

Summary

Minnesota State Colleges and Universities Centers of Excellence

Program evaluation year 2 (2006-07) progress report

Aiming to develop best-in-class programs in critical industry sectors, ensure a highly-qualified and diverse workforce to strengthen Minnesota's economy, and gain regional and national reputations, the Minnesota State Colleges and Universities system designated four Centers of Excellence:

- The Center for Manufacturing and Applied Engineering (now 360° Center for Manufacturing and Applied Engineering)
- The Minnesota Center for Engineering and Manufacturing Excellence (MNCEME)
- The Center for Strategic Information Technology and Security (CSITS)
- The Center for Integrated Health Science Education and Practice (now called HealthForce Minnesota)

Continued development of partnerships

The headline story for the Centers' first year (2006) was relationship building among institutional partners including K-12 schools and related organizations, business and industry, and the partner academic institutions. In 2007, this has continued and become more integrated into day-to-day work.

Partnerships can provide an effective way to respond to a rapidly-changing environment. However, they require new skills and behaviors and overcoming common challenges. These include geographic distance, the need to identify common interests and transcend differences in institutional missions, and the fact that participation is outside of the standard time commitment or incentive structures.

Centers have found that successful partnering requires: strong communication that begins with face-to-face relationship building; a consistent set of partners and their representatives; the right mix of partners; a clear, shared mission; and time, trust, and patience to develop and practice new ways of operating. When these foundations are well established, it is important to

spread the involvement both upward to policy-making and resource-controlling levels of participating organizations *and* outward to operational levels.

Partnership with business and industry

Business stakeholders surveyed in 2007 cited three main roles for industry in the Centers: to advise the Centers on strategic priorities as well as industry's skill needs; to provide a "real world" context by hiring graduates or providing industry experience for students and faculty; and to provide financial or in-kind support, especially for specific projects. In the Centers' first two years, contributions from private corporations, industry associations, and corporate foundations totaled just over \$2.4 million in cash and in-kind donations (not including the value of individual representatives' time).

Among the Centers' goals identified by multiple stakeholder groups, industry representatives rated two as critical: increased numbers of potential employees, and a better qualified or educated pool of potential employees. Other benefits industry expects from the Centers include input into the academic preparation of future workers, and opportunities to network with other business people and educators. They also report that they find the Centers valuable as a single point of access for a broad range of programs and services, and for their work to promote the visibility and positive image of the industry and its job opportunities.

All Centers report considerable progress in developing new relationships with business and industry, and over one-third of business respondents reported that their business had not been involved with any of the Center's academic partners before the Center was formed. Center directors report that the new and deeper relationships with business have resulted in better understanding of industry needs. Business representatives report a largely positive perception of Center progress. Two-thirds (67%) of those surveyed

think their Center has made adequate progress to date. Although increases in numbers or qualifications of students are not expected this early, most business partners report being satisfied that the work is being done to make this happen. In the mean time, immediate benefits reported include better business access to Center resources, increased awareness of their business or the industry sector, and networking with others in education and industry.

Partnership with K-12 and other outreach to promote enrollment

During 2007, all four Centers increased their marketing activities and levels of visibility, and continued to promote interest in their respective fields and programs. Activities include sponsorship of in-school secondary curricula (such as Project Lead the Way) and summer camps and other out-of-school-time activities. Promotion includes information and marketing materials for prospective students and their parents, secondary teachers and counselors, and others including WorkForce Center staff.

Partnership among higher education institutions

Although Centers are expected to promote innovations in recruitment, programs, and articulation, they do not control admissions, instruction, program approval, or award of degrees. Rather, they depend on the partner universities and colleges to do these and other traditional academic functions.

Centers have expanded and strengthened their academic partnerships during 2007. Building on a shared vision and the relationships and trust that were developed during 2006 (often on existing foundations), stakeholders report that partnership is more effective when each partner is clear about its needs and expectations, and brings innovative ideas to the discussion, while promoting the Center and its

work among its own internal and external institutional networks. This includes ensuring that both faculty and top administrators are informed and involved.

Key Center accomplishments to date

An estimated \$10.4 million in **additional funding** was leveraged in the first two years, or slightly more than the amount awarded for start-up. Just over one-quarter (28%) came from private sources such as industry partners or businesses, corporate foundations, and philanthropies.

Centers have heightened visibility by increasing **marketing and outreach efforts**, including general student recruitment and targeted recruitment to more diverse and nontraditional students.

Based on **enrollments** in courses identified by Centers as core to their associated programs, just under 20,000 students were affected by Center activities in each of the first two years of implementation. According to faculty in two Centers, enrollments in associated programs grew in fall 2007 (the start of the 2008 academic year that will be reported on in the final report).

With advice from industry stakeholders and the coordinated efforts of associated departments and programs, Centers have helped fund **upgrades in technology** and facilities, spur the creation of dozens of **new courses** and **eight new programs** or concentrations (with more under development), and **better articulation** among programs.

The Centers are also contributing to **changes in how existing courses and programs are offered**, including more nontraditional instruction such as simulation, on-line learning and other remote instruction, and flexible class times to better support a more diverse student population.

