



An organizational approach for sustaining e-learning in a large urban university

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Abstract

Partly motivated by recent fiscal and economic realities, many universities acknowledge that for long-term sustainability, they must discover how to better exploit e-learning media and channels to reach, engage and retain new and mature learners, including working professionals. But online learning is not simply a digital “add-on” to education. Rather, e-learning is a fairly complex language and communication phenomenon that mirrors how learners are already acculturated and interconnected through their social and professional networks. The future of modern universities is highly dependent on recognizing and embracing these realities to ensure their long-term survival.

For a number of years, large urban universities have been enriching their traditional instructional models with e-learning pedagogy and technology. E-learning has been progressively adopted to provide flexible and convenient access for students wanting to attend their accredited post-secondary institution. Online learning, characterized by distinct benefits and challenges, has also been shown to achieve learning outcomes that are competitive with those of traditional models of learning. Some institutions have begun to blend traditional learning and e-learning models to produce innovative and potentially superior learning outcomes.

This paper discusses several motivational, integrative, and fiscal factors that inform e-learning sustainability in the context of a large urban university. Distinguishing attributes of e-learning are explored relative to traditional learning including pedagogy, design, technology, development, and delivery. Also explored are issues of engagement among instructors and learners, faculty buy-in and incentives, hidden and unaccounted for costs, rationalization of costs and fees, e-learning profitability versus quality, and issues of student recruitment and retention. An organizational structure is proposed that stimulates e-learning opportunities and buy-in at the grassroots, builds and sustains specialized and scarce e-learning competencies and resources in a central e-learning unit, and solicits, endorses, and supports new e-learning projects aligned with institutional priorities.

Introduction

Portland State University (PSU) is a large urban university in Portland Oregon (USA) serving resident and non-resident learners including non-US nationals. Located in downtown Portland, PSU has delivered accredited programs to adult learners as well as freshly graduated high school students across a wide range of accredited disciplines. In Oregon (USA), as elsewhere, state funding continues to decline steeply, negatively impacting both operational budgets and infrastructural investments including buildings, classrooms, and, notably, e-learning instructional design and technology costs. Effective e-learning demands sizable investments requiring careful planning and application of scarce resources. In the face of these challenges, PSU has been carefully examining its strategic and investment options as they relate to e-learning evolution and integration with the curriculum, administration, and student body [1].



1 Learning effectiveness:

Is e-learning more or less effective than traditional learning?

Smith and Mitry in [2] assert that there is not a significant difference in learning outcomes between traditional classroom and online instruction. [2] suggests that educators should keep an open mind as to the relative merits of both traditional and e-learning models, devoting resources equitably to the progressive development, trialing, evaluation, and integration of e-learning methods and tools into the institution's overall approach to instructional development and delivery.

2 Distinctions are blurring:

How distinct is e-learning from traditional learning? E-learning methods and tools have matured significantly over the past 20 years due to significant improvements in e-learning and related technologies, large increases in web bandwidth, and the ubiquitous use of e-mail, web services, and various emerging messaging services. Both traditional learning and e-learning have significantly benefited from rapidly evolving and enriched tools and services, thereby blurring the distinctions between these instructional models. For example, an increasing proportion of traditional classroom-based courses are routinely using learning management systems to access distributed instructional materials, to manage grades, and to conduct course evaluations.

3 Critical success factors:

What factors are most critical for e-learning success? Neely and Tucker [3] confirm, rightly, that the most significant investments are in course development and delivery including instructional design, e-learning management technologies, online collaboration tools, and supportive infrastructure. Achieving faculty buy-in is a critical success factor that should not be underestimated. E-learning faculty must be strongly committed to developing and delivering e-learning courses, and they will need fairly extensive training in online pedagogy and tools. E-learning capabilities, the potential benefits, and the scholarly value of online pedagogy should be recognized and fostered throughout the institution at college, school and departmental levels.

