Developing Knowledge Through Practical Experience: The Principles of Financial Sustainability for Online Programs

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Abstract

Following the theory of situated cognition as proposed by Brown, Collins, and Duguid (1998), this research project tapped into the contextual knowledge of experienced administrators of online programs. Draft principles of financial sustainability for online programs were developed by an initial team of experienced online educators and then critiqued by seven directors of FIPSE-funded online programs. The directors added conditions, situations, and caveats to the principles making the final product a rich and comparatively complete list of issues that are important for administrators to understand. The final list of ten principles include (1) know your market, (2) know your costs, (3) determine a price, (4) negotiate with the institution(s), (5) observe good financial management rules, (6) develop and implement marketing, (7) have a web identity, (8) identify and develop good faculty, including adjunct faculty, (9) improve retention, and (10) improve courses or program. These principles represent the situated knowledge of experienced administrators and may be valuable to new administrators of online learning or experienced administrators looking for additional ways to improve a program’s financial status.

Introduction

How do administrators of online programs create and sharpen their knowledge of how to make their programs financially successful? Perhaps there are answers to these questions in the work of Brown, Collins, and Duguid (1989) and their theory of situated cognition, where knowledge is best understood as situated in and a product of the activity, context, and culture where it is developed and used (p. 1). By tapping into the knowledge of experienced online administrators, the expertise of the field can be shared more widely and the skills of new administrators can be more rapidly improved.

This research relied on the situated knowledge of experienced online administrators to develop principles for financial sustainability of online programs. It was initiated when a Fund for the Improvement of Post-Secondary Education (FIPSE) officer wanted to capture the knowledge of how to offer financially sustainable online programs as evidenced by a group of successful FIPSE project directors. This project became an opportunity to explore the Brown, Collins, and Duguid (1989) theory while capturing the situated knowledge of a set of experienced online
administrators. It asks the research question, “Are there agreed-upon principles of financial sustainability for online programs?”

Literature

Administrators must possess knowledge of people, the workings of small groups, an organization and its culture, and the environment it is in. And this is only a short list of what administrators must know and do. For administrators of online programs, there are no educational programs to prepare them for their role, although there are a growing number of conferences and journals that provide contact with other administrators and opportunities to learn from their successes and failures. These conferences and journals offer a version of Brown, Collins, and Duguid’s (1989) “cognitive apprenticeship” (p. 2), where knowledge is passed on by the more experienced to the less. But this knowledge continues to evolve, “because new situations, negotiations, and activities inevitably recast it in a new, more densely textured form” (p. 3). In other words, apprenticeship is not purely a one-way endeavor as implied by reading or listening to an expert; the apprentice continues to make new knowledge of the old as he or she faces new contexts in which to test, expose faults and exceptions, and then modify the original knowledge.

In fact, Brown et al. (1989) would propose that learning results from acting in situations, not merely from receiving it from others. To learn to use a tool or concept or knowledge, one must understand the community or culture where it is being used. Said in a different way, learning must be used and these uses are shaped in fundamental ways by the situations in which they are used. Or put even more simply, knowledge is developed when practitioners act, reflect, and evaluate what they do in their jobs.

This emphasis on situated knowledge should not ignore the growing research literature on important topics for administrators of online programs. They need to know the practices of their higher education institution or system, the rules and exceptions to rules that guide what they can do. They need to know how to cost their programs, using the Technology Costing Methodology (or TCM at http://www.wcet.info/projects/tcm), the Flashlight Cost Analysis Handbook (http://www.tltgroup.org/programs/fcai.html), Rumble’s (n.d., 1997, 2001) costs, Activity-Based Costing method (Bates, n.d.), Cost of Supporting Technology Services (COSTS) (Leach & Smallen, 2000), or Morgan’s (2000) online costing tool (at http://www.marshall.edu/distance). Costing methods from the National Association of College and University Business Officers (NACUBO) (2002) and the Delaware Cost Studies (2002) also exist, although they have not been used to cost online programs because they cost “undergraduate instruction” (NACUBO, 2002) or instructional costs by discipline or faculty type (University of Delaware, 2002), but do not provide data on online coursework specifically.

To understand costs of online coursework requires that the institution disaggregate costs in much greater detail. Activity-Based Costing (ABC) has been a popular method for costing online courses because online courses have been an infrequent activity within traditional institutions and online courses have more discrete activities and more people involved in the design and development of the course. This makes costing online coursework different than costing on-campus programs, in terms of understanding how cost structures of online coursework are different from traditional courses and understanding how faculty time is spread across online courses and other important activities. ABC is therefore different from many other costing approaches, because it attempts to cost various activities (e.g., registering a student, preparing a powerpoint presentation) rather than by budgetary line item (e.g., faculty salaries) or by allocating existing departmental or college-level budgets (Massy, 2003). Faculty salaries, in this case, are broken down into the various activities faculty do, rather than being lumped together.
Whatever the costing method, the online administrator needs to know how to capture program costs and to be relatively confident that proposed budgets can be covered by the revenues coming in for the program.

Administrators can also expect to be familiar with the growing literature on cost-effectiveness or cost-efficiencies. Twigg (1999, 2002, 2003a, 2003b, 2005) has done perhaps the most comprehensive work on cost-effectiveness and researching ways to control or cut costs while maintaining or improving student learning. But there has been other research in this area (Bishop & SchWeber, 2001; Campbell, Bourne, Mosterman, Nahvi, Rassai, Brodersen & Dawant, 2004), and there will continue to be more studies that add to our knowledge of how to improve both costs and learning. Research on cost-efficiencies (Meyer, 2006) tends to focus on similar tactics to cut or control costs: redesigning courses, using technology more to replace high-cost labor or free up capital space, using high-cost faculty less, or replacing high-cost with lower-cost instructors. These tactics can be broken down into very specific approaches, such as using online automatic grading, developing modules for greater individual learning, building virtual labs, and offering online quizzes as self-assessment tools. All of these are examples of using technology to replace some of the activities of higher-cost faculty in ways that have the potential to improve student learning.

