The Sloan Consortium Quality Framework And The Five Pillars

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The Sloan Consortium
A Consortium of Institutions and Organizations
Committed to Quality Online Education

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ABSTRACT

This overview introduces the Sloan Consortium (Sloan-C), explains its quality framework for guiding quality and sharing effective practices, and suggests directions for research and development. As an association of colleges, universities and organizations dedicated to making higher education accessible to all, Sloan-C uses a quality framework that focuses on five pillars that support quality learning environments. Sloan Consortium (Sloan-C) believes academic knowledge and industry knowledge can complement each other to improve the quality of learning in both sectors. In particular, practitioners can learn how to improve higher order learning online, how to adapt technology to continuously improve interaction, how to use assessment to mainstream best practices, and how to combine ALN and face-to-face learning.

KEYWORDS
Access, Asynchronous Learning Networks (ALN), Blending, Continuous Quality Improvement (CQI), Cost Effectiveness and Institutional Commitment, Effective Practices, Faculty Satisfaction, Five Pillars, Learning Effectiveness, Quality Framework, Student Satisfaction

I. INTRODUCTION

The purpose of the Sloan Consortium (Sloan-C) is to help learning organizations continually improve quality, scale, and breadth according to their own distinctive missions, so that education will become a part of everyday life, accessible and affordable for anyone, anywhere, at any time, in a wide variety of disciplines. Created with funding from the Alfred P. Sloan Foundation, Sloan-C encourages the collaborative sharing of knowledge and effective practices to improve online education in learning effectiveness, access, affordability for learners and providers, and student and faculty satisfaction with the goal of making higher education "an ordinary part of everyday life" [1]. Thus, in 1993, Sloan-C coined the now familiar term "asynchronous learning networks" (ALN) to convey the idea that people learn at various times and places in everyday life [2]. "ALNs are people-networks for anytime-anywhere learning. ALN combines self-study with substantial, rapid asynchronous interactivity with others" [3].

II. BACKGROUND

From its inception, Sloan-C emphasized that the "networks" in ALN are not just technological infrastructures, but the people networks that ALN supports in ways not possible before. "We think of every person on the network as both a user and a resource," says Mayadas [4]. Thus, online communications are a powerful, technology-assisted means for rapid communications among multiple audiences. ALN makes higher education much more widely accessible than ever before possible. ALN's collaborative power also promises to bridge divides between the two everyday, but frequently separate, worlds of academic and corporate learning. Because ALN is a truly new and disruptive technology, Sloan-C emphasizes principles and metrics that can help establish benchmarks and standards for quality based on continuous quality improvement (CQI).

Five principles, known as the pillars of quality, guide the familiar CQI process of identifying goals and benchmarks, measuring progress towards goals, refining methods, and continuously improving outcomes. The pillars are learning effectiveness, cost effectiveness and institutional commitment, access, faculty satisfaction and student satisfaction. The process and the principles align in academic educational environments as well as they do in corporate training environments [5].

Table 1. Higher education and Corporate ALN

Quality principles	For Higher Education	For Corporations
Learning effectiveness	Learning effectiveness, new knowledge, applied theory, continuous feedback from stakeholders	Productivity, improved operations
Cost effectiveness and institutional commitment	Cost effectiveness, brand recognition, scalability, public service and influence, prestige, funding	Cost Savings, brand, market capture
Access	Wider access including international communities, greater research and development opportunities, faster response to new fields of study, capacity enrollment	Market Growth, distributed team work
Faculty (employee) satisfaction	New populations of students and colleagues, greater satisfaction with teaching and learning	Competition, competitive intelligence, understanding
Student (customer) satisfaction	Learner and teacher satisfaction and loyalty, career opportunities including OJT, internships, and mentorships	Recruitment and retention

Sloan-C's early demonstration of the value of ALN, and its knowledge- and community-building activities, has contributed to today's environment in which over 95% of all for-credit, degree-oriented instruction in the country follows the Sloan-C ALN model--enrolling 2.5 to 3 million learners in the 2001/2002 academic year [6].

