

Minnesota State Colleges and Universities Centers of Excellence program evaluation

Year 1 (2005-06) progress report executive summary

The 2005 State Legislature appropriated \$10 million for the 2006-07 biennium to create Centers of Excellence within the Minnesota State Colleges and Universities (MnSCU) system to develop flagship programs in Minnesota's critical industries. The Centers would provide best-in-class programs, ensure a highly-qualified and diverse workforce that would strengthen Minnesota's economy, and be recognized regionally and nationally. To achieve these goals, Centers were expected to develop collaborations with businesses and to form partnerships within the MnSCU system and with K-12 schools.

The four Centers selected in October 2005, following a competitive process, were:

- Center for Manufacturing and Applied Engineering
- Minnesota Center for Engineering and Manufacturing Excellence
- Center for Strategic Information Technology and Security
- Center for Integrated Health Science Education and Practice

In 2006, Wilder Research began evaluating Centers on their activities, outcomes and economic impact. Evaluation reports will be submitted in 2007 and 2009 to the governor and chairs of the higher education finance committees in the legislature as required by authorizing legislation. An interim report will also be submitted in 2008. Initial evaluation activities included site visits, document review, data analysis from the statewide record system, and interviews with 100 stakeholders from academic, industry, and K-12 partners.

Key activities and accomplishments in the first year

Center development. A key accomplishment for all Centers was creating a vision, structure, and work plans, as well as new relationships with academic, industry, and K-12 partners. Many faculty, administrators, and industry leaders now know more about each others' programs and resources, and are beginning to share best practices.

New approaches. All stakeholders reported that the Centers have fostered new activity, including new or expanded work with K-12 schools and industry. More and earlier industry input into curriculum development has helped courses better meet industry job-skill standards; programs for high schools students have helped spark enthusiasm for these fields.

Improved articulation (ease of transfer) among programs. Most stakeholders report that Centers are making it easier for students to move through different levels of course work and training, including bridge programs to help diverse students prepare for college; college credit for advanced high school courses; and on-line classes and programs that allow increased flexibility both in schedule and geographic location.

Visibility. All four Centers are developing a "Center identity" and gaining recognition through brochures, websites, campus visits, presentations to statewide and national conferences, and/or articles in academic or industry journals.

Acquisition of outside resources. Besides the \$5 million first-year start-up funding, Centers and their associated programs also obtained nearly \$6.8 million in grants and donations.

Better labs and equipment. Particularly at the two manufacturing Centers, there has been a significant focus on updating equipment and laboratory facilities in order to provide training in accordance with current industry standards.

Overview of academic partners and programs associated with each Center of Excellence

Consortium for Manufacturing and Applied Engineering (CMAE)

Partners

Bemidji State University, Bemidji
Central Lakes College, Brainerd
Minneapolis Community and Technical College, Minneapolis
Northland Community and Technical College, Thief River Falls
Northwest Technical College, Bemidji
Pine Technical College, Pine City
Saint Paul College, Saint Paul
Saint Cloud Technical College, Saint Cloud

Programs are focused in **Engineering Technologies** (emphasizing Industrial, Electrical, and Mechanical Drafting), several specialties in **Precision Production**, and related programs in mechanics, repair, and technical sales.

Minnesota Center for Engineering and Manufacturing Excellence (MnCEME)

Partners

Minnesota State University, Mankato
Alexandria Technical College, Alexandria
Anoka Technical College, Anoka
Hennepin Technical College, Brooklyn Park, Eden Prairie, and Plymouth
Normandale Community College, Bloomington
Northeast Higher Education District (Hibbing Community College, Itasca Community College, Mesabi Range Community and Technical College, Vermilion Community College)
South Central College, Faribault and North Mankato

Programs are focused in **Engineering Technologies** (emphasizing Hydraulics, Manufacturing, and Computer Assisted Drafting), **Precision Production** (machine tool technology), and related programs in computer science, biotechnology, property and equipment maintenance, and automotive mechanics.

Center for Strategic Information Technology and Security (CSITS)

Partners

Metropolitan State University, Minneapolis and St. Paul
Inver Hills Community College, Inver Grove Heights
Minneapolis Community and Technical College, Minneapolis

Programs include **Computer and Information Science & Support Services**, with related programs in Management Information Systems and Computer Technology/Computer Systems.

Center for Integrated Health Science Education and Practice (CIHSEP)

Partners

Winona State University, Winona
Minneapolis Community and Technical College, Minneapolis
Minnesota State College – Southeast Technical, Winona and Red Wing
Normandale Community College, Bloomington
Pine Technical College, Pine City
Ridgewater College, Willmar and Hutchinson
Riverland Community College, Albert Lea, Austin, and Owatonna
Rochester Community and Technical College, Rochester

Programs include **Health Professional & Related Clinical Sciences** (ranging from Nursing to Dental and Allied Health Diagnostic to Clinical Laboratory Science to Home Health Aide), plus related programs in Bioinformatics and Biomedical Sciences.