This quick review of the research literature clarifies the differences in knowledge necessary to administrators of online programs. Research literature may be viewed as a form of knowledge that has been tested by a set of standard research methods and the requirements of peer-review and standards of publishers. And yet administrators possess another kind of knowledge that is situated, practical, and tested by various experiences and revised in new situations.

For example, higher education administrators of all kinds are increasingly aware that resources are constrained and programs must help students with diverse needs to learn. Two conditions make this situation especially pressing for administrators of online education. First, many online programs are offered on a cost-recovery basis, in other words, the revenues brought in from students, employers, etc. must cover the cost of offering the program. While other programs need not cover the entirety of their costs, they can not be a continuous economic drain on the institution. Second, competition is increasing as more higher education institutions offer online programs and students take an increasingly consumerist view of the educational marketplace. And while this situation does not describe the entire higher education marketplace, it increasingly describes online programs that must find students, market to them, and enroll enough of them to offer a program to cover costs.

These pressures argue for a method to unearth, compile, and evaluate the expertise of experienced administrators of online programs. The following section describes how the authors undertook the development of a set of principles that would improve the likelihood that online programs would be financially sustainable.

**Method**

During the Summer of 2006, the director of a FIPSE-funded project who developed and offered online courses to prepare library media specialists for K-12 schools was preparing the required final project and fiscal reports for FIPSE. The FIPSE Project Officer asked that she consider abstracting her knowledge of how to develop and offer online programs that were financially sustainable over a period of time. This seemed an intriguing project, and the FIPSE project director sought the involvement of the other two authors to form a project team to design a process to develop principles that, if followed, would improve a program’s likelihood of being
financially sustainable. The team had experience developing and offering online programs, experience in developing costing methods for online learning, or research expertise in cost-efficiencies of online learning.

Before proceeding, the project team developed several definitions to guide the project. A principle is “a comprehensive and fundamental law, doctrine, or assumption” or “rule or code of conduct” (Merriam-Webster, n.d.). For this project, principles would be any rules of policy or practice that have a high likelihood of contributing to the financial sustainability of an online educational program.

Sustainability is “a method of . . . using a resource so that the resource is not depleted or permanently damaged” (Merriam-Webster, n.d.). FIPSE uses this term and defines sustainability as “the likelihood that a project will be continued and institutionalized beyond federal funding” (FIPSE, 2006, p. 18). For this project, sustainability will be those policies and practices that improve the likelihood that an online educational program is financially viable.

Program will refer to any course or set of courses, or module or set of modules that comprise an educational program of study.

Two caveats are important to understand both the process of uncovering and evaluated situated knowledge, but also the goals of the process. First, the project team aimed to provide a comprehensive list of principles that would contain questions for administrators to ask before taking a program online. While a program or institution might not have answers to all of these questions, it would be wise to know as much as possible about these issues, because this would help administrators make more informed decisions and increase the likelihood that the program would be financially sustainable.

Second, the purpose of the principles would be to focus on fiscal matters and issues that directly impact financial sustainability. Because quality is critical, these principles would need to assume that the program was already pedagogically sound and contributed to student learning.

With these definitions and caveats in hand, the project team proceeded. First, the team brainstormed an early set of principles that they felt would lead to sustainability and submitted these to an external consultant with expertise in online programs. After this round of reviews and revisions, a draft document on “principles of sustainability” was available for wider review.

After gaining IRB approval to undertake this research, the team identified nine FIPSE project directors in the FIPSE Grants Database (http://www.fipse.aed.org/subject.cfm?program=1) whose projects developed online modules, courses, and/or programs and whose grants were in the latter stages of completion. The project directors of these FIPSE projects were chosen because of their experience going online. These projects were also at different types of higher education institutions (medical schools, research universities, regional or comprehensive universities, community colleges), which might have elicited different experiences with the projects.

The nine project directors were contacted by email explaining the project, its aims, and the draft principles. A telephone interview was requested to gather their criticisms, additions, or changes to the principles. Seven project directors were finally interviewed; scheduling problems prevented additional FIPSE directors from being involved. One member of the project team conducted all of the interviews – lasting approximately one hour for each interview -- and proposed wording changes or additions to the principles based on the interviewee’s suggestions.
Initially, it was expected that this round of additional comments on the draft principles might produce conflicts that the project team might need to adjudicate, but this did not occur. Instead, the interviewees largely added ideas and exceptions to the principles. The final question of the interview asked the project director to assess the importance of each principle by answering the question, “How valuable is this principle to achieving sustainability of online programs?” Likert-style responses included (1) low value, (2) modest value, (3) moderate value, (4) high value, and (5) absolutely critical. Mean responses were calculated to assess the importance of each principle as well as the order of presentation in the draft list of principles.

After the interviews, another draft of the principles was prepared, including the suggestions, additions, and clarifications arising from the interviews. This draft was reviewed by the project team as well as the external consultant, which resulted in additional word modifications and clarifications. The current version of the principles for financial sustainability are presented next.

