SLOAN-C™

The Sloan Consortium Report to the Nation

FIVE PILLARS OF QUALITY ONLINE EDUCATION

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The following is a synthesis of research-based insights and comments gathered from papers presented at the recent Alfred P. Sloan Foundation's Sloan Consortium (Sloan-C) invitational workshop held in Lake George, NY on September 26 - 28, 2002.

In the mid-90's, The Alfred P. Sloan Foundation's Sloan Consortium (Sloan-C) established its Five Pillars for Quality Online Education – learning effectiveness, student satisfaction, faculty satisfaction, cost effectiveness, and access – as the values, principles and goals of asynchronous learning networks.

Asynchronous learning networks (ALN) – an important variant within what is commonly known as "online learning" or "e-learning" – emphasizes computer and Internet technologies to facilitate interactive communications between an instructor(s) and students inside an online learning environment. Online learners and instructors work outside any physical classroom (from their home, workplace or wherever there is a computer with an Internet connection) and interact with each other through electronic communications, such as e-mail and threaded online discussions. They also have access to electronic text (or print-based text), as well as multimedia learning resources – all part of a sophisticated virtual learning environment. Online learners and instructors are not required to come to campus, and they are not tied to a real-time schedule.

A Growing Higher Education Phenomenon

The growth of ALN is best represented by the rapidly evolving, and now commonplace, practice of employing web-based tools and content for both traditional, face-to-face and distance-education courses at colleges and universities across the country.

Sloan-C's five pillars are a framework for measuring and improving an online program within any institution. Quality in online education is often thought to mean "learning effectiveness," and that is certainly one element, and it is one of the pillars. However, learning effectiveness has greater meaning when it is combined within a framework that encompasses all five pillars.

Sloan-C recognizes that new ideas and implementations are taking place every day inside the relatively young field of online learning, as thousands of institutions practice the art in their own distinctive ways. Conferences, journal articles, research papers and workshops (all of which have their advantages and disadvantages) are some of the

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Alfred P. Sloan Foundation Program Director

typical ways of capturing this knowledge as it is created. To overcome one disadvantage – that being the speed in which significant new practices are collected and distributed to the online teaching community – Sloan-C has set up a knowledge website devoted to distributing what is known about effective practices within each pillar.

Sloan-C effective practices editors for each pillar collect and conduct research on both published and unpublished practices. These practices are also submitted to editors from regionally accredited institutions that offer online higher education courses and programs. Practices are reviewed by the editors and then prepared for publication and posted on the Sloan-C website at **http://www.sloan-c.org/effectivepractices**. A Sloan-C effective-practices managing editor aids in the review and editing process. Eighty effective practices are now available online. The site is updated regularly as new practices are added.

Showcasing the Best of the Best

"Sloan-C has built a very strong, usable tool, supported by empirical evidence, representing the best of the best of online higher education programs," says Frank Mayadas, Alfred P. Sloan Foundation Program Director. "We are achieving a two-fold goal: One is to share knowledge that other educators can examine and perhaps emulate, and the other is to substantiate that online teaching and learning does indeed work, not just here and there, but for many people in many disciplines, in many kinds of institutions."

Mayadas says that consumers of online education, typically busy adult learners seeking the flexibility of anytime, anyplace learning on the Internet, can easily review the Sloan-C website for information about institutions offering the highest quality of learning experiences and customer services to online learners. In addition to the

effective practices section of the website, Sloan-C publishes a complete Catalogue of Online Educational Programs in which visitors can search for online programs by discipline, by type of degree or certification, or by educational institution.

Workshop Pulls Together Five Pillars

Much of Sloan-C's research in effective practices was recently presented at the its annual invitational, three-day workshop, held in September 2002 at Lake George, NY. Effective practices editors led the workshop and presented overviews of the state of practice and challenges in online education based on the five pillars.

Pillar I
Learning Effectiveness

Is online learning effective? Are students receiving educations that represent the quality of the institutions they are attending? A thorough review of research conducted by Learning Effectiveness Effective Practices Editor Karen Swan, Associate Professor of Instructional Technology at the University of Albany, overwhelmingly supports the view that online learning can be just as good as, and – in some cases – better than, face-to-face, traditional learning.

It's the Interaction

Just as in a traditional setting, interaction with classmates, instructors and content makes for effective online learning. Interaction is the key.

"Computers are, if nothing else, interactive," says Swan. "They respond to what we input, and they provide for communication potential that is incredibly interactive."

Swan says that one extremely important element for effective education online entails facilitating active learning exercises, where students are placed in situations that require them to think and respond to course materials presented online.

Learning of a Higher Order

Randy Garrison, Director of The Learning Commons at the University of Calgary, adds that online learning effectiveness requires that educators understand how to build online learning environments that generate meaningful discourse and encourage deep reflection, with significant opportunities for collaboration between student and faculty and student and student.

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He says that online courses create communities of inquiry where learning is accomplished through sustained electronic communications, often in the form of small group discussions that engage all "the dimensions for higher-order learning."