4 Faculty buy-in challenges:

How critical is it for faculty to buy into e-learning? It is safe to say that at a majority of traditional universities only a modest minority of faculty are "sold" on e-learning. However, faculty members increasingly acknowledge the growing online e-learning trend as well as the apparent synergies with social and professional networks. Faculty concerns about ownership and control of their learning materials (intellectual property), workload implications, e-learning effectiveness, training, and infrastructure support need to be systematically addressed.

5 E-Learning design and development:

What is the preferred e-learning approach? Three principle approaches to e-learning design and development can be identified: (1) dedicated departments devoted to curriculum design and development that contain both content specialists and instructional designers; (2) faculty jointly developing e-learning courses with instructional designers; and (3) faculty trained in e-learning pedagogy, course design, and learning tools assisted/coached by instructional designers. At PSU model (3) is emerging as the favored approach.

6 Student and faculty engagement:

How can students be engaged to maximize retention? Smith and Mitry [2] assert that the quality of both traditional learning and e-learning are dependent upon incorporating challenging problem-solving exercises together with intensive interactions among credentialed faculty and students. A University of Texas study [6] confirms that poor engagement and interactivity lead to low retention rates. Effective instructional design using, for example,



discussion forum exercises, offer the potential of reducing these rates to levels as good or better than traditional retention rates [6]. Bishop of the Sloan Consortium in [7] reports that increased retention rates can be achieved by redesigning online courses to more fully engage students and instructors. Ellis, Goodyear et. al. [4] observe that online discussions enable valuable learning outcomes that cannot be as readily achieved via classroom discussions. My own experience confirms that online discussions encourage deeper engagement, understanding, reflection, and critical thinking.

7 E-learning delivery:

How critical to e-learning are the credentials of faculty members? A range of instructional delivery models are practiced across e-learning institutions: (a) full-time faculty deliver e-learning courses; (b) full-time faculty supported by teaching assistants (typically graduate students) deliver courses to achieve better scale; (c) adjunct faculty supervised by regular faculty deliver courses to inject industry practice; and (d) facilitators experienced in the discipline and coached by part-time faculty advisors deliver content. Other variants exist. [2] asserts that the quality of instruction is directly correlated with the quality and participation of credentialed faculty; that the quality and performance of adjuncts can vary widely; and that facilitated e-learning courses, while low cost, dilute learning outcomes.

8 E-learning scalability:

Is e-learning more or less scalable? Bartley and Golek in [5] claim that e-learning is more scalable than traditional learning because online pedagogy and technologies make it easier to incrementally add instructors and students. Meanwhile Smith and Mitry in [2] assert that e-learning student/instructor ratios cannot be arbitrarily increased - "class sizes are necessarily limited to a smaller number of students [than physical] classrooms". In other words, it may be easier to scale up e-learning courses by offering additional sections, but this does not imply that such a strategy elevates student-faculty ratios. It is safe to say that e-learning scalability is tied to the subject matter being taught – remedial and practitioner courses appear to scale more easily.

9 E-learning costs:

What about hidden and unaccounted for costs? Rivard [10] confirms that online learning costs, technology costs in particular, are routinely underestimated and that online implementations typically come in at twice the estimated schedule and twice the estimated budgets. Hidden and underestimated effort and costs include course design, faculty learning, development and conduct of training programs, copyright clearing, setup and content development, help desk and technology support, integration with registration/financial systems [10], and e-learning supervision, coordination, and administration [3]. Rivard estimates online new course development at \$15K-\$40K per course and \$20K to adapt an existing course. Boettcher [11] estimates that an experienced faculty member needs to devote about 10 hours of development time for every hour of instruction, and that a 3-credit course costs about \$30K to develop. Meanwhile [3] estimates the average instructional cost to deliver an online course at about \$9K.

10 E-learning savings:

Are there any savings that could be considered? Certain students will be attracted by the significant savings they can achieve by reduced trips to campus and not needing to reside on or near campus. Increased telecommuting would reduce the demand for on-campus office space for faculty, adjuncts and teaching assistants. Telecommuting flexibility for faculty could incentivize instructors, especially those significantly distant from campus, to develop and teach e-learning courses at preferential fee levels, and could also increase the size of the teaching pool. Bishop [7] reports that some universities have realized classroom space savings attributable to e-learning. But Smith and Mitry [2] confirm that building operations and maintenance have rarely been factored into rationalizing budgets for traditional learning versus e-learning. The University of Texas [6] reports that the "cost



culprit” for traditional learning is building operations and maintenance (space). Meanwhile, [10] estimates that classroom cost savings of e-learning is about \$61 per student credit hour (SCH).

