Planning Human Resource Development and Continuing Professional Education Programs That Use Educational Technologies: Voices That Must be Heard

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The problem and the solution. Many human resource development and continuing professional education programs that use technology lack quality and are not fully implemented because development and delivery processes do not work well thereby alienating learners and/or faculty. Many others are implemented but not sustained, often because the program design is fundamentally unsustainable. One general way of describing the problem is to say that when planners design the program, processes, and business model, they often do not take into account the interests of all internal and external stakeholders. This article focuses on how planning models that foreground learning but neglect faculty, staff, and organizational interests undermine learning, because they undercut implementation and sustainability. Planning models that foreground and balance stakeholder interests support learning because they support implementation and sustainability.

Keywords: *continuing professional education; human resource development; program planning models; technology*

A social work professor received a $200,000 grant from a foundation to develop Web-based modules to teach data collection and analysis skills to senior program staff in governmental mental health agencies in the western United States. A needs assessment indicated that these personnel needed training in such skills. Forty staff from 12 states enrolled, and the program provided up-to-date computers to easily access the modules. The modules were developed by skilled social work faculty and teaching assistants and a very competent instructional designer, and they were relevant to the work environment, interesting, and instructionally sound including using faculty and teaching assistants to provide feedback on assignments. Yet there was a significant dropout

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rate. Only 8 of the 30 participants completed all six of the modules. Once the money was spent to develop and teach the modules once, the grant was over, and the modules were not taught again.

A 6-month, team-based management development program that included face-to-face skills training and team-based project learning for public health nurses also included a Web-based component to teach quality improvement (QI) skills. At the end of the first program cycle, 60% of the learners had completed less than 25% of the QI course, and few had completed more than 50%. Focus groups revealed that most did not have their own computers with high-speed Internet connections at work. Many wanted to learn as a group but had to share the computers with several other nurses and a supervisor. Most of those who had computers at home used low-speed, dial-up connections. Most of the learners, who averaged 42 years of age, preferred face-to-face learning in any case and rated the online QI course as slow, monotonous, and boring.

An executive master's program in business administration made extensive use of the Web to deliver lectures via narrated slide-audio presentations in its courses. Several faculty had been accustomed to making oral presentations in class based on a few slides and handouts rather than writing out their lectures. Putting the slide-audio lectures on the Web required them to formalize and script their lectures. In addition, when the semester started and they were working a few weeks ahead of the students to prepare the slides and lectures, they soon learned that they did not have the PowerPoint skills to develop slides that could be delivered over the Web. They ended up spending so much time in this process that they had little time to meaningfully assess student work and give feedback. Their teaching evaluations showed learner dissatisfaction, and several faculty did not want to teach in the program again.

Change a few details and these are cases we have all recently encountered. This article deals with planning human resource development (HRD) and continuing professional education (CPE) programs that use technologies such as computers and videoconferencing.

Planners should use a stakeholder-based planning model by taking into account the needs and interests of the internal and external stakeholders, or people who significantly affect or are affected by the program (Mitroff, 1983). When they do, the program is more likely to be implemented well, achieve its objectives, and garner enough support to be sustained. Planners must also be able to identify the relevant stakeholder groups and how they relate to and depend on one another; understand their interests in relation to the program; build a planning and implementation process that takes their situation, needs, and interests into account; and evaluate all of the program's processes and effects to see how the groups are being served and what can be improved (Cervero & Wilson, 1994; Freeman, 1984; Mitroff, 1983; Umble, Cervero, & Langone, 2001). Promising tools for planners that take multiple stakeholder interests and evaluation criteria into account include the Baldrige National Quality Program *Education Criteria for Performance Excellence* (Baldrige National Quality Program, 2003) and the Balanced Scorecard (Kaplan & Norton, 2000). Planners also need several strategies of negotiation to enact these frameworks effectively.