Results

The process of tapping the practical knowledge of existing project directors of online efforts resulted in principles that grew longer, more detailed, and more comprehensive. Each review tended to improve the document, adding a perspective that was missing or an exception that needed to be included. In retrospect, it was important to include the experience of project directors of very different types of projects. Two projects were at medical schools, three at research institutions, and two at regional or comprehensive institutions. Some projects were to operate or offer programming on state funding, others used grant funding to offer programs, and still others attempted to license their products to create a revenue stream. Some projects were local, others regional, and others national or conceivably international. Some projects were for undergraduate students, others for graduate students, and still others for adults seeking professional training. Some projects focused on developing online modules, others developed courses, a few even developed a full program (be it a certificate or degree program). Some projects were housed in an academic department, others in a continuing education or distance education department, still others in a central office. And projects were spread across the sciences, allied health, education, and professional programs.

Despite this diversity of projects, what is intriguing is the similarity of the responses and the consistent support for the draft principles. Therefore, their diverse needs, problems, and solutions contributed to a set of principles that others may have more confidence in. The final set of overarching principles is:

Principle #1: Know your market.
Principle #2: Know your costs.
Principle #3: Determine a price.
Principle #4: Negotiate with the institution.
Principle #5: Observe good financial management rules.
Principle #6: Develop and implement marketing.
Principle #7: Have a web identity.
Principle #8: Identify and develop good faculty, including adjunct faculty.
Principle #9: Improve retention.

Principle #10: Improve courses and program.

What follows in this section is a prose description of the kinds of questions and issues to be explored for each principle. An individual desiring to view the entire list of questions for each principle will find the principles in a checklist format in Appendix A.

**Principle #1: Know Your Market**

All of the individuals involved in this process agreed that this principle was first in importance and foundational to all other principles. It involves (a) knowing the job market (e.g., what jobs graduates can do; what skills are growing in importance), (b) knowing the student market (e.g., how many there are, what influences their interest in programs, where they are located, what skills they have, what computer equipment they have), (c) knowing the competition (e.g., which institutions offer similar programs, how they are delivered, what they cost, how much time they require, how many students are enrolled), (d) knowing your markets within the institution (e.g., how the program fits into programs at your institution, whether it can be adopted by others, whether it competes with internal programs), and (e) knowing your competitive advantage (e.g., how loyal students are, whether there are new competitors, whether preference for the program is based on price, focus, delivery or format). Once this information is in hand, the administrator can ask tough questions about the program: whether there is room in the market for the program, if changes to the program might make it more marketable or appealing, and the level of enrollments to be expected from the market. One way to get help identifying, compiling, and analyzing market information is to develop advisory boards with expertise in the area of the program.

**Principle #2: Know Your Costs**

Knowing and understanding costs must precede setting a price (principle #3) and generating monies to cover the costs of reinvesting in the program. To do this, administrators of online programs need to first create a process for identifying and estimating costs, which may be determined by the institution or may require the administrator to explore other costing methods (e.g., Technology Costing Methodology), or allocating costs to development, delivery, and administration (Rumble, 2001). Costs that need to be identified and tracked include instruction, academic support, and student services, but also fees to various bodies inside and outside the institution (more on this later). This is an enormous first step that takes a great deal of time and effort, but will pay off later when the administrator tackles the second step: improving cost-efficiencies through use of instructional design principles, increasing scalability, substituting lower-cost for higher-cost labor, substituting technology for higher-cost labor, and substituting technology to free up capital space.

Calculating costs to any program requires that you identify all costs. To do so requires knowing where the program will be housed, because different locations of a program will bring the program under different policies at your institution or system. That includes policies on what the institution expects the program to pay (known as “chargebacks”) to various departments or levels of the organization. Also identify the costs borne by the institution or partners, because some of these are free and others are not. Be alert to finding hidden costs, too, which is especially important if the program is one of the first online programs at the institution. But remember that
costs change and it is best to get all agreements in writing. Also, seek help from those who have experience identifying costs. And while it is important to identify all costs, precisions may not be absolutely necessary. If you are early in the process, obtain reasonable estimates and do not try to calculate every item to the last penny.

**Principle #3: Determine a Price**

With this cost information in hand, you are now able to calculate the number of students needed to cover costs left over when resources from other sources are applied to the bottom line. This is critical to calculating a price for the program and generating the level of revenue so there is a surplus for reinvesting in the program. Let us define the price charged to students as the sum of tuition and all fees. The administrator must identify all policies on tuition and fees, all waivers to these policies, including distance learning or technology fees applicable to the program. Then ask will the state subsidy be available to support the program, will there be other sources of support (e.g., grants), or will the program need to cover all of its costs? Is the price of programs already set by policy, and if so, will the revenue exceed the costs? If not, will the institution help out? Can enrollments be increased to cover the shortfall? And if enrollments are increased, will there be a negative impact on learning? How many courses or years will the program have to operate to achieve a breakeven point or the point where it can begin to make money or recoup its development cost?

Setting a price also requires asking questions about students, their ability to pay, their future pay, their financial aid options, the ability or willingness of their employer to pay, and the availability of grants. Setting a price requires asking what other programs charge and if there is an ethical limit to what can be charged. Lastly, the price needs to be low enough to attract students and high enough to cover costs and generate a surplus. That surplus is essential, so it is critical to understand what the institution expects of the surplus and whether a larger share of the surplus can be negotiated to cover unexpected expenses, redesigning and upgrading the program, or trying new programs and new markets.