11 E-learning fees:

What factors might influence student fees? Morgan [12] discusses a Stevens Institute survey that collected data on relative tuition fees. Of the 43 programs examined, 81% charged the same tuition for both traditional and online learning, and 19% charged a higher tuition for online courses. Savings realized by way of e-learning (student costs, demand for classrooms, and instructor telecommuting) should be factored into the e-learning budgeting and tuition fee setting.

12 Profitability versus quality:

What about e-learning profitability/quality trade-offs? University credentialing (e.g. ABET) requires a predominance of full-time and tenured faculty over adjuncts. Smith and Mitry [2] point out that e-learning profitability can be increased by decreasing the use of credentialed faculty, increasing the use of e-learning facilitators, and eliminating residency requirements. However, such action significantly erodes instructional quality, learning outcomes, student retention, and institutional credibility. The quality and performance of the technology infrastructure is particularly important for e-learners. Performance is also critical for faculty as it impacts directly on their workload during both course development and course delivery.

13 Marketing and recruitment:

Is recruitment and branding a factor for e-learning? Rivard [10] states that accredited universities should not overlook the importance of marketing and branding to distinguish themselves from the e-learning competition. It would appear that credentialed brick-and-mortar urban universities wanting to more fully integrate best practices of e-learning pedagogy into their traditional educational model have a distinct competitive advantage that may mitigate the level of investment needed for marketing.

14 Organizational alignment:

How can administrations address the critical success factors? Administrations at the college, school, departmental and program levels need to align their policies and fiscal practices with the e-learning mission and goals of the university so as to achieve faculty buy-in, enhance faculty-student engagement, and thereby improve student retention and institutional sustainability. This includes visibly addressing IP concerns of faculty, ensuring that critical e-learning infrastructures are in place and consistently maintained, reinforcing the scholarly value of e-learning pedagogy at organizational levels, and providing faculty incentives and release time as required to build and sustain e-learning development and momentum.

15 Proposed organizational approach:

How can organizational concerns be balanced? The organizational approach proposed herein, an adaptation of a proposal by Ellis et. al. in [13], is for the university to create a cross-organizational structure that promotes the benefits of e-learning, solicits proposals from the colleges, schools and departments in strategic areas of benefit, funds worthy proposals within the fiscal constraints of the university, and progressively rolls out new e-learning courses and programs. The following paragraphs briefly summarize this organization and process.

Central administration receives e-learning project proposals that are reviewed, evaluated, prioritized, and recommended by the central e-learning unit. E-learning projects must align with the university’s mission, resources, and priorities, and must also demonstrate efficacy and feasibility. Endorsed projects are funded and resourced by central administration.



The **central e-learning unit** maintains and manages an e-learning center of excellence that recruits, acquires and develops e-learning designers, technologies, technology specialists, and help desk support. A critical role of the e-learning unit is to qualify and endorse e-learning proposals submitted by the colleges, schools, departments, and programs. Central e-learning supports approved e-learning projects by providing training; project management, instructional design, media and learning object integration services, and access to external e-learning resources as needed.

The **colleges, schools, departments, and programs** identify e-learning faculty members particularly motivated to identify, promote, and facilitate e-learning initiatives. They stimulate, support, and possibly lead e-learning proposals submitted to the central administration. E-learning proposals include estimated benefits, effort, costs, and schedules which are reviewed and prioritized by their administrations in consultation with their faculties before being submitted to the central e-learning unit and central administration for consideration and resourcing.

Summary

This paper has systematically explored critical success factors and proposed an organizational structure that stimulates e-learning opportunities and buy-in at the grass roots of the university, builds and sustains specialized and scarce e-learning competencies and resources in a central e-learning unit, and solicits, endorses, and supports new e-learning projects aligned with institutional mission and priorities.