Identifying Stakeholders and their Needs

Stakeholders for programs that use educational technologies include:

1. learners;
2. managers of organizations where the learners work;
3. faculty or content experts;
4. instructional designers and technical staff, for example, Web developers and graphic designers;
5. managers and leaders of the organization(s) offering and funding the program; and
6. the public (or customers) who pay for and use the services (or products) provided by the program's target audience of learners.

In this section, these stakeholder groups and their interests are briefly described.

Learners

Learners want to use learning materials and programs that

1. are relevant to their jobs;
2. are up-to-date and present reliable content from credible faculty or institutions;
3. are instructionally sound so that learning is time-efficient and effective;
4. are interesting and offer a high degree of interactivity with both peers and faculty;
5. are technically sound with few glitches and within their capabilities and the capabilities of the technologies they have access to in the workplace;
6. offer continuing education credits and/or academic credit (especially in CPE, such incentives can be very important motivations to stick with a program); and
7. are supported by their workplace such as with time, encouragement, recognition, and rewards (Cannon, Umble, Steckler, & Shay, 2001; Umble, McQuide, & Hummer-McLaughlin, 2003; Umble, Shay, & Sollecito, 2003).

It is important to understand the characteristics of adult learners and their reasons for participating in programs. It is also necessary to consider instructional design, prior technological exposure, and barriers to course completion in relation to attrition rates for courses.

When educating adults using technological tools such as computers, it is important to address the question of "which methods of instruction and learning are particularly suited to adults' ways of learning" (Enckevort, Harry, Morin, & Schütze, 1986, p. 33). The following principles can be adapted to online courses (LeJeune, 1998) and other teaching technologies:

1. Adults want to know why they need to learn something before learning it. Adults should be made aware of how learning can be applied toward real-world experiences that, in turn, make learning more meaningful.
2. Adults have a self-concept of being responsible for their own decisions and lives. Once they have arrived at that self-concept, they develop a deep psychological need to be seen by others and treated by others as

being capable of self-direction. They often resent and resist situations in which they feel others are imposing their wills on them.
3. Adults come into an educational activity with more experiences than youths thereby resulting in diverse backgrounds, learning styles, motivation, needs, interests, and varying goals. Thus, adult education emphasizes individualization of teaching. Greater experience can also inhibit them from developing new ways of thinking.
4. Adults are ready to learn about issues of concern to them.
5. Adult learners are life centered in their orientation to learning. Adults are motivated to devote energy to learning something to the extent that they perceive that it will help them perform tasks or deal with problems that they confront in their lives. They learn new knowledge, understandings, skills, values, and attitudes most effectively when they are presented in the context of application to real-life situations.
6. Although adults are responsive to some external motivators (better jobs, promotions, higher salaries), the most potent motivators are internal pressures (the desire for increased job satisfaction, self-esteem, quality of life). Motivation may be blocked by an adult's negative self-concept as a student, time constraints, and programs that violate principles of adult learning. (Knowles, Holton, & Swanson, 1998, pp. 55-61)

The interrelationships among learner characteristics, instructional design, and technological comfort are quite complex. Just as the three legs of a stool provide support and balance, these three factors when interwoven provide support to the learner. For example, the course designers must consider prior technological exposure and comfort of the learner when developing a course. Depending on the learner's technological skill set, the course designers may need to provide practice, guided tutorials, or detailed instructions to ensure that technology is not a barrier to course completion. Additionally, course designers can create an atmosphere for peer interaction using communication tools such as chat rooms, threaded discussion, and bulletin boards to simulate the types of discussions that are typical in face-to-face situations. These interrelationships deserve consideration for effective design and delivery of Web-based courses.