**Principle #4: Negotiate With the Institution(s)**

Because all online programs are offered in and through educational organizations that have various rules, it is important to locate as many of these policies or rules in the beginning and negotiate exceptions when necessary. The experts encourage administrators to work out agreements – in writing – before offering the program, and to make these agreements as comprehensive as knowledge of the organization and its rules allows it to be. The agreement should cover program revenue, the percent of royalty payments, and indirect cost recovery and indicate how much goes to faculty, the program, department, and others. Do not assume these are non-negotiable; there may be more room for negotiation than originally supposed. For inter-institutional partnerships, indicate how financial aid, student records, course transfers, and charges will be shared. Negotiate with everyone and at every level, although it is important to be consistent, follow institutional norms for who negotiates, and get agreements in writing. Do not forget to identify institutional and system policies on approval of programs and make sure several institutional leaders understand the program because losing an advocate can be detrimental to completing and fulfilling negotiations.

**Principle #5: Observe Good Financial Management Rules**
It may not be glamorous, but the administrator must know and follow all financial rules. In fact, especially for faculty acting as program administrators, it is important to stress that they are now a money manager. This involves identifying the financial rules at your institution, knowing how to set up and monitor a budget, knowing how to keep books, hiring someone to do this or learning how to do this, regularly reviewing the budget, making sure payments are made, knowing how to work with accounting, knowing when money is available, knowing what money can roll over and other restrictions, knowing how to get reimbursed or pay people, and knowing how billing and financial aid works for students. Also, make sure the budget is not accessed by others or what charges will be made against the account. Have contracts for work performed and make friends with the people in offices who can teach these new skills or help negotiate within the institution’s budgeting system.

**Principle #6: Develop and Implement Marketing**

Marketing is key to finding and communicating with potential students. This requires knowing what students are most likely to be successful and stay enrolled in the program and identifying ways to distribute information about the program. It also requires reviewing what is known about the market and identifying routes to distribute information about the program, including organizations, employers, professional associations, agencies, and advisory boards. Next, develop a marketing plan, using newsletters and other publications, web sites and media channels. Help students understand if online learning is for them and if the program will fit their needs.

**Principle #7: Have a Web Identity**

Think of the program’s web site as its “face,” which can help the right students find the program, understand the program, and choose it, if it is right for them. Make sure the web page Googles well and follow institutional guidelines for web design. Provide lots of information about the program (what it does, what is required, when it is offered, how it transfers or is delivered, successes of earlier graduates) and links to application forms, registration, cost and financial aid information, deadlines, library resources, policies, advising, etc. Make sure there is a way for the student to contact someone and have a process for managing inquiries so questions are answered quickly, students can be tracked, and new information about the program can be shared with them. Be clear about students’ responsibilities (e.g., equipment, prerequisites) and do not forget to use the site to collect information from students to make sure the program is finding the right market. And finally, make sure the site stays up-to-date.

**Principle #8: Identify and Develop Good Faculty, Including Adjunct Faculty**

Good faculty are critical to ensuring a quality learning experience, and good adjuncts can be doubly critical as a way to ensure quality and handle enrollment growth. Choose faculty who are interested in online learning and want to learn how to do it well; they need to be flexible and able to handle problems; perhaps involving them in an existing course is a good way to see if they are really a good fit with online learning. Make sure various policies are understood and followed: institutional policies on workload, course or program enrollments, and hiring new faculty. These policies govern core faculty and may constrain the program’s use of core faculty, the size of the program, and the number of adjuncts needed to handle enrollment increases. Adjuncts can be found several places (e.g., professional associations, employers, program graduates), but they
need to like online teaching and be trained to do it well. They can help deal with enrollment growth and help control costs, as well. Training for both core and adjunct faculty needs to cover pedagogy, technology applications, instructional design, the course management system, academic policies, student and course expectations, and ways to manage interactions and assess student learning. Co-designing courses with more experienced faculty designers can help new faculty, as will having a solid assessment plan in place to make sure student learning improves despite efforts to increase efficiency.

Principle #9: Improve Retention

Improving retention is tied to financial sustainability because it costs more to recruit a new student than to retain an existing one. This requires improving screening methods or admissions criteria, providing an orientation to online learning, the CMS, and the program, building community in the program, encouraging interaction between and among students and faculty, designing high-quality courses, encouraging faculty to reveal their personalities online, contacting students regularly (especially those who have been “missing”), and providing regular feedback so that students know how they are doing and/or what they may need to improve and how to do so.

Principle #10: Improve Courses or Program

The quality of a program is critical to financial sustainability because quality impacts the recruiting and retaining of students, keeps faculty committed to the program, and raises the level of recognition of the program among employers, members of the public, or institutional leaders. Actions that are particularly helpful include continuously assessing student learning and the curriculum and making improvements, using rubrics or other assessment tools, keeping curriculum up-to-date, listen to and use student feedback during and after the course or program, evaluating faculty instruction and role in the course, having the course reviewed by an instructional design professional or online course evaluation rubric such as Quality Matters (http://www.qualitymatters.org), regularly scanning the market to monitor the program’s changes in competitive advantage, monitoring accreditation standards, and seeking external evaluations (e.g., advisory board members, professional associations, recognized experts).

Table 1 captures the initial proposed order of the principles and the mean Likert score for the importance of the principle given in response to the question, “How valuable is this principle to achieving sustainability of online programs?” While all principles received either “high value” or “absolutely critical” votes, the Likert responses implied that a different order – based on importance – might be considered. While changing the order of the principles was discussed by the project team, doing so would result in a list of principles that seemed out of order. It was felt that the proposed order made more logical sense, because it started at the beginning and proceeded through the program planning and implementation process step by step.

