches the full student body, instead of leaving the matter to students' initiative. The approach avoids situations where students wait until they near graduation to address questions about job opportunities or whether a program or career is a good fit. Minneapolis Community & Technical College has also implemented the GPS LifePlan tool, and several other colleges are planning to do so.

Some MnSCU colleges' occupational programs incorporate job search skills into curricula, but this is not done consistently.

In addition, some colleges require subgroups of students to take part in career planning or job-search preparation. For instance, Northwest Technical College developed a "bridges" program for students who applied to Bemidji State University but failed to gain admission. In this program, students start their college career at the technical college and take a one-credit seminar on exploring careers, in which they assess their interests, research occupations, and interview

⁵ In its graduate follow-up survey, MnSCU collects information on job titles for graduates employed within a year of graduation, although the information is not standardized and, therefore, cannot be cross-referenced against information from other MnSCU colleges. Further, MnSCU uses the state's Unemployment Insurance program data to report on ISEEK both hourly wages and job retention. The data do not contain information on specific occupations, and they are not available for the self-employed or workers outside Minnesota.

Many MnSCU faculty generate valuable information about job opportunities, but their involvement varies by program.

employers. Some occupational programs within a college incorporate job search skills into their curriculum. The Dental Assistant Program at Dakota County Technical College, for example, does this routinely.

For occupational programs, faculty are often a primary source of information on jobs, but this also varies. At most colleges we visited, college representatives told us how faculty members' networks in the community generate valuable information about job prospects that gets passed on to students. Some said, however, that faculty involvement can vary by program, and a centralized service, like a college placement office, may be needed to ensure that all students get served.

Many student leaders we surveyed said one of the services most helpful for identifying job opportunities is having someone on staff whose job is dedicated to this task. Similarly, several career center personnel told us it was important to have staff dedicated to job-placement activities. Counseling and advising resources vary greatly among the 30 colleges, however.

All colleges reported having at least a part-time counselor to work with students on careers and job searches, but some had far more students per counselor than others. The ratio of students to counselors ranged from 474 students per full-time equivalent (FTE) counselor at Vermilion Community College to 7,505 students per FTE counselor at St. Paul College. Table 3.2 summarizes the variation in counseling resources. Community colleges may need more counselors than technical colleges because technical college students typically have already decided their program or major when they enroll. Yet data show that six out of the ten colleges with the highest ratio of students to counselors were community colleges or consolidated colleges.⁶

Table 3.2: Counseling Resources at 30 MnSCU Colleges, 2008

	<u>Minimum</u>	<u>Maximum</u>	<u>Median</u>
Number of FTE counselors	0.8	15	3
Students per FTE counselor	474	7,505	1,312
Students per FTE counselor and advisor	195	3,356	813

NOTES: Numbers of counselors and advisors are as of spring semester 2008. The number of students is the unduplicated headcount of students in for-credit courses at the end of fiscal year 2006. Counselors' duties include the highest level of personal, career, and academic counseling, whereas advisors provide common supportive services such as information to students on program options.

SOURCES: Office of the Legislative Auditor, analysis of MnSCU colleges' chief student affairs officer survey, July 2008; Minnesota State Colleges and Universities, *Fact Book* (St. Paul, November 2007), 3.

⁶ Results are similar for ratios of counselors plus advisors to students. The ratios by themselves tell only a partial story because counselors provide many different services (from disability services to mental health counseling to veterans' services) in addition to career counseling.

Some MnSCU colleges make data on graduates' job placement rates widely available to prospective students, while others do not.

Colleges also vary in the way they use data on their graduates' success at finding jobs related to their chosen fields. Some colleges view these related employment rates as consumer information and use them to inform prospective students and promote the college. They post their rates online and make them widely available. Other colleges use the rates as part of evaluating their occupational programs, but they do not include the rates in promotional materials or distribute them unless specifically requested. The rates are derived from MnSCU's graduate follow-up survey, which most MnSCU chief student affairs officers we surveyed viewed as at least somewhat useful when working with new or prospective students. Yet, one in five of the student affairs officers considered the follow-up survey results either somewhat or very useless, as Table 3.3 shows.

Table 3.3: Opinions of MnSCU Colleges' Chief Student Affairs Officers on Usefulness of Graduate Follow-Up Survey, 2008

	Usefulness with New or Prospective Students	
	Number	Percent
Very Useful	10	33%
Somewhat Useful	14	47
Somewhat Useless	4	13
Very Useless	<u>2</u>	<u>7</u>
Total	30	100%

NOTES: The question read, "When working with new or prospective students, how useful were the results from the graduate follow-up surveys?" *N*=30.