Research also shows that when adults' needs are not met, adults may withdraw from programs (Bernard & Amundsen, 1989; Garrison, 1987; Kember, 1989; Morgan & Littlewood, 1998; Morgan & Tam, 1999; Powell, Conway, & Ross, 1990; Wickersham & Dooley, 2001; Woodley, 1987; Woodley & Parlett, 1983). Barriers to participation can be classified as situational, institutional, dispositional, and epistemological (Cross, 1981; Enckevort et al., 1986; Garland, 1993; Gibson & Graff, 1992; Morgan & Tam, 1999; Woodley & Parlett, 1983). Situational barriers include a poor learning environment, lack of time because of work or home responsibilities, and geographic location. Institutional barriers include cost, problems with institutional procedures, course scheduling, course availability, and tutorial assistance. Dispositional barriers include lack of a clear goal; stress of multiple roles; time management; learning-style differences; interest, motivation, and attitudes toward school and content; and psychological,

social, and economic factors. Epistemological barriers are concerned with the diversity of academic disciplines and communication techniques.

Galusha (1998) cited lack of technical training for the student as a barrier to learning. Students who lack computer or writing skills may be inadvertently excluded from a course using an electronic medium as a delivery method:

> If students are undertaking distance learning courses that require knowledge of the computer, then the students must be taught, at a minimum, the fundamentals of operating the system. . . . If distance learning is to be successful, technical barriers must be made a non-issue. (Galusha, 1998, p. 11)

Educators must also be attentive to learners' self-efficacy regarding learning and using technologies and adapt their teaching accordingly. Self-efficacy refers to "perceptions about one's capabilities to organize and implement actions necessary to attain a designated performance of skill for specific tasks" (Oliver & Shapiro, 1993, p. 81). Oliver and Shapiro (1993) further noted that "those who possess a high degree of self-efficacy tend to be higher achievers than those who have a lower degree of self-efficacy" (p. 83).

Many scholars have described these learning-related interests of adults, but meeting these needs in practice requires very well-funded assessment and program development processes and very strong design and development processes. The most significant problem with the social work data skills course described above was that the otherwise well-designed modules were too time-consuming for busy managers to complete, especially because they relied on learners' self-discipline to stop their busy, regular work and complete Web-based modules at the office. Although a skills-training needs assessment was done, the assessment on the time availability and feasibility of the model was incomplete. Clearly, too, the nurses' quality improvement module was designed with little understanding of the worksite. In our experience, learners will often not participate in or complete online learning at the desktop without planned activities that ask them to do it at a certain time or with peers or without having paid for the program and/or associated academic credits. Programs with planned group activities, discreet activities occurring at a particular time, or offering academic credit and paid for are much more likely to be completed.

Managers of Organizations Where Learners Work

In HRD and CPE, managers of organizations where learners work may want all employees, or all of a certain type such as nurses or sales managers, to participate in a certain course. In these cases, managers want courses that meet the current organizational needs. In other cases, managers of professionals and business staff encourage individual learners to take open enrollment courses to meet their performance improvement goals. Again, they

will want commonly needed topics to be available. Needs assessments are indicated so that planners can represent these interests in the planning process.

Managers also hope that the courses meet learning goals effectively and efficiently and use appropriate, available, and reliable technology. Managers may be very interested in seeing evaluation results showing improvements in critical outcomes such as immunization rates or sales results. In such cases, programs and evaluations must be carefully planned to achieve and measure the outcomes that managers are looking for (Swanson & Holton, 1999).

Managers may be more willing to support and give release time for learning if the programs are designed to reach current organizational goals and are marketed as such. Another problem with the social work data skills course mentioned above was that learners were promised time off or other supports to complete the extensive modules, but most never got it.

Faculty and Content Experts

Faculty and content experts need to be paid well to develop quality courses and materials. This is especially true if the program expects them to tailor the materials to the needs of a particular audience. Payment must be in line with the amount of time that the faculty member spends on the project, which, of course, makes developing the kind of high-quality materials described above very expensive.

It may be appropriate to hire assistants who are paid considerably less than faculty to interact closely with technology staff and manage details of materials preparation. In academic settings, graduate students have the advantage of knowing the content but the disadvantage of high turnover. Programs may wish to hire full-time, permanent technology assistants to work with all faculty, because such permanent staff can become adept with the technologies.