Reaching Definitive Conclusions

Despite research from respectable educators that all points toward the positive effects of online learning, Roxanne Hiltz, Distinguished Professor of Computer Science and Information Science at New Jersey Institute of Technology, says that more sound studies still need to be conducted to measure and document the most effective kinds of online teaching. Hiltz's research is culminating in a book to be published next year by Lawrence Erlbaum Associates, Inc.

Pillar II
Student Satisfaction

A vital aspect on any education is to ensure that students are satisfied with their educational experience. Elements of online student satisfaction are reviewed by Effective Practices Editor Joeann Humbert, Director of Online Learning at Rochester Institute of Technology.

Students as Consumers with Expectations

Online learners, like customers, are satisfied when they receive responsive, timely, and personalized services and support, along with high-quality learning outcomes, says Humbert, who looks closely at how institutions can meet these demands.

Student satisfaction with courses involves determining whether or not students are happy with what they learned. Survey instruments that ask students whether or not they would take another online course or recommend online learning to their friends can be useful measurement tools

in this area. In a recent RIT survey, 20 percent of first-time online learners indicated that they found out about RIT through a co-worker's recommendation.

Humbert says that academic and administrative support services (admissions, registration, career advice, tutoring, academic advising, library, etc.) are all key factors that impact student satisfaction. A number of studies show that online environments that effectively facilitate high levels of interaction and collaboration among learners typically result in successful online programs.

Productive Interaction and Discourse

Studies related to online learning interaction are being conducted continuously by the State University of New York (SUNY) Learning Network (SLN), the online instructional unit supporting 64 SUNY institutions. SLN has grown from two SUNY campus offering online courses with 119 total enrollments in 1995 to 53 SUNY campuses and nearly 40,000 enrollments today.

Peter Shea, SLN's interim director of learning environments, says SLN's interest lies in "tracking and making sure there is a lot of contact between students and faculty, a lot of reciprocity and cooperation, a lot of student-to-student interaction, active learning techniques, and communication of high expectations."

An SLN survey in the summer of 2002, which garnered responses from 1,150 students, revealed "73 percent of the respondents agreed with statements indicating that their instructor helped facilitate productive discourse, and approximately 72 percent agreed with statements indicating that their classmates helped facilitate productive discourse."

Graduation and Retention Rates

One of the best indications of student satisfaction can be found in online learning graduation and retention rates. Karen Vignare, Senior Research Analyst at RIT, noted that more than 70 percent of RIT students taking 50 percent or more of their courses online graduate within six years. Retention and course completion rates for the same group of students at RIT are also impressive, with data showing that 90 percent of online learning students return to take online classes after their first year – a higher retention rate than campus-based students at RIT.

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Pillar III
Faculty Satisfaction

Faculty Satisfaction Effective Practices Editor Melody Thompson, Director of Quality and Planning for the Penn State World Campus, reports that studies show that faculty members are pleasantly surprised to find that electronic communication frequently offers "more and better interaction with individual students and groups of students, as well as among the students themselves."

Other studies reveal that "faculty members appreciate the additional flexibility offered by online learning environments both for themselves and for their students." Online learning faculty also find that the experience of learning and using educational technologies not only increases teaching effectiveness online but in face-to-face classes as well.

A Need for Moral Support

Some report that even the strong supporters of online teaching and learning "feel like they are looked down upon by their colleagues (within their same departments) who have not yet adopted online learning," says Thompson. Conversely, critics of online learning can be viewed as "recalcitrant Luddites." Consequently, at some institutions, there is a need for the development of increased levels of moral and administrative support, as well as mutual respect between those who participate in online learning and those who do not participate, says Thompson.

The Monroe Model

Providing adequate support is perhaps best exemplified at the Monroe Community College (MCC) in Rochester, NY, where Marie Fetzner, Assistant to the Vice President of Educational Technology, has fostered what is called "The Monroe Model," a team effort that effectively responds to the need for online faculty support at multiple levels.

The Monroe Model supports faculty in academics, training, instruction, the library, technology, and student services. Fetzner says that by providing multi-faceted support, MCC faculty can devote less time to administration and more time to the development and delivery of their courses and interaction with learners.

Recognizing Advances in Educational Technology

Another institution that has built a reputation for ensuring faculty satisfaction is Indiana University Purdue University Indianapolis (IUPUI). Special Assistant to the IUPUI Administration Erwin Boschmann reports that IUPUI recognizes advances in information and instructional technology as important facets of scholarship.

"The constant emphasis on using technology not just in research, but in teaching and learning as well, and the stress on true scholarship, especially in the use of technology, are among items that have contributed to a faculty satisfaction with academic life at IUPUI," says Boschmann.

Pillar IV
Cost Effectiveness

Many schools have come to appreciate that increased use of educational technology to enhance face-to-face classes, as well as for fully online courses, has become mandatory for remaining competitive. The number of students who now demand online content and tools is growing tremendously.