SOURCE: Office of the Legislative Auditor, analysis of MnSCU colleges' chief student affairs officer survey, July 2008.

There is also variation among colleges in the career and job resources available. For example, all colleges reported having materials on career options. On the other hand, while 73 percent of the colleges reported having the capacity for students to post résumés or apply online for jobs, 27 percent did not.⁷ Table 3.4 shows the variation in availability of certain career exploration and job search resources.

Some, but not all, of the web-based resources available to assist students explore careers, learn job-search skills, and identify jobs are available at all MnSCU colleges. Online resources are particularly helpful, according to career center personnel we interviewed, because career centers may have only one or two staff people, and those employees may have additional responsibilities outside the

⁷ MnSCU's "eFolio" allows students (and other Minnesotans) to develop electronic portfolios of their education and career interests and includes the option of posting résumés online.

Table 3.4: Career Exploration and Job Opportunity Information and Services Available at 30 MnSCU Colleges, 2008

Service	Available	Not Available
Written materials explaining how the college's programs relate to specific careers (N=30)	100%	0%
Referrals to Internet sites on career exploration, such as ISEEK or Minnesota Career Information System (N=29)	100	0
Written materials on career options (N=30)	100	0
One-on-one career exploration with college counselor or advisor (N=30)	100	0
Courses, workshops, or seminars on job-search skills (N=30)	100	0
One-on-one meeting with program faculty regarding programs and careers (N=30)	97	3
On-campus visits by recruiters (N=30)	93	7
Class on career exploration (N=30)	87	13
Career fairs representing numerous employers (N=30)	87	13
Tours of businesses at employers' sites (N=29)	79	21
Single-session workshop (outside orientation) to explore careers (N=30)	77	23
Capacity for students to post résumés or apply online for jobs (N=30)	73	27
"Brown-bag" workshops featuring workers or employers from a specific industry (N=30)	57	43
Life planning tool (e.g., GPS LifePlan) to help students determine academic, career, and personal goals (N=30)	50	50
Career exploration session during orientation (N=30)	30	70

SOURCE: Office of the Legislative Auditor, analysis of MnSCU colleges' chief student affairs officer survey, July 2008.

center. Online resources such as ISEEK are commonly used by all colleges.⁸ Others, such as proprietary diagnostic career-exploration tools, are available at only those colleges choosing to purchase them. Typically, staff must help interpret results of these tools.

RECOMMENDATIONS

We offer two recommendations regarding information provided to students on exploring careers and the market for jobs. One is aimed at the Board of Trustees, and the other at MnSCU colleges.

⁸ As explained in Chapter 2, ISEEK is a web site for career exploration, educational planning, and job search information.

RECOMMENDATION

The Board of Trustees should by policy require colleges to ensure that information on career exploration and job opportunities is getting to the occupational program students who need it.

The policy should require each college to (1) identify potential types of students who need but may not receive such information and (2) develop plans to prevent situations where some students are left uninformed. A board policy is needed because students are the colleges' primary constituents. Information on both job seeking and job opportunities can be critical to successfully locating employment, and its adequacy at the colleges merits board attention. Further, a board policy is needed because this matter affects all colleges.

Not every student necessarily needs college assistance in these matters. Part of the policy deliberation should include a discussion of which students are most likely to lack the appropriate information. At a minimum, the list should contain students in programs connected to occupations with mixed expectations for regional job opportunities.

We do not advocate that the board prescribe what services and information colleges should offer. Some variation among colleges is acceptable, and perhaps necessary, to meet local needs. The objective is to make sure all students who need assistance get served. The policy should include a mechanism for assurances from colleges that the responsibility is met systemwide.

RECOMMENDATION

Especially for occupations with mixed expectations for regional job opportunities, MnSCU colleges should make certain that pertinent students are informed of job prospects.

MnSCU colleges provide students with information on job prospects, but few ensure that all students who need assistance receive it.

While many colleges already take steps to provide information to students about job prospects, few ensure that all students who need assistance receive it. When a student's chosen field is not expected to offer strong opportunities for employment, this information is particularly important. Similarly, the information is important when data show that graduates might have to move to find work. It is incumbent upon students to learn what they can about their chosen profession. Even though information on job prospects may be available, however, colleges should not assume that all students have sought it out. All colleges should have ways to guarantee students are alerted when jobs do not exist locally or job openings for their chosen fields fall short.