Obviously, development costs should be included in program budgets. Faculty may have publishing, research, and other courses to contend with and not be interested in being paid (or not paid) for turning overheads into well-done PowerPoint slides on the Web or other such tasks. Then, too, technologies change, and it is better to train a few people to help the faculty than a dozen faculty who would rather be doing other things. These points may seem self-evident, but many people in charge of distance or technology learning units do not appreciate this and wind up alienating faculty and ultimately hurting both the product and the learners. Many of the problems with the executive M.B.A. program cited at the top of this article could have been avoided with early attention to this issue, such as hiring a technical assistant.

The need to pay well for good work from faculty implies the need for careful budgeting and having a business plan for programs (Abrams, 2003). Faculty also need adequate time in advance to prepare, released time to teach in the distance program (again, in exchange for adequate funding), and assurance that their intellectual property will be protected.

Instructional Designers and Technical Staff

Many organizations that offer CPE programs employ instructional designers who can work with faculty to make programs more effective. Having a qualified instructional designer on the team can vastly improve materials thereby meeting needs of learners and ultimately every other stakeholder (Cannon et al., 2001; Steckler et al., 2001; Umble et al., 2003), but it is also expensive. Instructional designers typically will not have the same influence and authority in the organization as faculty. Program managers should ensure that the program development processes are fair to the instructional designers, such as

1. having technical assistants on staff to free up the designer for design work (program managers often underutilize the expertise of the designer);
2. making sure that the materials development process has deadlines that are enforced with faculty and that faculty also understand the proper use of instructional designers. This will help make sure designers are not stuck with working 18-hour days before product releases, which not only alienates designers but vastly decreases product quality; and
3. giving the designers free access to faculty to rapidly clarify problems.

These guidelines apply to all technical staff whose collaboration is critical to project success, such as videoconference facility staff or Web developers (Umble et al., 2003).

Managers of the Organization Offering and Funding the Program

Managers of the organization that offers and funds the program are likely to be concerned about (a) reaching the desired target audience in appropriate numbers, which may be conceived as the program's coverage or sales; (b) determining if the program is reaching its objectives and worth the investment; and (c) making sure the program will generate continued sales and be sustainable. HRD programs that use technology, whether offered by a unit within the business or by an outside vendor, will likely have a strong strategy and business plan including market research and plans, a product planned and priced in accordance with that research, and sound research supporting the technology as appropriate for the target audience. The bottom-line perspective in business makes it more likely that training

and educational programs will have a workable business plan in place before launch. This is also true of CPE courses offered by many vendors.

Strategic and business planning is probably less likely to be used explicitly by public universities and governmental agencies. Many public sector staff are not experienced in strategic and business planning, because they have not typically charged for services or been held accountable for sustaining themselves (Goldsmith, 1997). Many technology-based programs do not have marketing or sustainability plans but seem to have been developed with the mind-set that "if we build it they will come" and that long-term implementation and revenue generation are of no consequence. Sometimes it seems as if the ability to put content onto Web sites, CD ROMs, or videoconferences is self-justifying to educational planners.

This is changing. Public sector organizations are increasingly being held accountable for specifying, measuring, and continuously improving outcomes (Hatry, Morley, Rossman, & Wholey, 2003). As tax revenues decline, a growing movement known as *civic entrepreneurship* (also called *social entrepreneurship* or *venture philanthropy* among foundations) advocates using bottom-line business and entrepreneurial thinking to enhance the usefulness and sustainability of social programs (Dees, 1998; Goldsmith, 1997).

Some of the unfortunate outcomes of the case studies reported at the outset of this article might have been avoided with a business planning mindset. For example, market research might have revealed that social work managers do not want lengthy 12-hour modules every month for 6 months but would rather have short, accessible modules that they can access as needed. Furthermore, using faculty and teaching assistants to teach the modules to 40 students was very effective educationally and in line with every educational theory but far too expensive to be sustainable without continued funding, which was not expected. Using in-depth market research and thinking of the grant as a way to start up a sustainable program (that charges or receives advertising revenue from its Web site) might have led to a more effective and sustainable model.