As more and more businesses require that their employees be "web savvy" and have a working knowledge of learning online, the responsibility of preparing students to be technologically astute now falls on the nation's educational institutions. Building the right educational technology infrastructure is an expensive undertaking, and with already constrained budgets, it can become a daunting challenge.

The notion of effectively controlling cost while remaining competitive is obviously a vital concern. Effective Practices Editor Tana Bishop, Associate Dean for Administration in the Graduate School at the University of Maryland University College (UMUC), addresses cost effectiveness. UMUC is one of the largest providers of online learning in the United States, with 32,787 students taking online classes last year.

The good news is that colleges and universities are finding ways to increase learning effectiveness, achieve lower dropout rates, decrease the use of over-crowded buildings and ultimately decrease labor costs through creative development of technology-enhanced and fully online courses.

Bishop says, "competition for educational dollars and increasingly limited fiscal resources require institutions to identify, project, and control the costs associated with online learning. While profit-making typically is not the goal of public institutions, there is a growing desire to control costs or to achieve some cost savings while improving quality."

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BYU Study

At Brigham Young University, for instance, Web-based Courses Evaluator Gregory Waddoups explains how BYU is conducting studies to redesign courses using online components that increase learning and reduce costs. In one study, BYU created a series of multimedia lessons and online peer-to-peer sessions to replace time students typically spend in the classroom.

"The redesigned course was intended to improve learning and reduce instructional costs by reducing the total hours each instructor spends teaching and by reducing the hours needed to train and supervise new instructors," says Waddoups. When the redesigned course was compared with a parallel class taught traditionally, findings showed that "student satisfaction with the course quality, instructor and instructional interactions was not significantly different," says Waddoups.

MSU Global

At Michigan State University (MSU), custom online learning programs are being developed through a three-year-old department called the MSU Global Online Connection (MSU Global), which has repositioned MSU's

continuing education efforts. It has become a central component of MSU's 21st Century learning vision, says Christine Geith, Director of the program.

MSU Global has three lines of business for online educational programs and services: The first, Academic and Professional Programs, provides business planning and marketing support for online degree and certificate programs at MSU. The next, The Global Institute, creates and markets online learning-based professional development and personal enrichment products, and, to date, includes the creation of a Horticulture Gardening Institute, the Michigan Tourism Virtual Academy and the Global Community Security Institute. And finally, Global Vista, offers strategic consulting services for organizations seeking to use online learning.

Pillar V
Access

Regardless of all the well-documented research pointing to how effective, satisfying and economically feasible online learning can be, prospective learners must be able to discover it easily. This is where Access Effective Practices Editor John Sener comes into the picture. "Access is an issue that permeates almost every aspect of the online learning enterprise," says Sener, who is an online learning consultant for Sloan-C.

While "access" is often used to provide appropriate means for people with disabilities, Sener broadens the term to mean reducing all barriers. At the Sloan-C effective practices website are numerous examples of how institutions are providing better access.

UMUC

One of the most comprehensive and experienced models of access-related issues can be found at the one of the oldest and largest providers of online education, UMUC. In many ways UMUC can be considered the mega-online university as its enrollments continue to climb and its administration is faced with the challenge of managing the expansion of its entire online learning infrastructure effectively.

In a paper presented at the Sloan-C workshop, Merrily Stover, former Assistant Dean of Undergraduate Studies at UMUC, outlines the multifaceted structure of an institution focused on providing a full-range of services to make online learning easily accessible to students.

"The goal of universal access through the development of an accessible and affordable ubiquitous technical infrastructure will take many years"

– Bruce Chaloux
Director of the Electronic Campus
Southern Regional Educational Board

For example, UMUC's Student Success Center offers a full range of online orientations, 24-hour technical support, and easy web-based access to online courses and programs. The school's Better Opportunities through Online Education Program helps low-income workers gain access to higher education. Plus, this year alone, UMUC's faculty development program introduced more than 2,000 faculty members to web-based instruction.

The Digital Divide is Still an Issue

While institutions, such as UMUC and others across the higher education landscape develop and enhance their programs, awareness of the opportunities that online learning can provide must be expanded to all citizens, says Bruce Chaloux, Director of the Electronic Campus at the Southern Regional Educational Board (SREB).

SREB's Electronic Campus, launched in 1998, is a regional approach to expanding access with an online electronic marketplace and portal for courses, programs, and services available electronically from colleges and universities in 16 member states. Starting with 104 courses from 40 institutions, it now provides access to 8,000 courses and more than 300 degree programs from more than 325 colleges and universities.

Chaloux reports that "the 'digital divide' is real and growing, adding that "differences in computer ownership and Internet access across racial, geographic, and income groups are larger in the South than the rest of the nation." In an effort to redress unequal access, SREB invites national participation to create policies for effective and equitable credit transfer and other avenues that foster open access avenues.

"The goal of universal access through the development of an accessible and affordable ubiquitous technical infrastructure will take many years," says Chaloux. Meanwhile, concerted efforts at the national, regional, state and institutional levels must overcome the barriers.