List of Recommendations

- All MnSCU college statements of mission, vision, and purpose, as well as their high-level planning documents, should clearly reflect the priorities set in state law and decisions of the Board of Trustees ([p. 63](#)).
- MnSCU colleges that currently do not assess labor market data when conducting program reviews should change their review policies to require assessing how well the supply of graduates and workers matches demand for occupations related to a program ([p. 64](#)).
- MnSCU should explore improvements to assessing graduates' success at finding employment related to their chosen occupation ([p. 65](#)).
- When reviewing its cap on enrollments for construction electrician programs, MnSCU's Office of the Chancellor should take local economic conditions into greater account ([p. 65](#)).
- Colleges should provide better oversight of program advisory committees and take steps to improve those that are not fulfilling their potential ([p. 66](#)).
- The Board of Trustees should by policy require colleges to ensure that information on career exploration and job opportunities is getting to the occupational program students who need it ([p. 74](#)).
- Especially for occupations with mixed expectations for regional job opportunities, MnSCU colleges should make certain that pertinent students are informed of job prospects ([p. 74](#)).



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March 6, 2009

Mr. James R. Nobles, Legislative Auditor
Office of the Legislative Auditor
100 Centennial Office Building
St. Paul, Minnesota 55155

Dear Mr. Nobles:

Thank you for the opportunity to respond to your evaluation report, *MnSCU Occupational Programs*. We found the evaluation to be both thorough and professional and offered us excellent insights about our occupational programs. The report will be used to improve upon our strong tradition of offering technical education programs that provide skilled workers to the state's employers.

We especially appreciate your lead finding that the "system generally does a good job of assessing economic conditions and workforce needs, but two-year colleges do not consistently consider market needs for workers when managing existing programs." We embrace the concept of continuous improvement and concur with your recommendations. In particular, it is our intention to strengthen our ties to employers and improve the information provided to students on job prospects. Our action plans for addressing the seven recommendations are as follows:

Recommendation 1: All college statements of mission, vision, and purpose, as well as their high-level planning documents, should clearly reflect the priorities set in state law and decisions of the Board of Trustees.

The system has a policy in place that requires a review of missions every five years. As of January 2009, all college missions have been reviewed and approved by the Board of Trustees. Future reviews will take place on a regular basis. The focus of these reviews will be priorities set in state law and policies of the Board of Trustees.

Recommendation 2: MnSCU colleges that currently do not assess labor market data when conducting program reviews should change their review policies to require assessing how well the supply of graduates and workers matches demand for occupations related to a program.

We appreciate your staff's recognition of the large amount of work in this area undertaken by Office of the Chancellor specialists. We will use this expertise to incorporate workforce demands into program reviews conducted by the colleges. Similar to procedures for new programs and major program modifications (Procedure 3.36.1, Part 5, Subpart A.3), we will add a criterion to our review process for existing programs (Part 7, Subpart A), that incorporates a supply-demand dimension.

Recommendation 3: MnSCU should explore improvements to assessing graduates' success at finding employment related to their chosen occupation.

We realize there are limitations to the methods we currently employ, and we will continue to seek approaches that better assess graduates' success at finding jobs related to their field of study and chosen occupation. A regional approach to job placement utilizing the combined resources of the colleges and universities may produce better results. We intend to test this concept.

Recommendation 4: When reviewing its cap on enrollments for construction electrician programs, MnSCU's Office of the Chancellor should take local economic conditions into greater account.

As your report shows, under most circumstances, colleges have taken appropriate actions to adjust program offerings to changes in the labor market. In rare circumstances, however, such as with the construction electrician programs, it has been necessary to exercise delegated authority under Board policy to cap enrollments. We concur the data now demonstrate that the enrollment cap must be adjusted for regional differences. Based upon a labor market analysis completed this fall, we will lift program enrollment caps in some regions and retain them in other regions.

Recommendation 5: Colleges should provide better oversight of program advisory committees and take steps to improve those that are not fulfilling their potential.

We are committed to improving our relationships (both at the statewide/system and institutional levels) with our business/industry customers. The Office of the Chancellor will work in tandem with the colleges to address the shortcomings identified with program advisory committees. College presidents will be held accountable by making the composition and performance of program advisory committees part of their annual presidential evaluations.

Recommendation 6: The Board of Trustees should by policy require colleges to ensure that information on career exploration and job opportunities is getting to the occupational program students who need it.

We will work with the presidents, staff, and the Board of Trustees to create policies in this area.

Recommendation 7: Especially for occupations with mixed expectations for regional job opportunities, MnSCU colleges should make certain that pertinent students are informed of job prospects.

We will work to improve college and program effectiveness in providing this information. Improvements can be made to Web-based tools such as iSeek. Doing so will increase the likelihood that students are aware of information on job prospects.

Conclusion

Again, we wish to express our deep appreciation for this program evaluation and fine report. Although it found that we had generally done a "good job," we are committed to implementing your recommendations and doing even better.

Sincerely,



David C. Olson
Chair, Board of Trustees



James H. McCormick
Chancellor

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