The Public or Customers Who Use Services

Ultimately, the public or customers receive the benefits of programs—or pay for the mistakes that lead to unsustainable programs. The notion of corporate social performance draws attention to the legitimate public demands on organizations and the related ethical dimensions (Clarkson, 1995; Freeman & Gilbert, 1988). Planners should remember that such customers or taxpayers are stakeholders in every program decision and be alert to ways that the program may or may not be serving their ultimate interests. The program failures cited above were ultimately costly for the public, which did

not benefit from more skilled professionals who might have completed a better designed program.

Implications for Practice and Research

For educational programs that use technology to be successful, sustainable, and ethically responsible, planners should design programs that are satisfactory to all of the stakeholders described above. Models of stakeholder-based planning (Freeman, 1984; Freeman & Gilbert, 1988) and evaluation (Mohan, Bernstein, & Whitsett, 2002; Stake, 1975) emerged in the 1970s with increased attention to business ethics and with the recognition that many stakeholders must buy in to any innovation for it to be sustainable.

This recommendation might be followed by using strategic management tools from business such as the *Education Criteria for Performance Excellence* from the Baldrige National Quality Program (2003). This comprehensive framework draws explicit attention to customer (student and other stakeholder) focus, meeting faculty and staff needs, developing and improving key processes, and measuring key outcomes, which can be defined in any way appropriate for the program or organization. This tool might be helpful for planners, evaluators, and managers of any program because of its attention to the needs of internal and external stakeholders, processes, and critical outcomes. Research has shown correlations between stakeholder satisfaction and well-run business processes with organizational performance results (Evans & Jack, 2003). Although the educational version of the Baldrige standards does not expect educational organizations to focus on financial outcomes, many programs should focus on financial outcomes as part of a sustainability plan whether in public or private organizations.

Another useful strategic management tool might be the Balanced Scorecard (Anderson & Lawrie, 2002; Cobbold & Lawrie, 2002; Kaplan & Norton, 2000; Stewart & Carpenter-Hubin, 2000-2001). Originally designed to measure business results, it has evolved into a strategic planning and management tool that advises organizations to measure a balanced set of financial, customer, internal business, and innovation and learning performance drivers and outcomes. Attention to such a wide range of variables in strategic planning, management, and measurement can help programs plan for and meet multiple, complementary objectives while also forcing attention to trade-off linkages between the diverse objectives.

Other tools from education include the *Statement of the Regional Accrediting Commissions on the Evaluation of Electronically Offered Degree and Certificate Programs* (Western Cooperative for Educational Telecommunications, 2000) and *Quality on the Line* from the Institute for Higher Education Policy (2000). These tools provide lists of issues and variables to pay

attention to but do not offer guidance on strategic management toward those objectives, as do Baldrige and the Balanced Scorecard.

Generally, any tool that will help a program design for and measure a wide range of stakeholder concerns, processes, and performance outcomes will be an improvement over design and evaluation tools that focus almost all of their attention on learning. Paradoxically, in our experience, an intensive focus on learning outcomes and instructional quality can undermine learning outcomes because critical drivers of learning outcomes, such as faculty satisfaction and workable development processes, are neglected and because programs may not have a sustainable business model (Farel, Umble, & Polhamus, 2001).

Serving several types of stakeholders and aiming for a variety of diverse outcome indicators, however, require difficult trade-offs. For example, the planner may wish to strongly recommend a technology and needs assessment before planning a new program, but managers of the organization may not want to spend the time and money and delay program implementation. Even if such assessments are done, it takes funding to adapt existing materials to fit the workplaces served. Faculty time for innovative content development cannot always be purchased or scheduled, and funding is always limited. Some faculty are not able or willing to modify their customary content and teaching unless they are paid to do so and they have help, because time is so limited. Program managers may have to be more interested in cutting costs than in hiring a technology assistant to help faculty develop materials, which could improve the quality of the materials, faculty time for interaction, and learning outcomes.