Table 1
Comparison of Initial Order of Importance versus Likert-Scale Responses
1=Low value, 2=Modest value, 3=Moderate value, 4=High value, 5=Absolutely critical

<table>
<thead>
<tr>
<th>Principle</th>
<th>Order of Principle</th>
<th>Mean Likert Response</th>
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<td></td>
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</table>
Know your market. 1 4.8

Know your costs. 2 4.7

Determine a price. 3 4.2

Negotiate with the institution(s) 4 3.9

Observe good financial management rules. 5 4.0

Develop and implement marketing. 6 4.7

Have a web identity. 7 4.0

Identify and develop good faculty, including adjunct faculty. 8 4.7

Improve retention. 9 4.0

Improve courses and program. 10 4.3

Each principle captures the situated knowledge of the online administrators involved in this research project. Appendix A provides a more detailed and lengthy list of conditions, questions, and suggestions that support each principle and guide one through a variety of questions or choices. Not all choices will be available in all conditions. Not all institutions will be interested in financial sustainability or having programs cover their costs; they may be willing to absorb costs or cover them through other revenues. Not every project will be able to negotiate its own price. Not every project will be able to negotiate with the institution, although it may be able to negotiate on some items and not others. But perhaps what is valuable is the list of things that can be negotiated in some institutions (if not all) and the negotiations that should be explored so that the online program can have the best chance of being financially sustainable. But as one experienced administrator might say to a new administrator, “It doesn’t hurt to ask.” Perhaps the more important caution is, “Don’t assume.” Do not assume you know the rules at your institution, or what the institution will or will not do. Ask. And do not forget to get agreements in writing.

Discussion

The principles of sustainability in Appendix A represent the collected, evaluated, and vetted
knowledge of experienced online project directors. As with all knowledge that is situated in individuals with a certain level of experience, it captures a level of “expertness” that may not be perfect because it is constrained by the conditions, situations and programs in different institutions. The principles may need to continue to evolve as professionals’ experience with developing sustainable online programs grows, markets continue to change, institutions adjust to new conditions, and costs change due to new technologies or other forces.

Nevertheless, this knowledge is certainly valuable to others who are new to the development and administration of online programs. The principles of knowing your market and costs are fundamental to achieving financial success. And it is important to know that in many cases prices and other policies can be negotiated with institutions. The administrator, whether he or she is a faculty person or administrator, needs some solid preparation and skills in financial management, marketing, and developing a web presence for the program. They also need to be able to find and develop faculty – full-time or adjunct – who have the potential and willingness to become good online teachers. And finally, they need to focus attention on finding ways to improve retention in the online program, especially through improving the quality of the courses offered. These are foundational skills in the view of experienced online administrators.

The process of abstracting knowledge from experienced administrators as outlined by Brown et al. (1998) may well be a useful approach to uncovering the situated knowledge of professionals in a manner so that it may be examined, learned, and tested by others. It may be an approach that can be used to abstract the knowledge of experienced distance and online learning administrators on other topics, such as what makes a good online instructor or student or the factors that affect a program’s success in a rapidly changing marketplace. Certainly, this process of interviewing and repetitively evaluating the knowledge of these project directors has produced a viable, working document that may help others develop and offer financially sustainable programs.

References


Leach, K., & Smallen, D. (2000). Understanding the COSTS of information technology (IT)
support services in higher education. In Finkelstein, M. J., Frances, C., Jewett, F. I., & Scholz, B. W. (Eds.), Dollars, distance, and online education (pp. 123-139). Phoenix, AZ: Oryx Press.


Twigg, C. A. (2002). Improving learning and reducing costs: Lessons learned from round I of the Pew Grant Program in Course Redesign. [http://center.rpi.edu/PewGrant/Rd1intro.html]


APPENDIX A
Principles of Sustainability

1. **Know your market.**

   A. **Why?** It is essential to know your market in order for a program to be sustained financially.

   B. **How to do this:**

      1. **Know the job market:**
         a. Know what jobs your graduates can fill.
         b. Know if these jobs are growing.
         c. Know what these jobs require in terms of skills.
         d. Know what standards are used by certifying or accrediting associations in the field.

      2. **Know the student market:**
         a. Know your target population.
         b. Know how many potential students there may be.
         c. Know the economic influences that affect students’ interest in the program.
         d. Know that a survey of student interest does not translate into enrollments. Only a smaller percentage of students interested in the program may be ready to enroll.
         e. **Know about your potential students:**
            i. **Demographic characteristics:**
               1. Are they in a single geographic location or in many locations across the nation or world?
               2. Are they in a particular occupation?
               3. Are they traditional-aged or adults?
               4. Do they need entry-level preparation or professional certification?
               5. Can they afford the price of the program?
            ii. **Student skills:**
               1. Are they educationally prepared with the appropriate degree for this program?
               2. Do they have the skills or preparation necessary?
               3. Are they computer savvy or novices?
               4. Do they believe that online education is easier, or are they experienced with the demands of online education?
               5. Do they have the necessary equipment and ISP access with sufficient speed?
               6. Is DSL necessary or will dial-up work for the program?
               7. Do they have CD-Rom or DVD technologies?
               8. How will you address any deficiencies in their skills or understanding (e.g., through orientation or training sessions)?

   3. **Know your competitors.**

      a. **How many competitive programs or institutions exist?**
         i. Make sure you include programs at institutions in the region, nation, and world.
b. What delivery methods do they use?
c. Do they require on-campus experiences?
d. What do they charge (tuition and fees)?
e. How long is the program (e.g., time or credits)?
f. Does the program have the same focus as yours?
g. Who do they market to?
h. What is the title of the program?
i. What level (baccalaureate, graduate) is it?
j. What prerequisite courses does it require?
k. Are they fiscally successful?
   i. How are they funded?
   ii. Are they licensing courses?
l. How many students do they enroll?
m. Are they accredited? By whom?