As consensus develops about the elements of good pedagogy, high quality, and costs, Sloan-C sets the minimum quality expectation that at each institution, learning online should be at least as effective as learning in other modes. For Sloan-C, ALN is generally characterized by cohort-style classes, with definite start and end dates, in faculty-led courses with student/faculty ratios approximately the same as for traditional classes, with provision for and encouragement of interaction among students as well as with the instructor, and with relatively low-cost course and media development. The ALN emphasis on interaction among people contrasts with many other approaches that emphasize expensive course materials as the main source of instruction and that place much less emphasis on interaction among the people in the course. Clearly, good and bad results can be achieved in either online or traditional classroom teaching depending on the quality, skill and motivation of the instructor and students. The majority of Sloan-C research demonstrates increasingly high levels of faculty and student satisfaction, and despite findings that online teaching and learning take more time, nearly all faculty who have taught online wish to repeat the experience. Growing enrollments indicate that students also wish to repeat the experience. Creation of online courses need not be expensive, and courses once created can be easily revised, and over time, cost a little less to deliver than in a traditional classroom. Most significantly, online learning increases access to quality education for many people who would otherwise be denied this opportunity.

QUALITY FRAMEWORK

Figure 1: The Five Quality Pillars

"In the business of education—'*to improve learning while achieving capacity enrollment'*—continuous quality improvement (CQI) helps people to set goals, identify resources and strategies, and measure progress towards the institution's ideal vision of its distinctive purpose" (italicized quotation from Gary Miller, cited in [7]). Thus, as in the brief version of the quality framework below, the goals of each of the five pillars are presented in CQI terms for measuring continuously improving learning, affordability, access, and faculty and student satisfaction—interactive components that focus on improving people networks, practices, achievement and growth.

Table 2. Brief Version of the Quality Framework

Goal	**Process/Practice**	**Metric** (for example)	**Progress Indices**
		LEARNING EFFECTIVENESS	
The quality of learning online is demonstrated to be at least as good as the institutional norm	Academic integrity and control reside with faculty in the same way as in traditional programs at the provider institution.	Faculty perception surveys or sampled interviews compare learning effectiveness in delivery modes Learner/graduate/employer focus groups or interviews measure learning gains	Faculty report online learning is equivalent or better Direct assessment of student learning is equivalent or better
		COST EFFECTIVENESS AND INSTITUTIONAL COMMITMENT	
The institution continuously improves services while reducing costs	The institution demonstrates financial and technical commitment to its	Institutional stakeholders show support for participation in online education	The institution sustains the program, expands and scales upward as desired, strengthens and disseminates its mission

	online programs Tuition rates provide a fair return to the institution and best value to learners	Effective practices are identified and shared	and core values through online education
	ACCESS		
All learners who wish to learn online can access learning in a wide array of programs and courses	Program entry and support processes inform learners of opportunities, and ensure that qualified, motivated learners have reliable access	Administrative and technical infrastructure provides access to all prospective and enrolled learners Quality metrics for Information dissemination; learning resources delivery; tutoring services	Qualitative indicators show continuous improvement in growth and effectiveness rates
	FACULTY SATISFACTION		
Faculty are pleased with teaching online, citing appreciation and happiness	Processes ensure faculty participation and support in online education (e.g. governance, intellectual property, royalty sharing, training, preparation, rewards, incentives and so on)	Repeat teaching of online courses by individual faculty indicates approval Addition of new faculty shows growing endorsement	Data from post-course surveys show continuous improvement: At least 90% of faculty believe the overall online teaching/learning experience is positive Willingness/desire to teach additional courses in the program: 80% positive
	STUDENT SATISFACTION		
Students are pleased with their experiences in learning online, including interaction with instructors and peers, learning outcomes that match expectations, services, and orientation	Faculty/learner interaction is timely and substantive Adequate and fair systems assess course learning objectives; results are used for improving learning	Metrics show growing satisfaction: Surveys (see above) and/or interviews Alumni surveys, referrals, testimonials Outcomes measures Focus groups Faculty/Mentor/Advisor perceptions	Satisfaction measures show continuously increasing improvement Institutional surveys, interviews, or other metrics show satisfaction levels are at least equivalent to those of other delivery modes for the institution

Sloan-C keeps in mind that quality is a work in progress and each organization seeks to measure quality in terms of its own distinctive, dynamic mission and the people who embody it. Thus, the Sloan-C quality framework enables each organization to set its own standard for each pillar. For example, a school could weight the importance of each measure in the following equation:

Quality = k1 *Learning Effectiveness + k2 *Cost Effectiveness and institutional commitment + k3 *Student Satisfaction + k4 *Faculty Satisfaction + k5 *Access

For a selective admissions school, k5 *Access might not be as important as it is for open admissions schools. Clearly, an organization can take different looks at the scales (for example an organization could assess its Learning Effectiveness on a scale comparing it to others in the National Study of Student Engagement, or Cost Effectiveness compared to US rankings in news reports, or even Student Satisfaction according to MSN's Best Party Schools).

