



Creating the Minnesota
Virtual University—
Assessing Results and
Readiness Criteria

Virtual U

In 1997 the state of Minnesota passed the Higher Education Bill, which called for the development of a statewide virtual university. This article describes the response to that mandate, measures the results to date against two classification systems and several sets of readiness criteria for virtual universities, and suggests keys to advancing virtual university partnerships based on lessons learned.

by **Ann Hill Duin** and **Linda L. Baer**

According to a Minnesota state planning report, "If Minnesota's higher education institutions—both public and private—are to thrive...they need to see themselves as brokers of educational services, rather than as competitors fighting for enrollment and public funds, and they need to work cooperatively to provide affordable services."¹ The citizens of our states, our nation, our world—our learners—expect our educational systems to partner in providing high quality, affordable, relevant, flexible, and focused programs and services that meet immediate and long-term educational needs. They expect us to leverage our resources in the development of joint systems and services that are designed with the learner at the center. Furthermore, we are all faced with growing competition from around the world as well as from nontraditional educational organizations.

In 1997 the state of Minnesota passed the Higher Education Bill, which called for the development of a virtual university, defined as "a system to provide the uniform delivery of higher education administrative services and program offerings to students through the electronic medium of the Internet." In this article we describe the development of such a statewide system—primarily the building of a suite of online resources to meet the needs of lifelong learners—and evaluate the results to date. In assessing our achievement, we examine two prevailing taxonomies for classifying virtual universities and explore several sets of readiness criteria that should be in place and addressed before beginning a statewide virtual university effort. We conclude with a discussion of keys to success in advancing virtual university partnerships.

Minnesota Virtual University Initiative

With one million dollars in state funding, our two public higher education systems—the Minnesota State Colleges and Universities (MnSCU) and the University of Minnesota (UMN)—responded to the state's mandate to build a virtual university by developing a statewide partnership among private colleges, state departments, industry representatives, and community organizations. With such limited funding, we opted to develop a suite of online learner resources consisting of (1) an advising and career planning tool known as ISEEK, the Internet System for Education and Employment Knowledge (see <http://www.iseek.org>), and (2) a common course catalog known as Minnesota Virtual University, or MnVU (see <http://www.mnvu.org>).

These two resources provide learners, counselors, and employers with a “virtual” advising office for help with needs assessment, program identification, and financial aid as well as a common catalog for links to courses and class schedule information (potentially from all providers in the state). In addition, employers, community groups, and learners of any age or at any location can post requests regarding their specific learning needs and preferred delivery method (face to face, World Wide Web, ITV, and so forth), and “matches” are then made between the providers and learners.

A coordinating board made up of members of the many stakeholders, two project managers, and a series of task teams have largely led this effort and developed these resources. The chancellor from one system and the provost from the other appointed the original board; the co-chairs are the senior vice chancellor from the Min-

nesota State Colleges and Universities and a vice provost from the University of Minnesota.

MnVU represents a solid commitment to partnership. The partners that have sustained the effort include state agencies, higher education institutions, and private organizations. In addition, task teams made up of faculty; administrators; staff; and people from industry, community groups, and government agencies worked in 13 areas, from faculty and staff training and development to marketing to distance education resource development (see the sidebar on page 20 for a complete list of MnVU partners and task teams).

Although governing boards, college and university presidents, academic deans, and other key stakeholders have been informed throughout the process—and several hundred administrators, faculty, and staff have actually been involved in the initiative—some continue to be opposed to this venture or view it as a competition for currently scarce resources. This opposition could be viewed as an asset instead of a liability. Stephen Downes, in his analysis of the California Virtual University, writes:

There is a great danger that online learning will suffer from the (uninformed) promises made by administrators and government officials. Expecting quick financial returns, expecting to be *the* provider of a certain course, program, or service, expecting that staff and students will flock unassisted to the new paradigm; these are all pitfalls into which promoters of online learning sometimes fall, and ironically, sometimes the discipline's greatest proponent can also be its greatest liability.²

Downes also notes that joint ventures are necessary because they reduce costs

and improve usage, but they “do not work unless the institutions work together, sacrificing (apparent short term) gain for future returns.”

We have found that faculty, administrators, and staff across our state respond to the MnVU effort generally in one of three ways: (1) tremendous excitement through recognition of the need for institutions to cooperate in developing online programs and resources for learners and a genuine readiness to collaborate with colleagues at other institutions to meet the needs of our citizens; (2) genuine fear that virtual universities and their online resources represent a “second-class” form of learning; or (3) a feeling that this represents the next ineffective educational scheme, competition for scarce resources, additional burden without reward, top-down decision forced upon them, or simply the next nuisance keeping them from conducting research.