This is the second of three annual evaluation reports addressing implementation issues and outcomes. A main focus of evaluation activities during 2007 was in-depth interviews with 66 industry stakeholders. Findings are also based on site visits and other meetings, review of documents, data collected by the Centers and the Office of the Chancellor, and interviews with Center directors, systems office staff, and trustees who visited the Centers during 2005-06.

In working with their academic partners on these accomplishments, and by coordinating processes across institutions, Centers have found ways to more quickly and easily implement innovations, and to better leverage existing resources. By convening faculty and staff across institutions they are sparking awareness and dissemination of best practices among campuses. According to the business representatives surveyed, the Centers' coordination of activities across several campuses makes them uniquely different from individual Minnesota state colleges and universities, and is one of their main selling points for industry.

Key challenges to Center development and growth

One measure of the extent of Centers' innovation is the extent to which they have challenged the system to do things in new ways, which can cause stress both to the Centers and to the rest of the system. This section describes some of the challenges involved in accomplishing the Centers' work so far, and considerations for ways that the Centers' progress can be sustained in the longer term.

1. Centers are restricted in their ability to seek, receive, or control funds.

Unlike a department or college, a Center is not a legal entity, and is not allowed to receive funds directly, either as a donation or as a share of tuition revenue from enrollments it helps to generate. Each Center has a governance structure that includes all academic partners, but Directors report to the administration of the host universities, which are also ultimately accountable for Center funds. One result of this arrangement is that the university administrators have the power, if they choose, to determine the amount of authority the Centers' governing bodies can exercise over those funds.

2. Differences in institutional missions and priorities can impede curriculum articulation.

Four-year institutions and each kind of two-year institution have different missions, which can lead to different understandings of academic standards for course content and depth. Similarly, selection of

courses for a two-year technical degree may not match what is expected in the first two years of a four-year degree. Development of articulation agreements for seamless academic progression requires a thorough review of curriculum, and tactful resolution of these differences.

3. Innovation is mainly initiated through new individual relationships, but is more likely to be maintained if it is embedded in new structural relationships.

Competition among academic partners naturally arises from varied missions and institutional strengths, as well as institutional needs to maximize revenues from tuition, grants, and contracts. The Centers have made significant strides toward reconciling many of the initial turf issues, by focusing on cooperative activities that increase resources for all the partners as well as form the basis for continued cooperation and trust.

So far, relationships have been developed through early partnership negotiations, which appear to make subsequent negotiations easier. The more layers of the organization that are involved in such relationship building (such as campus administration, department administration, and individual faculty members), the stronger the basis for continued cooperation and trust. However, busy academic schedules and difficulties in arranging for release time tend to limit such broad participation.

Funding and sustainability considerations

Across Centers, stakeholders often reiterate that four years of guaranteed funding is not likely to be enough to permit Centers to ramp up to a level of operation where they can generate, on their own, the funding they need to continue.

When Centers were set up, it was assumed that business and industry would be significant sources of funding for longer term operations. However, industry partners report that businesses do not feel they have enough resources to contribute at this level. They expect, and will advocate for, public funding to maintain the Centers. They are prepared to contribute directly to the work of the Centers, but more for specific projects than for ongoing general operations.

Stable, ongoing operations are key to effective service to industry as well as students, and require stable, ongoing sources of revenue. Identification of these sources will need to be a significant focus of third year efforts.

What can be expected by the end of 2008

The table below summarizes key outcomes expected of the Centers, and the likely time frame within which each may reasonably be expected:

ESTIMATED SEQUENCE AND TIME HORIZON FOR KEY CENTER OUTCOMES	
Year	Outcome of interest
1	2- and 4-year partnerships; employer involvement; growth in Center funding (initial efforts)
2-4	Articulation of curriculum (adoption of agreements)
3-6	Growth in student admissions and program enrollment
4-6	Growth in Center funding (more mature, sustainable efforts)
4-7	Diversification of student demographics; increase in graduation numbers
4-8	Articulation of curriculum (evidence of student success)
5-10	Regional recognition
6-9	Graduation outcomes such as employment success
6-10	Economic impact
6-12	Improvement of results in related programs

From the common starting point of a shared mission and expected outcomes, each Center is adapting to the different needs of its targeted industry and the different strengths and interests of its academic partners. Because of the need to find the best fit for these unique conditions, there is no single best set of strategies or practices that applies to all Centers.

Although the evaluation is designed to measure one set of common outcomes, Center stakeholders expect that outcomes will vary among the Centers, in part reflecting the varied environments in which they operate. These variations will most likely be reflected in different quantitative results, such as the numbers of enrolled students and graduates, as well as other more qualitative measures such as the extent of new partnerships or Center visibility.

It is unlikely that large-scale economic impact, including job placement rates and income changes, would be evident as early as the end of 2008. However, a variety of intermediate measures can be used to gauge potential longer-term impact. These might include such measures as customized training contracts, growth in enrollments in Center-related programs and in outreach activities for prospective students, or possibly awards of shorter-term credentials such as certificates.



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For more information

This summary presents highlights of the *Centers of Excellence Program Evaluation Year 2 Progress Report*. For more information about this report, contact Ellen Shelton at Wilder Research, 651-280-2689.

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