Measures of quality begin with vision and mission. For each of the pillars, the statements below describe an ideal environment:

Learning effectiveness

- The provider demonstrates that the quality of learning online is comparable to the quality of its traditional programs:
    - Interaction is key: with instructors, classmates, the interface, and via vicarious interaction
    - Online course design takes advantage of capabilities of the medium to improve learning (testing, discussion, materials)
    - Courses are instructor-led
    - Communications and community building are emphasized
    - Swift trust characterizes the online learning community
    - Distinctive characteristics of programs are highlighted to demonstrate improved learning
    - On-campus and online instruction achieve comparable learning outcomes, and the institution ensures the quality of learning in both modes with metrics tracking instructional methods, student constituencies and class size

Cost effectiveness and institutional commitment

- Institutions continuously improve services while reducing cost
    - Cost effectiveness models are tuned to institutional goals
    - Tuition and fees reflect cost of services delivery
    - Scalability, if an institutional objective, can be accommodated.
    - Partnering and resource sharing are institutional strategies for reducing costs
    - Mission-based strategies for cost reduction are continuously formulated and tested
    - Intellectual property policies encourage cost effective strategies

Access

- All learners who wish to learn online have the opportunity and can achieve success
    - Diverse learning abilities are provided for (at-risk, disabilities, expert learners)
    - The reliability and functionality of delivery mechanisms are continuously evaluated
    - Learner-centered courseware is provided
    - Feedback from learners is taken seriously and used for continuous improvement
    - Courses that students want are available when they want them
    - Connectivity to multiple opportunities for learning and service is provided

Faculty Satisfaction

- Faculty achieve success with teaching online, citing appreciation and happiness
    - Faculty satisfaction metrics show improvement over time
    - Faculty contribute to, and benefit from online teaching
    - Faculty are rewarded for teaching online and for conducting research about improving teaching online

- Sharing of faculty experiences, practices and knowledge about online learning is part of the institutional knowledge sharing structure
- There is a parity in workload between classroom and online teaching
- Significant technical support and training are provided by the institution

Student Satisfaction

- Students are successful in learning online and are typically pleased with their experiences.
  - Discussion and interaction with instructors and peers is satisfactory
  - Actual learning experiences match expectations
  - Satisfaction with services (advising, registration, access to materials) is at least as good as on the traditional campus
  - Orientation for how to learn online is satisfactory
  - Outcomes are useful for career, professional and academic development

III. EFFECTIVE PRACTICES

To help learning organizations continually improve quality, scale, and breadth, Sloan-C members share effective practices in an online knowledge center that helps people implement practices that work. Submissions to the site become eligible for annual awards when they are reviewed and approved by Sloan-C editors for effective practices according to these criteria:

- Innovation—the practice is inventive or original
- Replicability—the practice can be implemented in a variety of learning environments
- Potential impact—the practice would advance the field if many adopted it
- Supporting documentation—the practice is supported with evidence of effectiveness
- Scope—the practice explains its relationship with other quality elements

The matrix below indicates some of the relationships among the quality elements; the left-hand vertical column lists values common to each of the pillars.

Table 3. Effective Practices Matrix

	Learning Effectiveness	**Cost Effectiveness and institutional commitment**	**Access**	**Faculty Satisfaction**	**Student Satisfaction**
Community	Learning Community	Consortia and partnerships	Academic and administrative services to enable community	Faculty participation with new populations of students and interactive learning communities	Student engagement in learning community
Learning design	Curriculum and course design and conduct	Evaluation of re/design, relating costs and outcomes	Access to a variety of programs, courses, and learning resources	Governance and quality control	Academic and administrative support services
Assessment, research, evaluation	Evaluation of learning processes, outcomes, perceptions	System-wide implementations based on evaluation results	Access studies and refinements	Opportunities for research and publication	Online channels for lifelong affiliation with community
Information technology	Learning technology	Strategic planning and accounting to enhance quality and reduce institutional and student costs	Technical infrastructure and training for users	Technological innovations to reduce faculty administrative workload	User friendly interfaces

Moreover, the pillars interact to solve some perennial challenges for higher education such as those depicted in table 4.