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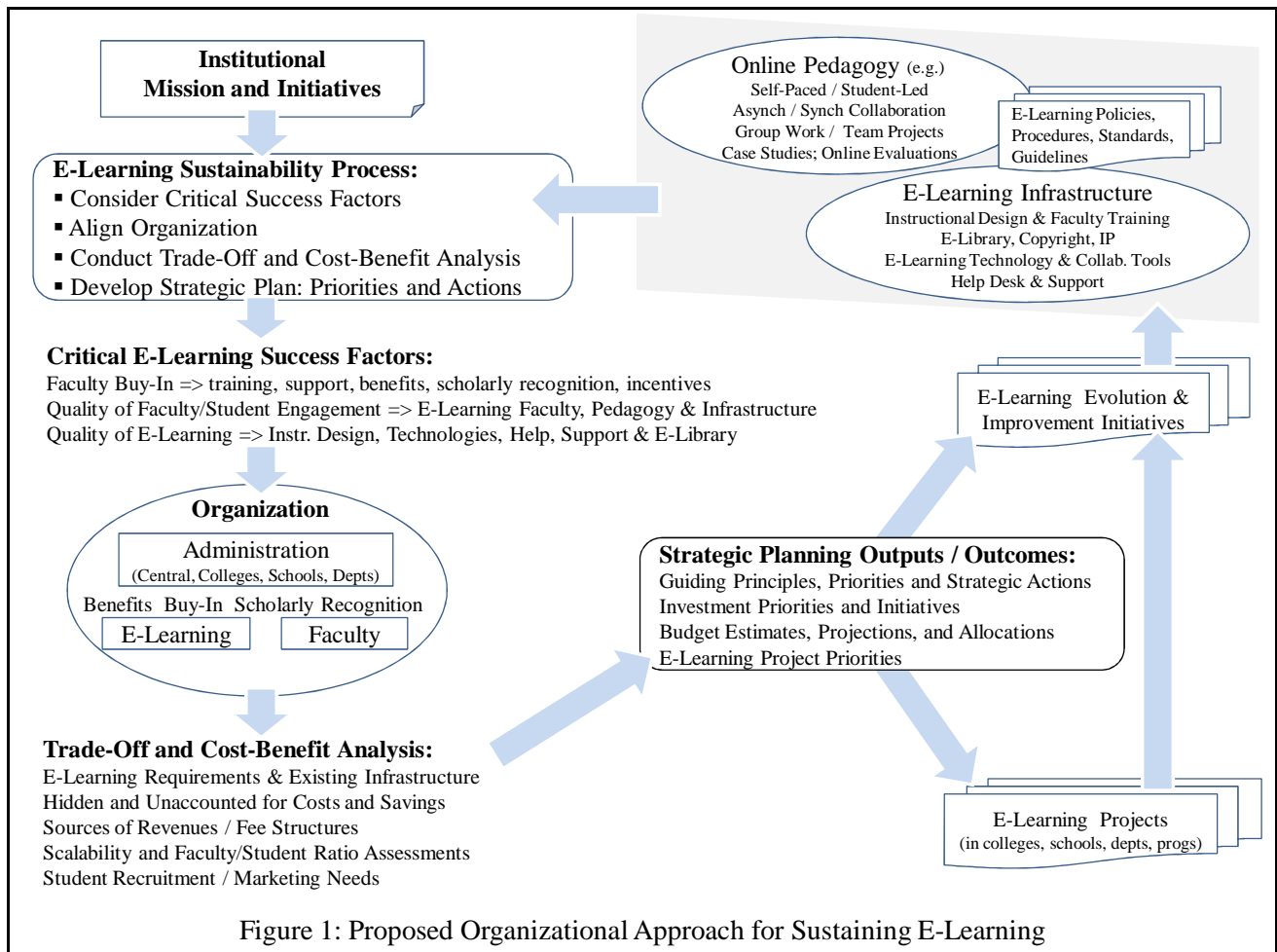


Figure 1: Proposed Organizational Approach for Sustaining E-Learning