Educational planners may have to negotiate aggressively to keep the learner interests at the table so that their managers approve the expense of conducting needs and technology assessments and of building programs that reflect the data. With an eye on their managers' interests, they can help their managers understand that greater numbers of learners will be reached and that satisfied learners and customer organizations are much more likely to return to the organization for more training in the future. In the public sector, they can argue that it is unethical to spend taxpayer dollars on programs that are not based on sound educational and technology assessments and that are likely to have few enrollees and benefits. Effective businesses know that skipping market research leads to costly errors.

Yet planners also need to understand that learners' interest in excellent materials must be balanced against an organization's need to offer a program on time and within budget. They can perhaps learn to use rapid assessment techniques that balance the interests of learners with those of their managers and organization.

Because of these inevitable trade-offs and the conflicts between stakeholder concerns, planners and managers need skills in several types of nego-

tiation (Benson, 2001; Maclean, 1996). Umble et al. (2001) described two main kinds of negotiation that planners engage in and should be skilled in. First, they should understand the big picture or *meta-negotiations* that occur when a planning or grant-writing committee is convened, which shape whose interests are at the table when a lot of the important decisions are made. They can help make sure that qualified representatives of the key stakeholder groups are at the table. Another important form of meta-negotiation occurs when that basic planning group decides on the program's basic purpose and values (i.e., conceptual frame factors) or funding and personnel (i.e., material frame factors). Of course, those decisions are repeatedly challenged throughout the life of many programs and can be influenced later, but planners will want to be skilled at shaping programs from their very outset through metanegotiations like these.

Planners and managers will also want to be skilled at substantive negotiations, which are the more detailed give-and-take discussions about the program's specific content, teaching methods, audience, or marketing strategies. Planners will want to keep learner and faculty interests at the table to ensure program quality yet also be willing to compromise to meet the legitimate needs of the institution offering the program and keep costs within a reasonable range.

The distance M.B.A. program mentioned above sponsored regular meetings in which learner feedback was shared with the instructional design and technical staff that then were able to make needed changes as the program progressed. The evaluator interviewed all faculty who had taught in the program during the first 18 months, collated their recommendations, and reported them in a meeting with program managers, instructional and technical staff, and faculty representatives present so that improvements could be made in the entire process of course development and delivery. This led to some improvements. Greater improvements were not made until the director hired a programwide technology assistant with some of the grant money available (this would be classified as a metanegotiation, because it involved substantial funding and personnel). This director had the power to make that decision, but it required some negotiation on his part with other stakeholders in the organization who would have liked those grant revenues for other purposes.

Planning and evaluation practice also have strong ethical components, because many people are affected by the decisions made and their consequences (Clarkson, 1995; Freeman & Gilbert, 1988). Rather than seeing one's job as primarily technocratic, keeping that vision can be a strong motivator to lead a constructive, thoughtful, inclusive process that serves the stakeholders well and meets business or social objectives.

As for evaluation and research implications, it has already been noted that evaluation indicators should be broad and include multiple stake-

holders' satisfaction with a wide range of outcomes. Evaluation and research in continuing education often focus on establishing effective means to improve professional behavior and outcomes (Robertson, Umble, & Cervero, in press; Umble & Cervero, 1996). Although important, such publications often imply that planners operate as unobstructed individuals and are able to readily apply that research. As this article has discussed, however, there are many reasons why that research is often not utilized in practice such as resource limitations, previously established frames, and the presence of multiple legitimate stakeholders with varying agendas and influence with whom the planner must negotiate. Researchers could make a valuable contribution by describing how effective and sustainable HRD and CPE programs have organized and funded themselves to simultaneously meet the needs of internal and external stakeholders.

CPE practitioners, particularly those in public organizations and universities, will probably be less familiar with strategic management and business-planning concepts. In addition, they may have to do more education and negotiation in their organizations to bring such ideas into practice. Regardless of the setting, HRD and CPE planners, evaluators, and managers can use the ideas discussed here to great benefit for their learners, staff, faculty, and organizations.

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