The wide array of responses stems in part from the lack of understanding of what constitutes a virtual university. Universities, continuing education divisions, corporations, and non-profit entities all create virtual universities, each with distinct characteristics.

Is MnVU Really a Virtual University?

According to Teare, Davies, and Sandelands, “A virtual university must be a real university offering learning opportunities otherwise denied. It must be, above all, a network for lifelong learning which meets the new learning needs of a new century.”³ By this definition, the Minnesota Virtual University, currently primarily a comprehensive course catalog, does not represent a “real” virtual university. Instead, what began as a legislative mandate to create a virtual university has become a framework for the

Minnesota public higher education systems to address joint development of online student systems, curriculum development, faculty and staff development, K–12 connections, transfer issues, industry partnerships, and rapid development of learning resources to meet learner needs. The online advising system and comparative course catalog that were created put the potential resources

of 200+ institutions at the fingertips of lifelong learners. They do not, however, deliver the courses, certificates, modules, or programs. MnVU is not a new degree-granting institution.

In the literature, virtual universities have been classified in different ways, such as by the degree of institutional integration (Burck Smith), organizational structure (Donald Hanna), gover-

nance structure (Fred Hurst), economic basis and scope (Thomas Athey), and the degree of innovative technology used (Jean Michel).⁴ The Smith and Hurst taxonomies are especially relevant to the different models one might undertake for building a statewide partnership.

Smith's classification focuses on higher education consortia that are formed to exploit the potential of communications technologies to provide "greater scheduling flexibility, greater variety of courses and degrees, and better educational value to...students." Smith believes such consortia will be the basis for future mega-universities and categorizes them according to three levels of institutional integration: the course broker, the collaborator, and the wholesale purchaser (see Table 1 for details). He did not consider any existing consortium to have reached the level of wholesale purchaser at the time his article was published (December 1998) but identified as close examples the Colorado Electronic Community College (CECC) and the part of Western Governors University that offers competency-based degrees.

Hurst, in an *On the Horizon* article published in July/August 1998, presented a set of six virtual university scenarios: the open university, governor's university, virtual community college and university, institutional competition and consumer advocacy, coordinated collaboration, and current structure (see Table 2 for details). These scenarios are directed at colleges and universities to help them evaluate different structures and governance models for distance learning in their attempt to meet the new needs for workforce training, retraining, and post-secondary education in general.

Why have our efforts to date in Minnesota to establish a virtual university resulted instead in the adoption of a "course broker" model? Leading administrators of Minnesota systems are

Table 1

Distance Education Consortia: Stages of Integration

The Course Broker—These consortia list course offerings from member institutions, but they do not offer degrees. Consortium members may share the cost of operating the collaborative, but they typically do not share revenues. This level of institutional integration allows for members to avoid controversial issues such as revenue sharing, scheduling conflicts, admissions criteria, etc. However, this model does not provide a consistent learning experience for learners. This is the most frequent consortium model at this point; examples are the Western Governors University (WGU), Southern Regional Electronic Campus (SREC), the Michigan Virtual Automotive College (MVAC), and the Iowa Communications Network. The current version of Minnesota Virtual University also would fall under this framework.

The Collaborator—These consortia have curricular, budgetary, and administrative structures that allow for the sharing of courses (typically these are rarely offered courses, such as certain language courses), costs, and revenues. Community college systems are "particularly well positioned" for this model because they already share standard admissions policies, open enrollment policies, and often statewide standardized degree curricula. A typical example is the Maryland Community College Teleconsortium (MCCT).

The Wholesale Purchaser—Such consortia "purchase" courses from member institutions, assemble the courses into a degree program, and "resell" the courses and the degree to the distance education student. This model offers the greatest variety of courses and programs to students while benefiting from the strengths of individual members and competition among members. This level of integration is rare.