Challenges going forward

Showing results within the short funding time-frame. Both academic and industry stakeholders report they are committed to the goals of the Centers. However, many are concerned the Centers might close if they cannot show significant results within the initial four-year time-frame. As one industry representative said, “The innovation and vision are long-term, but the funding is short.”

Adequate funding. There is concern about the ability to obtain new ongoing funding within four years. “The [new] funding was going to be coming from fund-raising efforts ... but you have to build a water-tight vessel before you sail it.” (University administrator)

Sustained partnerships. While development of working relationships with new partners is widely cited as a major accomplishment, the effort and time

required to sustain them – over and above usual responsibilities – is cited as a significant challenge. “It has taken hours from other projects.” (College administrator)

Lack of systems to reward or promote inter-institutional partnership.

Most personnel essential to the success of the Centers of Excellence are accountable through their institutions rather than to any Center official. Stakeholders generally felt that Center affiliation enhances the work of their own department or program, justifying use of time and resources. However, if their efforts detract from their work within their department or college, their willingness to participate may decrease. Also, some concern was expressed that if the project’s future was uncertain, their efforts would have been better spent within their own department or program. “We are already dealing with limited resources. How much do we want to commit to this initiative if it’s just going to be a [temporary] innovative project?” (College administrator)

Factors important to success

The following factors were commonly identified as important to achieving success:

- Maintaining a clear and consistent vision and focus
- Collaboration, coalition-building, and shared ownership (*quality* of partnership)
- Communicating with partners and/or relationship-building (*development* of partnership)
- Resource issues, including longer support in the initial grant, as well as the Centers’ own work to secure additional external resources for sustainability
- Marketing and promoting the Centers
- Maintaining the energy, support, and/or involvement of Center partners (academic, industry, and K-12), and of state-level “champions” within the MnSCU system and in state government

Tradeoffs associated with variations in Center design

Each Center has unique design elements. It is too soon to speculate on which may prove most successful, but understanding tradeoffs can inform planning for current and future Centers.

Number of academic partners. Having more partners allows a Center to benefit from a wider range of strengths and specialties, but also makes it more challenging to establish new relationships and maintain effective communications.

Industry role in governance. Three of the Centers have separate Industry Advisory Boards. By contrast, CIHSEP includes key industry leaders in every committee and working group, giving them earlier and a more direct voice into Center decisions, but also requiring significantly more time and energy of them.

Decision-making process. Three of the Centers develop work plans that include specific future projects. By contrast, CIHSEP’s work plan selects projects by Request For Proposals annually. Work plans that include future projects help identify programs or workplaces most likely to be affected and help to coordinate activities; work plans with annual Request for Proposals provide more flexibility in meeting needs, spread accountability to a wider pool of stakeholders, and may increase the number of new ideas.

Baseline description of Center activities

Last year, Wilder Research collected the following baseline information that will continue to be measured in subsequent years. Since the Centers did not begin to receive funding until January 2006, data reflect only the first six months of Center activity.

- During 2005-06, the 306 programs associated with the four Centers granted a total of 3,091 awards (certificates, diplomas, and degrees).

- 2,970 students received one or more credentials from Center-affiliated programs in 2005-06. Of these graduates:
 - 34 percent were male.
 - 24 percent were members of racial minorities or foreign nationals.
 - Ages ranged from 15 to 75, with an average age of 28.
 - 39 percent were first-generation college students (defined by Minnesota statute as one who does not have any parent who attended college).
- By the best estimates of Center Directors, at least 342 different firms were involved in some way with the Centers during the year. At least 11 percent of those firms were not previously involved with any partner program prior to the organization of the Center.
- Aside from the start-up funding, the estimated total funding received by the Centers (and/or their associated programs) in 2005-06 was \$6,792,125. Industries have also made significant in-kind contributions of time, equipment, and space.

Economic impact

It is reasonable to expect that Centers will have an effect on Minnesota's economy; however, the effects are not likely to be fully evident by 2009, and it will be challenging to measure them. The impact is expected to be primarily through helping train more highly-skilled workers and helping companies apply knowledge more quickly and efficiently. The impact is more likely to be seen in selected industrial sectors statewide, rather than particular geographic areas, as implied in the authorizing legislation. However, we cannot know precisely what would have happened to Minnesota's economy in the absence of the Centers of Excellence.

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For more information

This summary presents highlights of the *Minnesota State Colleges and Universities (MnSCU) Centers of Excellence program evaluation Year 1 report*. For more information about this report, contact Ellen Shelton at Wilder Research, 651-637-2470.

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