4. Know your secondary and tertiary markets.
   a. How does your program fit into other programs at your institution or partner institutions?
   b. Can your curriculum be adopted by other programs? Will you allow your curriculum to be adapted by other programs?
   c. Are you directly competitive with other programs at your institution? This may require internal coordination with your institution’s administration.
   d. Can you forge a transfer or articulation agreement?
   e. Can you license courses to other schools or companies? What process must be followed to license to other institutions or companies?

5. Know your competitive advantage.
   a. How loyal are the potential students to your institution?
   b. Does your program have the preferred accreditation?
   c. Have programs entering or exiting the market changed the dynamics of the marketplace?
   d. What is the preference for your program? Who decides?
      i. Is it based on price?
      ii. The program’s focus?
      iii. Employer preference?
      iv. Students want part-time or full-time?
      v. Can your program be flexible (e.g., use multiple delivery methods, have open-ended courses, etc.)?
   e. Be sure to update this analysis annually. Technology and competitors change rapidly.

6. Take a hard look at your data on students, competitors, and jobs.
   a. Is there room for your program?
   b. Can you adjust your program to make it more marketable or fit better with student or job needs?
   c. What level of enrollments can you expect?
      i. You may need a low and high estimate.

7. One mechanism to help with the process above is to form advisory boards with members drawn from groups appropriate for the program.
   a. Include representatives from business, education, professional organizations, the community, or government.
   b. The board can help identify the market, design curricula, advertise,
recruit students, and form helpful partnerships.

2. **Know your costs.**

A. **Why?** It is essential to set a price and generate a surplus to reinvest in the program.

B. **How to do this:**
   1. Create a process to identify and estimate costs with all parties.
   2. Investigate your institution’s method of identifying and classifying costs.
   3. Or, use cost categories from Jones (2004), *Technology Costing Methodology* for more details:
      a. Instruction:
         ii. Curriculum planning/course design
         iii. Instructional materials, including development, production, and acquisition
         iv. Course content delivery
         v. Tutoring, mentoring, interaction with students
         vi. Assessment of learning including assignment of course grades
      b. Academic Support:
         i. Computing support
         ii. Telecommunications support
         iii. Library and information support services
         iv. Assessment support services
         v. Academic logistical support
         vi. Academic administration
         vii. Academic personnel development
      c. Student Services:
         i. Academic advising
         ii. Counseling and career guidance
         iii. Student access services/student records
         iv. Advertising and marketing
         v. Recruitment
         vi. Admissions
         vii. Financial aid
            A. Financial aid counseling and evaluation
            B. Records maintenance and reporting
            C. Student employment services
         viii. Student records
   4. Or, use alternative method for classifying costs into
      a. Development costs (which generally is higher for online learning to take advantage of redesigning instruction and is key to improving the quality of learning),
      b. Delivery costs, and
      c. Administration costs (Rumble, 2001).

5. Consider improving cost-efficiencies through the following substitutions (Meyer, 2006) by using instructional design to also improve quality:
   a. Higher scaleability (using large enrollment classes or repetitions of courses over time);
b. Lower-cost for higher-cost labor;
c. Technology for higher-cost labor;
d. Technology for capital space.
e. This process requires careful planning and assessment to ensure quality learning.

6. Identify and calculate direct costs.
7. Know the policies that govern your program.
   a. Do you fall under the rules of Academic Affairs, a particular college, extended programs, or continuing education?
   b. If this is not known, negotiate where the program will be governed and document that decision in writing.
8. Know what your institution expects you to pay.
   a. Paybacks (also known as “charge backs”) to the department, college, university, system, graduate college, continuing education, etc.
   b. Overhead calculations (these may be taken from indirect paid by a grantee or be a direct charge to you)
   c. Get agreements in writing.
8. Know costs borne by your institution.
   a. These may be the same as above or the paybacks the institution expects the program to pay, but they may not.
   b. Know which services are “free” to you and which will cost you.
   c. Monitor these costs because they may change as a result of budget cuts or other reasons.
   d. Be sure to get approval for copyrighted material in your program.
   e. Investigate your institution’s intellectual property policy and licensing policies.
9. Know costs borne by partners.
   a. What costs will partners contribute for free?
   b. What costs must be reimbursed to the partners?
      o Ensure these costs are built into the price.
10. Calculate number of students needed to cover costs and generate a surplus.
11. Be alert to hidden costs.
   a. Identify knowledgeable individuals at the institution and ask about costs that are not obvious or talked about.

3. **Determine a price.**

   A. **Why?** You need to cover costs and generate a surplus to reinvest in the program.
   B. **How to do this:**
      1. Define the price charged to students as the sum of tuition and all fees.
      2. Questions for the institution:
         a. Identify the institution and/or system policies on tuition and fees.
            i. Are waivers from these policies or fees necessary or possible?
            ii. Is there a separate “distance learning” fee that students must pay?
         b. Is there state subsidy available to support the program and students?
         c. If the price is already set by existing policy and the cost exceeds the revenue generated by this price,
Will the institution subsidize the program?
ii. Can enrollments be increased? What are the impacts on learning and faculty workload?
iii. Will increasing enrollments diminish the market?
iv. What student fees do distance or online students pay (e.g., parking, athletics, on-campus services)? Can they be excused from these?
v. Will the price cannibalize enrollments of similar courses taught by the institution?
vi. Negotiate the number of years the program has to get to the financial breakeven point, but be realistic. Review your market information and competitive advantage.