Adapted from Burck Smith, "Creating Consortia: Export the Best, Import the Rest," Converge, December 1998 [http://www.convergemag.com/Publications/CNVGDec98/highered/highered.shtml] Copyright 1998, Converge magazine. Reprinted with permission.

opposed to the open university scenario as well as the development of a virtual university that would award degrees. Current discussions under way between UMN and MnSCU focus on “mission differentiation,” a characteristic of Hurst’s institutional competition and consumer advocacy (ICCA) scenario. Following this model, MnSCU’s community and technical colleges could be the designated leaders in the area of distance learning, and UMN could focus its efforts

primarily on research on the impact of this effort on learning and economic development in the state. This approach, however, is opposed by those faculty in the UMN system who see part of their response to the “land grant mission” as developing distance learning offerings to meet the needs of the citizens of the state. Thus one could argue that community and technical colleges and universities should partner via the MnVU mechanism in this effort.

To be candid, given the lack of strong support for MnVU by upper levels of administration and lack of ongoing, adequate support from the legislature, most of our state’s institutions are continuing to develop distance learning courses within their current structures. We contend that this result stems in large part from the fact that our state was not ready for this initiative; MnVU began as a response to a legislative

Table 2

Virtual University Scenarios

The Open University (OU)

The Open University scenario involves the creation of a new independent institution, focused solely on distance learning, that would compete with existing institutions for students and would not reduce duplication of courses and degrees. No state in the United States has currently proposed such an initiative.

Governor’s University (GU)

A governor’s university would broker existing distance learning content in the state and would award degrees based on this content as well as offer student and academic services from this central virtual organization. In contrast to the OU, the GU would not develop its own courses. It would not necessarily reduce course duplication and could increase duplication due to increased competition among institutions. An example of this model is the Western Governors University.

Virtual Community College and University (VCCU)

In this model, courses and services are designed and offered by member institutions, which would also award degrees and certificates and thus retain their overall autonomy. While this system offers one-stop degree shopping and tends to involve less interinstitutional conflict than the GU model, the model does not reduce the duplication of course offerings. Leverage could occur, however, through shared marketing costs. The now defunct California Virtual University (CVU) was an example of this model.

Institutional Competition and Consumer Advocacy (ICCA)

This model embraces the free market and open competition among all institutions in a state. The ICCA would be a centralized neutral student and employer advocacy organization to provide information, marketing, needs assessment, and standards for academic and student services. This model would preserve institutional autonomy and reduce course duplication, but current institutional structures may prevent rapid response to a free-market approach.

Coordinated Collaboration (CC)

This model would involve a division of labor, with the public higher education system choosing institutions to be primarily responsible for distance learning. The result would be individual institutions with different missions rather than many institutions with an “add-on mission.” Cooperative agreements would be made to meet student and state needs. Although this model would likely reduce duplication of effort, participating institutions would lose some autonomy.

Current Structure (CS)

In this model, institutions continue to develop distance learning courses within their current structure. Thus there is no reduction in duplication of efforts and there are no new incentives for reducing costs.

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Partners in the Minnesota Virtual University

- Minnesota Association of Private Post-Secondary Schools
- Minnesota Community Education and Training Associations
- Minnesota Department of Children, Families and Learning
- Minnesota Higher Education Services Office
- Private Business and Industry Corporate Training Centers
- Minnesota Office of Technology
- Minnesota Private College Council
- Minnesota State Colleges and Universities
- University of Minnesota

MnVU Task Teams

- Joint Powers Agreement
- Legislative Request
- Industry Partnerships / Rapid Response Mechanism
- Faculty and Staff Training and Development
- MnVU Facilitation
(plans for online and face-to-face ongoing feedback mechanism)
- Marketing
- Policy Development
- Community Partnerships
- Technical Tests at Cooperating Institutions and Organizations
- Evaluation
- K-12 Connections
- Minnesota Transfer Agreement
- UMN and MnSCU Distance Education Resource Development

mandate rather than a response to a set of shared purpose and values among our state's institutions of higher education.

Assessing Readiness for a Virtual University

Robinson and Daigle note in their article about the factors that defeated California State University's innovative technology initiative that "a university's preparation or readiness prior to a partnership initiation is the single most important contributor to such success."⁵ Clearly, we need to better understand and analyze our readiness for a virtual university initiative. What follow are suggested readiness criteria at institution and interinstitutional levels from several sources.

Pew Grant Program readiness criteria

Carol Twigg, in her work with the Pew Learning and Technology Grant Program, has developed a set of "institutional readiness criteria" and "course readiness criteria" for those institutions interested in using technology to increase access, improve the quality of learning, and reduce costs. The institutional readiness criteria take the form of a list of questions to be addressed:

- Does the institution want to control or reduce costs and increase academic productivity?
- Is there a demonstrated commitment on the part of institutional leaders to use technology to achieve strategic academic goals, a commitment that moves

beyond using technology to provide general support for all faculty and all courses?