Table 4. Examples of interconnectedness of pillars

How to improve learning without increasing faculty workload?	LE Course design Continuous assessment	FS Training Peer review Best practices	CE Interface Infrastructure	A Online support, Resources, Tutoring Reusable Learning Objects	SS Peer support, Orientation, Role adjustment
How to improve learning, scale programs, increase affordability and ROI?	CE Mission focus (core competencies) Redesign Partnerships Consortia Model Driven Design	LE Communities of inquiry (COI) Active learning Relevant curriculum Training—teaching presence	A Portals Market analysis	FS Efficient CMS, automations	SS Continuous assessment, Automations for review
How to reach market, match students with programs?	A Market analysis Portal development	SS Assessment Orientation Advising	CE Redesign Partnerships Consortia	FS Incentives	LE Active learning Relevant curriculum Personalized
How to engage more faculty?	FS Promotion and tenure policies Rewards	LE COI Training Rewards, recognition, research, P&T, governance	CE Incentives Peer review Ratios	A User friendly interfaces	SS Link evaluation results continuous course refinement
How to motivate and retain students?	SS Orientation Placement Assessment	LE Active, personalized learning	A User friendly interfaces Role adjustment What's in it for me? (WIIFM) training—active, relevant personalized	CE Affordability	FS Training

IV. DIRECTIONS FOR RESEARCH AND DEVELOPMENT

As online education becomes part of the fabric of higher education with combinations of face-to-face and online learning constituting the norm, the rate of technological change collides with an academic tradition that proceeds at a sometimes slow rate of consensus building [8]. Even so, pioneering schools report that they are experiencing the transformative effects of ALN. The University of Maryland University College, the State University of New York, the University of Central Florida, the Pennsylvania State University, the University of Massachusetts and more have witnessed a positive "spillover effect" that translates advances in online learning to face-to-face learning [9]. Support and information services designed for

online students also help place-based students; awareness increases as redesigned courses and programs undergo scrutiny and refinement by peers, information technologists, course designers, and content experts. As advances continue, Hiltz, Arbaugh, and Benbunan-Fich [10] propose that we can learn to measure learning across classes, courses, institutions, organizations and cultures. Hiltz and colleagues recommend that inquiries into quality include the variables in this excerpt from their paper:

1. the technology (in particular, the media mix);
2. the group (course or class), and the organizational setting (college or university), which define the context in which the technology is used;
3. the instructor; and
4. the individual student.

Every quality area calls for standards, norms, and benchmarks to be shared among academic institutions, corporations, foundations and government. Consistent with a vision of the future in which higher education transforms itslef, Sloan-C works with industry and government training communities that have developed in parallel with, but separately from, the academic community to explore the possibilities for degree-oriented, industry-specific education for new populations of learners. To realize the potential of ALN for advancing quality in education, practitioners want to learn how to encourage higher order learning online, how to adapt technology for continuously improving interaction, how to use assessment to mainstream best practices, and how to optimize learning by combining ALN and face-to-face learning. Framing a future in which education is an ordinary part of everyday life calls for unprecedented collaborations that the quality of asynchronous learning networks makes possible.

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VI. TERMS AND DEFINITIONS

Asynchronous Learning Networks (ALN): technology-enabled networks for communications and learning communities
Access: the quality principle that is the fundamental motivation for online learning, access means that people who are qualified and motivated can obtain affordable, quality education in the discipline of choice
Continuous Quality Improvement (CQI): a process that measures progress towards goals, using metrics and feedback from stakeholders for continuous improvement
Cost Effectiveness and Institutional Commitment: the quality principle that assures the institutional mission is conveyed online, affordably for the institution and for learners
Effective Practices: online practices that are replicable and produce positive outcomes in each of the pillar areas. The Sloan-C site is: http://www.sloan-c.org/effective
Faculty Satisfaction: the quality principle that recognizes faculty as central to quality learning
Five Pillars: The Sloan-C quality elements of learning effectiveness, cost effectiveness and institutional commitment, access, faculty satisfaction and student satisfaction
Learning Effectiveness: the quality principle that assures that learning outcomes online are at least equivalent to learning outcomes in other delivery modes
Quality Framework: a work in progress that assesses educational success in terms of continuous quality improvement beginning with goals and including metrics for assessing progress towards their accomplishment
Student Satisfaction: the quality principle that measures student perceptions and achievement as the most important predictors of lifelong learning

VII. ABOUT THE AUTHOR

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