3. Questions about students:
   a. Identify the target population’s ability to pay.
   b. Can a student rationalize a higher tuition level if it results in a more lucrative position?
   c. Determine financial aid options for your students.
   d. Pursue grant funding to help pay costs of students.

4. Questions about other institutions or programs:
   a. What do other competing institutions or programs charge?
   b. If there are no competing institutions, what is the moral or practical limit to what can be charged?

5. The price needs to be low enough to attract students and high enough to cover your costs PLUS generate a surplus for contingencies.
   a. Know where excess funds go. Will they be taken by the institution? Can you negotiate that these funds be retained by the program?
   b. Need funds for unexpected expenses in future.
   c. Need funds for retooling the program in future.
   d. Need funds for new programs.

4. **Negotiate with the institution(s).**

   A. Why? All educational programs are offered by the department, college, institution, or system. You need to follow the appropriate rules or negotiate exceptions.

   B. How to do this:
      1. Work on agreements before offering the program with the department, college, university, graduate school, continuing education, etc. and/or partnering institutions.
         a. If your program generates revenue for the institution, ask what dollar amount or percent of revenue can be returned to the program or department. In the absence of policy, negotiate.
         b. If courses will be licensed, what percent of royalty will go back to the faculty, author, program, school? In the absence of policy, negotiate.
         c. If your project is grant funded, find out how indirect costs are shared with the program, department, school, etc. In the absence of policy, negotiate.
         d. Negotiating takes time; allow sufficient lead time to do this.
         e. Document decisions resulting from negotiations.
      2. Agreements should cover:
3. For partnerships among institutions, include:
   a. How financial aid will be provided.
   b. How other institutions can access student records.
   c. How courses will be transferred or accepted at institution(s).
   d. How charges will be shared.
   e. If partnerships are within or between systems, check on system or state-level rules on collaborations.

4. Get all agreements in writing and have them signed and dated.
   a. An example Memorandum of Understanding from the Great Plains IDEA Project can be found at:
      http://www.gpidea.org/alliance/ResourceCenter/modelDocuments.html

5. Remember that many practices and policies are negotiable.
   a. May need to negotiate with department, college, university, system.
   b. Make consistent arrangements with all parties.
   c. Determine who is best placed to do negotiations: program coordinator, department chair, etc.

6. Identify approval processes, timelines, and content needed for approval of courses or program.
   a. There may be separate approval processes for department, college, university, system, or state.
   b. Each approval process has a different audience and reviews different issues.

7. If not already possible, make sure students can:
   a. Order and pay for transcripts online.
   b. Register for courses online.

8. Identify an institutional succession plan if the program’s main advocate(s) leaves or retires.

5. **Observe good financial management rules.**

   A. Why? You need to know and follow financial rules. You are now a money manager.

   B. How to do this:
      1. Identify the financial rules at your institution.
      2. Know how to set up a budget with the institution.
      3. Know how to keep your own books (you may need a “shadow budget” to stay up-to-date on what has been spent).
         a. If you can’t do this, make sure you have a highly qualified and trustworthy person do this.
         b. Regularly review charges against budget.
         c. Ensure payments are made, especially important when paying people in timely manner.
      4. Know:
         a. How to work with accounting.
         b. When dollars are available or “released.”
         c. What account types are available:
            i. Some accounts allow for rollover and others do not.
            ii. Other account types have restrictions.
d. How to get reimbursed.
e. How to pay people.
f. How students are billed.
g. When student financial aid is available or paid.
5. If at all possible, you need to have a separate program budget.
   a. Have a designated account within the university’s accounting system
   b. Try to avoid having funds go into an account that others can use.
   c. If this is impossible, be sure you understand what charges and amounts you can obligate.
6. Have contracts for all work subcontracted to others outside the institution.
7. Pay attention to building and sustaining relationships with various offices and individuals at your institution and partner institutions.

6. Develop and implement marketing.
   A. Why? You need a reliable way to locate and communicate with potential students.
   B. How to do this?
   1. You need to find the right clients (students who succeed and stay enrolled)
   2. Review what you know about your market and identify routes to distribute information about the program.
      a. Geographic location of students.
      b. Their occupations.
      c. Organizations that train for targeted occupation.
      d. Employers (may be willing to identify students and pay for their education).
      e. Certifying agencies.
      f. Professional associations.
      g. Agencies knowledgeable about occupation.
      h. Advisory boards, if you have them.
   3. Develop marketing plan.
      a. Check out newsletters, alumni publications, newspapers, web sites, listservs, professional association newsletters, state agency bulletin boards, media channels, etc. (some of these may be free and others cost money.)
      b. The institution may have personnel or departments with expertise.
      c. Develop materials appropriate to target population (this may include a web site (see next) or published materials).
   4. Find the “right” students.
      a. Help students understand if online learning is for them.
      b. Help students understand if the course or program will fit their needs.