- Is computing firmly integrated into the campus culture?
- Does the institution have a mature information technology (IT) organization(s) to support faculty integration of technology into courses? Or does it contract with external providers to provide such support?
- Do a substantial number of the institution's faculty members have an understanding of and some experience with integrating elements of computer-based instruction into courses?
- Does the institution have a demonstrated commitment to learner-centered education?
- Has the institution made a commitment to learner readiness to engage in IT-based courses?
- Is there recognition on the campus that large-scale course redesign using information technology involves a partnership among faculty, IT staff, and administrators in both planning and execution?⁶

These criteria are helpful at the level of the individual institution; that is, they can help an institution determine whether it is ready to engage in a virtual university partnership. However, we have found that for a statewide partnership effort, such as a virtual university, even a group of institutions who are able to respond positively to the above questions may not be able to foster the development of a virtual university as this is also dependent on interinstitutional readiness for such a major initiative.

Rosevear's readiness criteria

In his comparative case study of eight organizations from higher education, industry, and state governments

involved in the development of virtual universities, Scott G. Rosevear also argues for the need to assess readiness before creating a virtual university. He has developed the following set of questions to assess readiness:

- What is the state's technological infrastructure?
- How prepared are the traditional colleges and universities to support virtual learning environments?
- Do they all have equal technological capabilities?
- What is a reasonable prediction for how long it will take before the virtual university is operational?
- What are the resources gaps, and how will they be filled?⁷

Rosevear's second question regarding the preparation of colleges and universities to support virtual learning environments most closely aligns with the Pew institutional criteria.

Our readiness criteria

Based on our Minnesota experience, we would add the following criteria for determining if a state is ready for a virtual university initiative:

Learner and faculty needs. Are there learning opportunities otherwise denied by existing traditional institutions? Are faculty being denied the opportunity to offer their expertise in innovative ways to the citizens of the state?

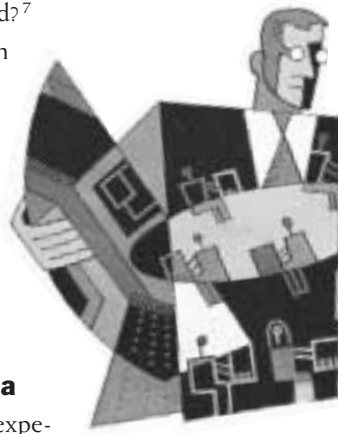
Champions of change. Is there both vertical and horizontal support across the institution and systems? Is there buy-in by the state's institutions and by key departments, programs, and faculty? Is there the potential for multistate or regional collaboration and support?

E-commerce strategy. Does the state have an e-commerce strategy, and does this strategy include an emphasis on lifelong learning (that is, innovative

partnerships between educational institutions and industry)?

International strategy. Does the state have an international strategy, and does this strategy include an emphasis on lifelong learning (that is, innovative partnerships in education, the ability to look worldwide for learning opportunities)?

Identified "crucial" industries and a clear economic development plan. The Michigan Virtual Automotive College began in large part to protect a crucial industry in the state. Has the state identified its most crucial industries to preserve, protect, and foster? The virtual university should preserve,



Most virtual university efforts have failed because they did not have the monetary resources to build and sustain such an effort.

protect, and foster lifelong learning in these industries.

A climate that supports collaboration. Are incentives in place to foster collaboration across systems? Rosevear's list of criteria includes the need for institutions in the state to have equal technological capabilities. We would argue that in addition to the need for a technological infrastructure, a state needs an environment that encourages and supports collaboration across public, private, proprietary, corporate, and other educational systems. The human resource infrastructure and commitment is the greatest need in establishing a statewide virtual university.

Resources. Is a minimum of \$5 million committed to the initiative? This

criterion seems obvious, yet most virtual university efforts have failed simply because they, in reality, did not have the monetary resources to build and sustain such an effort. Rosevear writes about the need to recognize the time it takes before a virtual university can be expected to sustain its operation. We would state that a minimum amount of time to sustain such an effort would be five years; however, most virtual university efforts funded by state legislatures result in a two-year funding commitment along with a large number of people who assume that the resulting virtual university will do everything imaginable for an extremely low price.