7. Have a web identity.
   A. Why? Your program needs a “face” and ways to help the right students find you and choose your program.
   B. How to do this:
1. A good web page googles well and allows potential students to find you.
2. Use institutional guidelines for web design.
3. Provide information about your program:
   a. What it does (e.g., the jobs it prepares students for).
   b. What it requires (e.g., number of courses, timeframe).
   c. When it is offered (e.g., what semesters courses are offered).
   d. Who is it for (e.g., students with a certain educational preparation, certification).
   e. How it can be used (e.g., if it transfers).
   f. Learning preferences (e.g., are you able to work comfortably in an independent, computer environment?).
   g. Whether it is available in different formats (e.g., pdas, podcasts, CD-Roms, cell phones, other new technologies).
   h. Approvals (e.g., is the program approved for certification in your state?).
   i. Success of earlier students or graduates, if available (e.g., number promoted, employed, etc.)
4. Provide links to:
   a. Application forms or process.
   b. Registration or enrollment.
   c. Information about costs and financial aid.
   d. Information about deadlines.
   e. Library or other necessary resources.
   f. Policies about enrollment and continued enrollment in the program.
   g. Other policies (e.g., grading).
   h. Tracking systems (e.g., DARS or other degree audit systems) for program advisement.
5. Provide a way for students to contact someone for more information.
   a. Email link or phone number.
   b. Can be a single point-of-contact or many, if all individuals can provide same information and can coordinate information.
6. Have an automatic process for managing and following up on contacts.
   a. Respond quickly.
   b. Collect contact information.
   c. Contact student if you have not heard from them to ask if they need more information.
   d. Identify status of that contact (not interested, not appropriate, very interested, applying, accepted, will enroll later, will enroll).
7. Have a process for students to receive updated information from the web site.
   a. Use an RSS function so that students receive changes to the web site.
8. Identify the responsibilities of students:
   b. Make sure program satisfies certification or employer needs.
   c. Have appropriate equipment, ISP access.
   d. Have educational preparation necessary for success.
   e. Be ready for demanding online coursework.
9. Can automatically survey potential students to find out how they learned about program.
   a. Find out if they are qualified.
   b. Helps you identify if you are reaching market.
c. Helps you adjust your understanding of the market.

10. Find out who maintains the web site.
   a. Get the skills to make changes as necessary or hire someone who can do this.
   b. Changes happen all of the time, so you need to make sure your program’s “face” is up-to-date.

8. **Identify and develop good faculty, including adjunct faculty.**

   A. Why? It is critical to find and develop good faculty, but also good adjuncts to handle enrollment growth.

   B. How to do this:
   1. Identify faculty:
      a. Who are interested in teaching online and learning how to do so well.
      b. Who are flexible and able to troubleshoot some problems.
      c. Have faculty new to online learning participate in an existing course to see if they are a good fit.
      d. Identify institutional policies on workload and course enrollments that govern core faculty. Such policies can affect whether your program can grow and how many adjuncts you may need to address growth.
   2. Identify key administrator advocates.
      a. Administrators at the program, department, and college level are essential to ensure that faculty are recruited, paid, and developed equitably and without detriment to their careers.
   3. Identify adjuncts.
      a. May be found through professional associations, employers, program graduates.
      b. Do they have proper credentials or educational preparation?
      c. Will they be successful and like teaching online?
         i. If you don’t know this, then involve them as a teaching assistant or co-teacher in an existing course so they can experience online coursework.
   4. Provide faculty and adjuncts with training.
      a. Need to explore new and different pedagogies, technology applications (e.g., learning objects), and instructional design principles.
      b. Need to know the course management system (including automatic assessment tools and tracking functions); how to use campus resources (but know the cost of training if it must be subsidized for adjuncts).
      c. Need to understand university, college, departmental policies.
      d. Need to know expectations of students, how course fits into program, and program philosophy.
      e. Need to know the professor’s role in the course, how to manage interaction, amount of discussion/interaction expected, how to conduct student assessment.
      f. Training and experience is essential to helping faculty improve what they do online.
   5. Have key faculty serve as co-designers for courses.
      a. Faculty involved with designing programs should know how to improve quality and use substitutions to increase efficiencies.
   6. Focus on student learning and quality improvement.
a. This makes it easier to recruit new students, increasing the program’s financial viability.
b. This also improves retention of existing students (see next), which will impact the program’s sustainability.

7. Have an assessment plan in place to document levels of student learning, and how the curriculum was changed based on this information.

9. **Improve retention.**

A. Why? Because recruiting new students costs more than retaining students.
B. How to do this:
1. Improve your screening methods so that students who are ready to learn online are enrolled.
2. Provide students with an orientation to learning online, program expectations, and using the CMS.
3. Build community among class members.
4. Encourage interaction among students and with faculty.
5. Design high-quality courses.
6. Encourage faculty to reveal their personalities online.
7. Contact students:
   a. Decide who will be responsible for this function (faculty or staff).
   b. Identify students who don’t enroll in a course or don’t log into the course earlier rather than later.
   c. Contact them and express concern for them.
   d. Encourage them to enroll again when it is appropriate to do so.
8. Provide regular feedback to students about progress in the course or program.

10. **Improve courses or program.**

A. Why? The quality of a program can help recruit and retain students, which has an impact on the program’s financial viability.
B. How to do this:
1. Continuously assess student learning and the curriculum and make improvements each year. Document this work.
2. Identify and use rubrics or assessment tools appropriate to your discipline or program (e.g., the “Quality Matters” rubric is available at [http://www.qualitymatters.org/documents.htm](http://www.qualitymatters.org/documents.htm)).
3. Keep curriculum up-to-date.
4. Listen to and visibly use student feedback (during and after the course, at the end of the program, and five years after leaving the program).
5. Continuously evaluate faculty instruction and role in the course so improvements can be made.
6. Ask an instructional design professional to recommend improvements to the course.
7. Perform regular scans of the market – other programs, other innovations, students, etc. – to reassess your competitive advantage.
8. Monitor changes to accreditation standards.
9. Seek external evaluations (e.g., advisory board members can do this, professional associations, etc.).