A commitment to learners. Do the state's institutions foster the development of learner-centered systems? So much has been written about the need for learner-centered systems that we hesitate to add this to our list of criteria. However, most institutions focus first on what the virtual university effort brings to them rather than on what it should bring to learners.

We have identified these criteria as we have worked to develop our state's virtual university. In some respects it is like determining when to have a family. If you wait until all your criteria have been met (for example, enough resources, a large enough home, enough time), you will never do so. Thus we recommend beginning such an initiative from the standpoint of advancing a partnership: Identify and work with key stakeholders and begin at the level of establishing trust and encouraging large amounts of communication.

Keys to Advancing Virtual University Partnerships

We know that characteristics of surviving and thriving organizations in the next century will, above all, include the capacity to develop, maintain, and

profit from working in strategic, collaborative relationships. While higher education continues to increase in complexity, specialization, and bureaucracy, thriving institutions of the future will be required to accomplish focused and targeted goals in more rapid timeframes than ever before and within a context of fewer public resources.

In order to meet the needs of rapid response in a complex setting, we must partner in new and unique ways. However, universities are particularly difficult to move towards lasting partnerships because of their high degree of complexity and organizational connections that lack cohesion of purpose (perhaps better described as "organized anarchy"). This lack of cohesion is frequently attributed to goals that are ambiguous, unclear, and diffuse, a consequence of multiple levels of authority and control from faculty within departments, departments within colleges, and colleges within universities. Hutchins suggests that the only thing connecting a university is a central heating system, and Giamatti proposed that a university was less an ecosystem than a swamp.⁸

Perhaps the greatest single factor distinguishing between universities and other types of organizations is related to authority and power relationships. The university has what has been described as a "fluid and amorphous" decision-making structure. It is a reflection of a large number of participants in the process and "hundreds of largely autonomous actions taken for different reasons, at different times, under different circumstances by different people." The greatest challenge is how to get everyone in on the act and still get action.⁹

Brandenburg and Nalebuff describe a new way of operating as "co-opetition," characterized by the following:

- Customers valuing what partners do together more than what they do individually.

- Suppliers finding it more attractive to supply to both individuals (or institutions) at once instead of individually.
- Supply-side complementarities becoming the norm.
- Institutions thinking how they might complement each other and maximize the use of resources and delivery of services.
- Institutions recognizing each other as equal partners in creating more value for customers.¹⁰

This reflects a very new way of approaching business. It is particularly difficult for higher education because a

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majority of people in higher education do not think in terms of cooperation, collaboration, partnerships, or co-opetition. Academe is still the stronghold of individual quests for knowledge.

As Robinson and Daigle note, "a desire to increase institutional resources and conduct business differently is a necessary condition but not adequate in itself to form a successful [interinstitutional] partnership."¹¹ Each university, each partner, must prepare in advance before attempting to form a virtual university to help determine if it is able to engage in such a relationship. The potential that a virtual university partnership holds can be realized, and risks of failure reduced, only if all parties to the partnership take important steps to establish trust, communicate openly,

and assess state and institutional readiness from a variety of perspectives.

So, how does one best advance a virtual university partnership? Based on our experience thus far, we know that a virtual university initiative needs a vision as well as leadership committed to a future that cannot be perfectly defined. It needs the support to allow it to grow toward a future that is continuously articulated; it needs the flexibility to jump on opportunities that arise during its development and implementation. To jump-start such an initiative, you need agreement on clear goals and principles, a commitment to collaboration, acceptance of creative partnerships, and champions at multiple levels who are provided with the time and support to succeed.

Endnotes:

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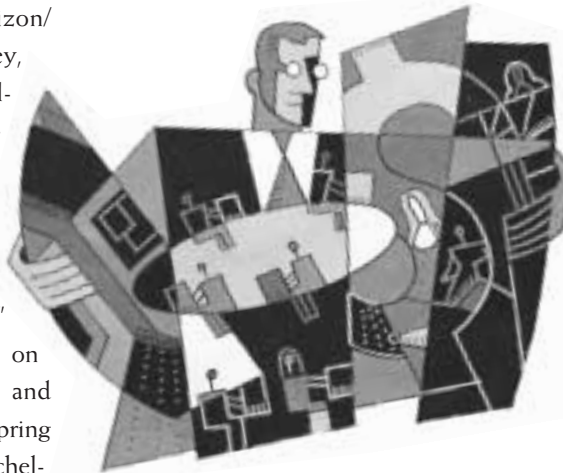
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